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MEDICAL RECORD

A Weekly Journal of Medicine and Surgery

EDITED BY

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Original Articles.

THE TRIAL, EXECUTION, AUTOPSY, AND MENTAL STATUS OF LEON F. CZOLGOSZ, ALIAS FRED NIEMAN, THE ASSASSIN OF PRESIDENT McKINLEY.

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WITH A REPORT OF THE POST-MORTEM EXAMINATION.

BY EDWARD ANTHONY SPITZKA,
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THE terrible shock which the assassination of President McKinley by Leon Czolgosz at Buffalo, New York, on September 6, 1901, imparted to the entire civilized world, and which naturally engendered in the public mind a mingled feeling of horror, vindictiveness, and revenge—a feeling that was exceeded only by the profound sense of sorrow and depression which took possession of the people when a few days later it was realized that despite the highest efforts of surgical and medical skill a fatal result to the distinguished victim was inevitable—naturally suggested, both to the lay and medicolegal mind, the need of inquiry as to the mental status and responsibility of the perpetrator of so repulsive and atrocious an act. Moreover, there are many persons who are disposed to hold that the enormity of such a crime is in itself sufficient evidence to warrant the opinion of the existence of insanity, merely because it seems to them inconsistent with the principles of ordinary rational conduct, even though aside from the act itself there be nothing in the entire life and conduct of the individual that is suggestive of mental disease. On the other hand, there are many who, in view of the magnitude of the crime, would oppose the granting of exemption from the ordinary consequences of capital offenses, even though the offender were a raving maniac. Suffice it to say that the position taken by such persons, in either case, is untenable, and would be an untrustworthy test of responsibility as regards the ends of justice, whether viewed from a legal or a medical standpoint.

It need scarcely be said that the question as to whether or not a certain act is the offspring of mental disease cannot always with safety be determined by the act itself, but must be determined by all the attendant circumstances leading up to and surrounding the act.

"An act of violence," says Ray, "must not be attributed to insanity merely because to a person of high culture and correct morals it seems inexplicable on the ordinary principles of human conduct."

According to the Code of Criminal Procedure of the State of New York, Section 21, the legal test of mental unsoundness, as applied to criminal cases, is based on the assumption that insanity is a question of law, to be determined by the court, and that the question of responsibility in mental disease hinges upon a knowledge of right and wrong as to the particular act at the time it was committed; whereas medical science holds that insanity, in its relation to crime, is always a question of fact to be determined like any other fact in evidence, aided, of course, in such case, by the interpretation of expert opinion evidence, and that whenever its presence can be so determined, the accused should be absolved from responsibility, irrespective of the form or degree of his mental disease, or the nature of the act committed. "All that medical science has to do in any such case," says Dr. John P. Gray, "is to say whether the deed springs from disease or not. If it does not, the man is responsible, however ghastly, seemingly purposeless, or vindictive the act may be." In other words, medical science holds that the whole question of responsibility should rest upon the presence or absence of mental disease, and not upon a knowledge of right and wrong, as regards the nature and consequences of the act in question, and that that which in fact is a condition of mental disease cannot in law be a condition of mental health.

The question to be determined, then, in the case of Czolgosz, from the legal standpoint, as embodied in the Code of Criminal Procedure of the State of New York, was: When he shot the President did he know the nature and quality of the act he was doing, and that the act was wrong? If this question could be determined in the affirmative, then he was responsible under the law and punishable for the offense which he committed, even though he was medically insane, so to speak.

On the other hand, the question to be determined from the standpoint of medical science was: Was Czolgosz at the time he committed the act a victim of mental disease or mental unsoundness? If so, according to the dictum of medical science, he was not responsible and hence not punishable for the act he committed. These are the sole questions upon which the guilt or innocence of the accused must rest, whether in the eyes of the law or in the judgment of medical science, and it follows logically that if he were guilty of crime owing to the absence of mental disease, he was equally guilty within the intent and meaning of the statute. Such being the case, the subject of the responsibility of the accused resolves itself into a question of health or disease—sanity or insanity. Hence the application of the legal test may be dismissed from further consideration here and we may proceed to consider the question of his responsibility from a medical point of view.

The Trial.—The trial of Czolgosz, which took place in the city of Buffalo, N. Y., on September 23-24, 1901, Hon. Truman C. White, presiding justice, was neither attended by delay "nor harassed by the trivial technicalities of the law." The "machinery of justice" moved so smoothly and so rapidly that the jury was procured, the case tried, and a verdict of guilty rendered within a period of two court days with sessions from 10 to 12 o'clock in the forenoons and 2 to 4 o'clock in the afternoons, the time actually occupied being eight and a half hours in all. The proceedings were marked by no melodramatic or sensational episodes or unseemly wrangle among counsel; while the fact that, under the extraordinary circumstances, the trial was not anticipated or interrupted by any riotous demonstration against the prisoner—any attempt at mob or lynch law—when he appeared in public, affords striking proof of the respect for law and order which prevails in the community where the trial was held. Czolgosz was brought into court closely guarded by a double cordon of police and handcuffed to an officer on either side. He was neatly dressed and cleanly in appearance, his face clean-shaven and hair neatly combed.

The preparation and trial of the case on the part of the people by the Hon. Thomas Penny, District Attorney, and his assistant, Mr. Haller, was well-nigh faultless. Shortly after his arrest, the District Attorney procured from Czolgosz a statement several pages in length, which was taken down in longhand, in narrative form, each page of which he signed after himself making corrections and revisions as to matters which he claimed the reporter had misapprehended. This statement gave in detail facts concerning his premeditations and preparations for the crime, also his movements for some time prior and up to the time of the shooting. The District Attorney also, within a few hours after the crime was committed, proceeded to put the prisoner under the observation of local experts in mental disease, namely, Drs. Joseph Fowler, Police Surgeon Floyd S. Crego, and James W. Putnam. These physicians had free access to him, down to and during the trial—covering a period of nearly three weeks, during which they examined him repeatedly and made a careful study of his case with reference to his mental condition. The District Attorney also permitted the experts on either side to confer together freely, and allowed those for the defense to have free access to all facts and information relative to the case in his possession—a proceeding which in effect was equivalent to the appointment of a commission of five experts, three for the prosecution and two for the defense, to determine the prisoner's mental condition. This course on the part of the District Attorney marks a new departure in the methods of getting expert evidence in criminal trials where the question of mental responsibility is involved, which is to be highly commended as a practical measure, tending to eliminate much superfluous testimony and at the same time to minimize the danger of contradictory expert opinions.

In view of the great importance of the case, it is regrettable that no experts were called to testify on the trial as to the prisoner's mental condition in order that it might appear on the record of the trial that his mental state was inquired into and determined by competent authority. Had the experts on either side been given the opportunity of thus stating officially their unanimous conclusion, together with the grounds on which it was based and the methods by which it was reached, it would have left in the public mind no room for reasonable doubt as to its absolute correctness, and that it had been arrived at only by the rules of professional conduct governing the examination of such cases.

The attorneys assigned by the court to the defendant, at the request of the Bar Association of Erie County, were ex-judges Loran L. Lewis and Robert C. Titus, both prominent lawyers and highly respected citizens of Buffalo. For obvious reasons these gentlemen were reluctant to undertake what they regarded as a most distasteful task, and consented to do so only from a high sense of duty to the public, at the urgent solicitation of the President—Hon. Adelbert Moot—and other prominent members of the Bar Association, on Saturday, September 21, preceding the trial, which began on Monday, the 23d.

Respecting the defense, it appears that substantially no preparation was made beyond a fruitless effort of counsel to confer with the prisoner and the examinations made of him at their request by Dr. Hurd and the writer, with reference to his mental condition, and a verbal statement by them to counsel of their conclusion that he was not insane. It also appears that no plea was entered by the attorneys for the defense; but Czolgosz, speaking for the first time in court, entered a plea of guilty to the indictment, which plea the court promptly rejected and directed that one of not guilty be entered on the record for the defendant.

Each juror on qualifying said, in answer to the usual question, that he had formed an opinion as to the guilt of the prisoner, but that his opinion could be removed by reasonable evidence tending to show that the defendant was innocent. And yet, to one accustomed to being in court and observing jurors when qualifying, it was difficult to avoid the impression that each of the jurors in this case held a mental reservation to convict the prisoner. Had Czolgosz been on trial for the murder of a common citizen, instead of the President, it is safe to say that not one of the jury as completed would have been accepted by the defense; and instead of getting a jury in approximately one hour and a half, that feature of the trial alone would probably have occupied several days.

Having in view the nature and importance of the case, the fact that no testimony was offered on the defendant's behalf and that practically no defense was made, beyond a perfunctory examination of jurors and a mild cross-examination of some of the people's witnesses, which was limited to efforts to elicit information respecting the President's condition during his illness and of his body after death, and a summing up by one of the counsel—Judge Lewis—which consisted mainly of an apology for appearing as counsel for the defendant and a touching eulogy of his distinguished victim, renders the case, in this respect, a unique one in the annals of criminal jurisprudence.

The jury retired for deliberation about 4 P.M., and returned in less than half an hour with a verdict of guilty of murder in the first degree. Czolgosz heard the verdict of the jury standing and without appreciable display of emotion. Several of the jurors were reported to have said, after the trial, that the jury was in favor of conviction unanimously from the first, and could have rendered a verdict without leaving their seats, but deemed it best to make a pretense of deliberation "for appearance' sake." Czolgosz was remanded to jail for two days, and on Thursday, September 26, was sentenced to be executed by electricity at Auburn Prison, in the week beginning October 28, 1901.

When Czolgosz returned to his cell, after his conviction, he ate a hearty supper, and soon thereafter went to bed and slept continuously until midnight, when the guard was changed, when he awoke for a few minutes, and then slept again until 6 A.M., when he arose and took a short walk in the cell corridor, after which he made a careful toilet, and at 7.30 partook of a hearty breakfast. He talked freely, as usual, on ordinary topics, but maintained his usual silence respecting his crime, and would not talk of the trial or the verdict. On Thursday, September 26th, he was removed from the Buffalo jail to the State Prison at Auburn, N. Y., where he was confined in a "death cell" until his execution took place.

The Execution.—Czolgosz was executed by electricity on the morning of October 29, 1901. The official witnesses, consisting of the Superintendent of State Prisons and other prominent New York State officials, several physicians, three representatives of the respective press associations, Mr. Spitzka, and others, and the official physicians—Dr. John Gerin, prison physician, and myself—having been assembled in the execution room and having received the usual admonition from the Warden as to the maintenance of order during the execution, the prisoner was conducted to the room a few minutes after 7 A.M. Every precaution was taken by the Warden, who had immediate charge of the execution, to minimize the opportunity for notoriety or sensationalism on the part of the prisoner, as well as to insure that his taking off should be effected in an orderly and dignified manner.

As Czolgosz entered the room he appeared calm and self-possessed, his head was erect and his face bore an expression of defiant determination. The guards, one on either side, quietly and quickly guided him to the fatal chair, the binding straps were rapidly adjusted to his arms, legs, and body, and the head and leg electrodes were quickly placed *in situ*, and connected with the wire which was to transmit the lethal current through his body. These preliminaries occupied about one minute. Czolgosz offered no resistance whatever, but during the preparations addressed himself to the witnesses in a clear, disdinct voice in the following significant language: "I killed the President because he was the enemy of the good people—the good working people. I am not sorry for my crime. I am sorry I could not see my father." At this moment, everything being in readiness, the Warden signalled the official electrician in charge of the switch, who immediately turned the lever which closed the circuit and shot the deadly current through the criminal's body, which was instantly thrown into a state of tonic spasm involving, apparently, every fiber of the entire muscular system. At the same time, consciousness, sensation, and motion were apparently absolutely abolished.

Two electrical contacts were made, occupying in all one minute and five seconds. In the first contact, the electro-motive pressure was maintained at 1,800 volts for seven seconds, then reduced to 300 volts for twenty-three seconds, increased to 1,800 volts for four seconds, and again reduced to 300 volts for twenty-six seconds—one minute in all—when the contact was broken. The second contact, which was made at the instance of the writer as a precautionary measure, but which was probably unnecessary, was maintained at 1,800 volts for five seconds. That conscious life was absolutely destroyed the instant the first contact was made, was conceded by all of the medical witnesses present; also that organic life was abolished within a few seconds thereafter.

Czolgosz was pronounced dead by the attending physicians and several of the other physicians present, after personal examination, in four minutes from the time he entered the room. One minute of this period, as already stated, was occupied in the preliminary preparations; one minute and five seconds in the electrical contacts, and the remainder of the time in examinations by the physicians to determine the fact of death. The physicians present at the execution and at the autopsy were Drs. H. O. Ely of Binghamton, N. Y.; W. A. Howe of Phelps, N. Y.; G. R. Trowbridge of Buffalo, N. Y.; W. D. Wolff of Rochester, N. Y., and C. R. Huntley of Buffalo.

The Autopsy.—The autopsy was made by Mr. Edward A. Spitzka, under the direction of the official physicians—Dr. Gerin and myself. The examination occupied about four and a half hours, and embraced a most careful, gross examination of all the viscera, attention being especially directed to the brain and its meninges. The accompanying masterly description of the post-mortem findings and especially of the condition and anatomical structure of the brain by Mr. Spitzka leaves nothing to be said here upon this point beyond the fact that the autopsy revealed no evidence whatever of disease or deformity of any of the bodily organs including the brain, which was normal in size, shape, weight, and appearance, and was well developed in all respects—a conclusion which was concurred in by all of the physicians present, several of whom had witnessed the execution.

In deference to the expressed wish of the relatives of Czolgosz, and for reasons of a sentimental nature on the part of the State authorities, the prison warden declined positively to allow any portion of the body to be removed from the prison. Consequently and regrettably, it was impossible for the examiners to retain honorable possession of any portion of the brain for microscopic examination and study. Accurate measurements, however, of the head and its appendages, of the face and of the exterior and interior of the skull, together with detail anatomical drawings and descriptions of the brain were made; also plaster molds of the head from which a cast was subsequently made, and photographs of the same—full face and profile—taken. These measurements, together with plates of the drawings and photographs, are presented in Mr. Spitzka's report of the autopsy.

In view of its great importance, both to medical science and to medical jurisprudence, the writer regards it as fortunate that the State was able to secure the services of so able a brain anatomist and skilled operator and draughtsman as Mr. Spitzka, to make the post-mortem examination.

The Mental Status.—On Thursday, September 19, 1901, I received a telegram requesting me to meet Mr. Adelbert Moot, President of the Erie County Bar Association, in Buffalo, New York, on the following morning. On my arrival in Buffalo the next day, Mr. Moot informed me that he had sent for me for the purpose of requesting me to inquire into the mental condition of Leon F. Czolgosz, confined in the Buffalo jail under indictment for the murder of President McKinley, and whose trial was to begin on the following Monday. Mr. Moot further stated in substance that three local experts had already examined the prisoner for the district attorney, but in view of the enormity of the offense and the fact that there obviously could be no legitimate defense other than insanity, it was deemed important, in the interests of justice, that his mental condition should be investigated by other experts acting in behalf of the defense, or a least independently of the prosecution, to the end that the prisoner should be accorded every legal right, there being no desire to convict him if he were not mentally responsible, and that I had been selected for the responsible duty. With a deep sense of the responsibility involved, I consented to act, provided it should be distinctly understood that I was not there as a partisan expert in behalf of either side, but simply in a professional capacity to aid in determining the real mental state of the prisoner; and providing further, that my selection would be acceptable to the eminent counsel whom the Bar Association had selected for the defense, should they decide to accept that duty, a matter which was then undecided. On the following morning (Saturday), Mr. Moot informed me that the gentlemen referred to had consented to act and invited me to meet them in conference, which I did, and which resulted in their requesting me to proceed at once to examine into the prisoner's mental condition, and to report my conclusion to them as soon as I had reached one. They also assented readily to my proposal to invite Dr. Arthur W. Hurd to become associated with me professionally in the case, Dr. Hurd being the Superintendent of the Buffalo State Hospital for the Insane, and a competent alienist of large experience in mental diseases. It was also agreed that we should be allowed to confer freely with the District Attorney and with the experts for the people, after completing our personal examination of the prisoner. Being unable to establish communication with Dr. Hurd before evening of that day, and in view of the short time intervening before the trial, I decided to make a preliminary examination of Czolgosz alone, and did so that afternoon in the District Attorney's office, first disclosing to him my identity and the object of my interview and informing him of his legal right to decline to answer any question I might ask him.

I examined him again on the following day—Sunday—in the jail jointly with Dr. Hurd and in the presence of one of his guards, who was questioned at length respecting his observations of him in jail, as to his habits of eating, sleeping, talking, reading, etc. We subsequently interviewed the District Attorney and the Superintendent of Police, General Bull, who gave us all the facts and information in their possession respecting the case. The statement which Czolgosz made to the District Attorney shortly after his arrest throws much light on his mental condition on the day of the crime, but that official deemed it his duty to refuse to allow me to publish it. We also conferred at length with the people's experts, Drs. Fowler, Crego, and Putnam, who stated to us separately and in detail their observations and examinations of him. We also observed him carefully in the court-room throughout the trial.

After our examination of Czolgosz, on Sunday, we reached the conclusion, independently of each other, that he was sane, and we so informed his counsel on Monday morning before the trial began.

It should be said that owing to the limited time—two days—at our disposal prior to the trial, and the fact that his family relatives resided in a distant State and were not accessible for interrogation, we were unable to obtain a history of his heredity beyond what he himself gave us.

Czolgosz, as he appeared at the time of my examinations of him at Buffalo, may be described as a well-nourished, rather good-looking, mild-mannered young man, with a pleasant facial expression; features, regular; face, smooth-shaven and symmetrical; mouth and ears, well formed and symmetrical; teeth, none missing, but in poor condition from neglect; tongue, clean; palate, fauces, and uvula, normal in appearance; eyes, blue and normal in expression; pupils, equal in size, and normally responsive to light and accommodation; hair, light brown and slightly curly; stature, medium—five feet seven and a half inches; and weight, estimated, about 140 pounds. The extremities were in all respects normal. The external genitals were normal, excepting two small flat, unindurated cicatrices on the mucous surface of the prepuce, probably the result of previous chancroids, although he denied having had venereal disease other than gonorrhœa. There were no signs of specific nodes or periosteal tenderness over the usual sites of these lesions, nor was there any evidence upon the head or body of traumatism, excepting a slight deviation of the nose due to a blow which he received at the time of the assassination, and a superficial, perpendicular cicatrix on the left face, which he said was the result of a slight injury he received when working in a barbed-wire factory. There were no tremors or twitchings of the facial muscles, tongue, or hands. The pulse, temperature, and skin were normal, as also were the special senses, knee reflexes, co-ordinating power, and the sensory and motor functions. Finally, a careful inspection of the entire visible body failed to reveal the presence of any of the so-called stigmata of degeneration. The almost perfect symmetrical development—especially of the head and face—is a noteworthy feature in Czolgosz' case, although had deviations been found, the fact would have had little weight as tending to show mental disease or degeneracy, as marked asymmetries, both cranial and facial, are frequently observed in persons who are quite sane and above the average in mental capacity.

In answer to questions, he stated, in substance, that he was born in Detroit, Michigan, of Polish parents; that he was twenty-eight years of age, unmarried, and a laborer by occupation; that he was a Romanist, originally, but had abandoned that faith several years ago because he no longer believed in it; that he attended the common schools as a boy and had learned to read and write; that he had used beer and tobacco, but not to excess; that he had done various kinds of unskilled labor, such as farming, factory-hand work, etc.; that his mother was dead, and his father, one brother, and a married sister were living; that so far as he knew there was no insanity in his family, and that he had not suffered any serious illness or injury during his lifetime; that he had never been subject to fits, spasms, or vertigo; that he usually ate and slept well, and that his bowels were always regular. He admitted having had sexual intercourse with women, but denied masturbation, or other unnatural practices.

Careful inquiry failed to elicit any evidence of delusion, hallucination, or illusion. When questioned as to the existence of enemies, persecutions, or conspiracies against him, he replied in the negative. He evinced no appearance of morbid mental depression, morbid mental exaltation, or of mental weakness or loss of mind; nor did he display any indication of morbid suspicion, vanity, or conceit, or claim that he was "inspired" or had "a mission to perform," or that he was subject to any uncontrollable impulse. In fact, as regards the existence of evidences of mental disease or defect, the result of the examinations was entirely negative. On the contrary, everything in his history, as shown by his conduct and declarations, points to the existence in him of the social disease, anarchy, of which he was a victim.

My last examination of Czolgosz was made jointly with Dr. Gerin, physician of Auburn Prison, the evening before his execution. This examination revealed nothing either in his mental or physical condition which tended to alter the opinion I gave to his counsel at the time of his trial, namely, that he was sane—an opinion which was concurred in by all of the official experts on either side, namely, Drs. Fowler, Crego, and Putnam, for the people, and Dr. Hurd and myself for the defense, also by Dr. Gerin, the only other physician who examined him. Furthermore, the prisoner's manner, appearance, and declarations in the execution room, together with the post-mortem findings, corroborated most conclusively the original opinion as to sanity, while his dying declarations that he killed the President because he regarded him as "an enemy of the good people—the good working people," and that he was not sorry for his crime—all tend to stamp him as an anarchist. In fact, his bearing and conduct from the time of the commission of the crime to his execution were entirely consistent with the teachings and creed of anarchy. Moreover, neither the three careful personal examinations which I made of him—one alone, one with Dr. Hurd, and one with Dr. Gerin—the measurements of his body by the Bertillon system, nor the post-mortem findings, disclosed the slightest evidence of mental disease, defect, or degeneracy. This opinion is confirmed by the people's experts who repeatedly examined him and observed him from time to time, from the day of the assassination to the close of the trial, and by Dr. Gerin, the physician of Auburn Prison, who observed him carefully during the four weeks that he was in that institution awaiting execution. Dr. Gerin has had exceptional opportunity for the study of criminals, both sane and insane, in his capacity as prison physician, and previously as Assistant Physician at the State Hospital for the Criminal Insane.

If Czolgosz was a victim of mental disease, the question would naturally arise as to what form of that disorder he was suffering from. If, in answer to this question, we undertake to make a diagnosis by exclusion, we find the following results: There was absolutely no evidence of insane delusion, hallucination, or illusion. There was none of the morbid mental exaltation or expansiveness of ideas that would suggest mania in any form, none of the morbid mental gloom and despondency of melancholia, none of the mental weakness of dementia, none of the conjoined mental or motor symptoms that are characteristic of paresis, nor was there anything in his manner, conduct, or declarations that would suggest the morbid vanity and egotism, the persecutory ideas or the transformation of personality which usually characterize paranoia or systematized delusional insanity. In fact, at no time during the period from his arrest to the time of his execution did he exhibit any of the mannerisms—boastful display, etc., or claim to have a "divine inspiration" or a "mission"—or make any complaint or suggestion of personal wrongs and persecutions which are so characteristic of paranoiacs; nor did he, during his trial, or subsequently, evince any indication of satisfaction or delight at being the central figure of the occasion, and the observed of all observers, which he was; nor was there any attempt on Czolgosz' part to simulate mental disease. The refusal to talk with his counsel was perfectly consistent with the views which he expressed to the District Attorney soon after his arrest, namely, that he did not believe in law, and that he wanted no counsel. He did, however, converse with others, namely, the District Attorney, from time to time before his trial, also with his guards at the Buffalo jail, with whom he frequently walked in the corridor fronting his cell for an hour or two at a time, conversing with them intelligently the while, and making his wants as to bathing, toilet, tobacco, etc., known in a natural manner. He also conversed freely with the people's experts in their earlier examinations of him, and talked, though not so freely, with Dr. Hurd and myself, and when, on arraignment for trial and formally asked to plead, he promptly arose from his chair and answered in a clear voice, "guilty." He also responded promptly when directed by the clerk of the court to "stand up and look upon the juror," as each of the jurors were sworn, and resumed his seat in each instance at the proper time. Beyond this he remained mute while in the court-room, and yet to any one who observed him closely it was apparent that he was fully aware of, and attentive to, the proceedings.

A recent writer—an eminent alienist—discussing the mental state of Czolgosz, says:*

"We can perceive no indications of mental disease in Czolgosz, and were the absurdity of his statements and acts to be a criterion of mental unsoundness, we should have to establish a new category of insanity for the reception of the various groups of anarchists —not to mention other terrorists.

"We deem it an error to regard Czolgosz' mutism in court, when called on to plead, and before his counsel as an attempt to simulate insanity. This conduct is in line with his rôle expressed in the theatrical declaration: 'I am an anarchist and have done my duty.' As it was his 'duty' to slay the President, so it was his duty to go to death with his lips sealed; and with this intent, the plea of guilty and his conduct are perfectly consistent. He shows no reluctance to converse on matters disconnected from the crime, nor even of matters connected therewith, provided they do not touch its preparations and thus betray his associates."

Aside from his reticence to his counsel there was nothing in Czolgosz' manner, appearance, or declarations that was indicative of insanity or of simulating. His reticence toward his counsel, as already intimated, was entirely consistent with his expressed disbelief in government and in law, and his declaration that he shot the President with a clear knowledge of the nature and consequences of the act; and while he pleaded guilty in court—and also proclaimed, when he went to his death, his reason for committing the crime, and declared that he was not sorry therefor, in a manner which clearly implied that he regarded the act as a justifiable one—he did not claim that it was not a crime on his part as paranoiacs usually do, nor did he in any way indicate that he regarded himself a victim of conspiracy or persecution. On the contrary, he declared—to the people's experts—that he fully understood what he did when he shot the President, and was willing to take the consequences; that "I know what will happen to me—if the President dies I will be hung." Justice White, commenting on Czolgosz' plea of "guilty," when arraigned for trial —a plea which could not be accepted under the law —said: "The prisoner's plea of guilty indicates that he himself anticipates no escape from the penalty which the law prescribes for a crime of the character alleged in the indictment." Again Czolgosz said: "I done my duty, I don't believe in voting; it is against my principles. I am an anarchist." He further said that he had been an ardent student of the doctrine of anarchy, and had attended many "circles," where these subjects were discussed. He had attended a meeting of anarchists "about six weeks ago," and also in July; had met and talked with an anarchist in Chicago about ten days ago; that he belonged to a "circle" in Cleveland which had no name. "They called themselves anarchists." That he went to Cleveland "on no particular business" the Friday before the assassination. He had been in Buffalo for two or three weeks prior to going to Cleveland. "I planned to kill the President three or four days ago, after I came to Buffalo—from Cleveland—I don't believe in the republican form of government, and I don't believe we should have any rulers. I had that idea when I shot the President, and that is why I was there."

In explanation of his abandonment of his religious faith and his rejection of the services of a priest, Czolgosz said the night before his execution, "I would like the American people to know that I had no use for priests. My family are all Catholics and used to go to church until the hard times of 1893. We had been taught by the priests that if we would pray, God would help us along, but it did no good; it didn't help us, and we stopped going to church at that time." He also said at this interview: "McKinley was going around the country shouting prosperity when there was no prosperity for the poor man. I am not afraid to die. We all have to die sometime."

It may be said that Czolgosz' belief which he expressed as he went to his death, that the President "was an enemy of the good working people," was a delusion, and such it undoubtedly was in the broadest sense of that term; that is, it was a false belief, but it was in no sense an insane delusion or false belief due to disease of the brain. On the contrary, it was a political delusion, so to speak—a false belief founded on ignorance, faulty education and warped, not diseased, reason and judgment—the false belief which dominates the politico-social sect to which he belonged and of which he was a zealot, who in common with this kind believes that all forms of government are wrong and unnecessary—a body of malcontents whose teachings oppose all government and who advocate the use of violence to destroy the existing social and civil order of things. By his own admissions, Czolgosz was a devout anarchist and a firm believer in the principles of "Free Society" as taught by Emma Goldman—of whom he was an ardent admirer—and others. These were the beliefs which furnished the motives for the murderous deed.

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* "The Mental Status of Czolgosz and Assassins Generally." By E. C. Spitzka, M.D. *The Medical Critic*, November, 1901.

That Czolgosz was an anarchist and actuated in his crime by the motives which spring from the teachings of that sect are clearly shown by: (1) His declarations after his arrest, namely, that he did not believe in any form of government or law, and that all rulers were tyrants who ought to be put down. (2) His admissions to the District Attorney that he was a member of anarchistic societies or circles, and had frequently attended the meetings of the same; also that he had been influenced in his views by the "lectures" of Emma Goldman; and that when apprehended anarchistic literature was found on his person, and (3) The recognition and commendation which he has received at the hands of anarchists at their meeting, both in this country and abroad, since his death, several of these societies having openly recognized him as such and lauded his action.

The anarchists' creed teaches that when one of their number is selected to do a certain deed, he is to proceed about it quietly and in his own way, taking no one into his confidence; that, having accomplished the deed, if apprehended, he shall not admit his connection with any other members of the circle; that, if convicted and sentenced to die, he shall go to his death without revealing his connection with others, resting secure in the belief that he will be ever regarded by his associates as a martyr and a hero, who died in the discharge of a noble duty. The course and conduct of Czolgosz from the beginning down to his death are entirely in keeping with this creed. And finally, the cool and courageous manner in which he met his death, and the fact that from the day of his arrest until he died, he never uttered a word that could be used against his accomplices—if he had any—and that he died—as anarchists who suffer the death penalty always die—without uttering a word that would tend to incriminate any of his co-conspirators, all tend to stamp him as an anarchist.

In conclusion, the writer, having viewed the case in all its aspects, with due regard to the bearing and significance of every fact and circumstance relative thereto that was accessible to him, records his opinion unqualifiedly that Leon F. Czolgosz on September 6, 1901, when he assassinated President McKinley, was in all respects a sane man, both legally and medically, and fully responsible for his act.

85 MADISON AVENUE.

The Violet Cure for Cancer.—It is said that a test of the recently revived violet-leaf cure for cancer is to be made in Baltimore. The patient is a woman in the University Hospital suffering from an inoperable carcinoma of the breast.

THE POST-MORTEM EXAMINATION OF LEON F. CZOLGOSZ.

By EDWARD ANTHONY SPITZKA,
NEW YORK.
COLLEGE OF PHYSICIANS AND SURGEONS.

THE post-mortem examination was performed by the writer under the supervision of Dr. Carlos F. MacDonald of New York, who was requested by the State Superintendent of Prisons to take medical charge of the execution in conjunction with Dr. John Gerin, prison physician. The examination began at 7.50 A.M., and was completed at 12.30 P.M. Among the witnesses were the physicians in attendance at the execution.

As the body lay upon the table in the dorsal position, the right leg, to which the electrode had been attached, was slightly flexed, and a trifle abducted. This attitude of the body has been found to be uniform in the post-mortem examinations made on many other electrocuted criminals by Dr. Ira Van Gieson. In all of these cases the electrode had been applied to the knee flexure.

Corresponding to the attachment of the leg-electrode there was a superficial blistering, with some desquamation of the epidermis and some œdema. At the site of application of the head-electrode there were only a few signs of vesication, limited to the occiput.

Post-mortem discolorations existed in all the extremities, but not in the trunk, head, or neck, where the skin was fairly white. There was post-mortem lividity of the toe- and finger-nails. The pressure of the straps had not produced any discolorations. There was a discharge of small amount from the urethra, probably of seminal fluid.

The assassin's physiognomy may be described as youthful and with rather a pleasant expression. The nose is pointed, slightly retroussé, and fairly straight, deviating a little at the point of the injury inflicted at the time of the assassination. The eyes are blue, the pupils equal and moderately dilated. The hair is a light brown and slightly curly. The face is oval and symmetrical. The ears are well formed and absolutely symmetrical. The mouth is well-shaped; the lips full, measuring the true orifice, the width is 4 cm., between the outer angles 5 cm. The teeth are of normal shape, but are in poor condition. The external genitals are normal, and are unclean with accretions of smegma under the prepuce. There are two flat cicatrices—one 4 mm. in diameter, the other half as much—on the mucous surface of the prepuce, about 5 mm. from the corona glandis. The tissues under and about these cicatrices are not indurated, and the scars are doubtlessly the remains of chancroids acquired at some time previously. As stated before, there has been a discharge of seminal (?) fluid, some of which is still within the urethral passage.

At 8.10 A.M., the surface temperature of the body, taken on the side of the chest with a "Seguin" surface thermometer, was 97° F.; per oram, 97°.

The body cooled very slowly throughout the examination, and the greatest amount of heat appeared to be retained in the brain. Rigor mortis set in about three hours after death.

The following measurements of the head were recorded.

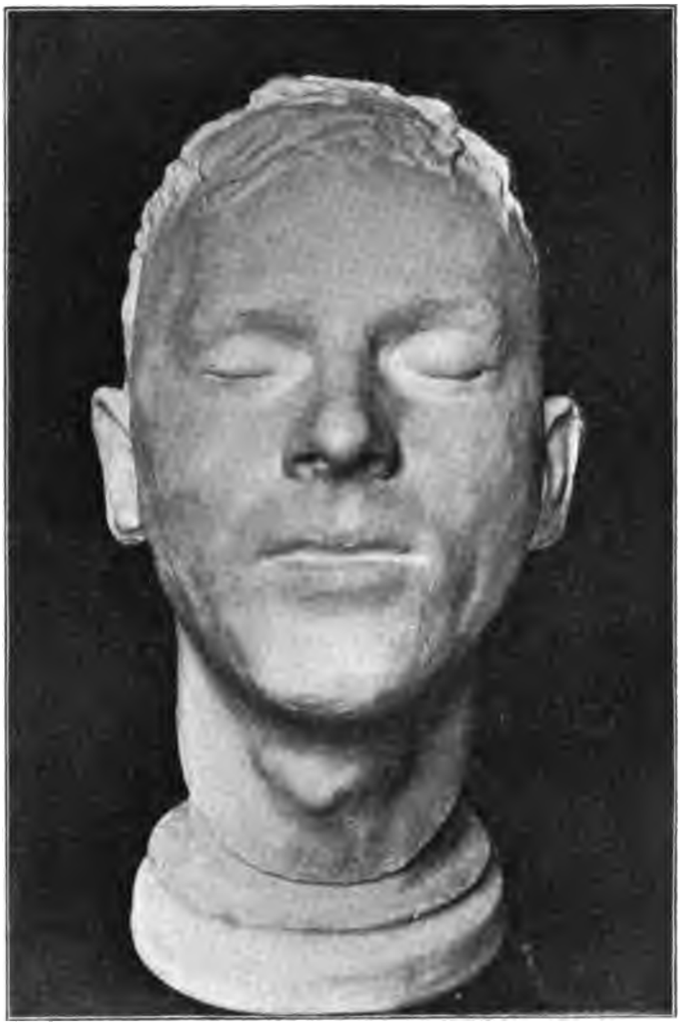
	CENTIMETERS
Max. circumference ($21\frac{1}{2}$ inches)	54.6
Max. antero-posterior diam. (from glabella to max. posterior point)	18.7
Max. lateral diam.	15.5
(Cephalic Index=82.88)	
Biauricular diam. (between roots of zygomæ),	15.0
Length of face (from the intersuperciliary point to the superior alveolar point between the middle incisors)	9.2

	CENTIMETERS.
Bizygomatic diam.	14.5
Min. frontal diam.	12.0
Diameter from glabella to inion	19.1
From vertex to hair-line	12.0
From hair-line to root of nose	6.0
From root of nose to its base	5.3
From base of nose to chin	7.0
Vertex to chin (diameter)	25.4
Breadth between pupils of eyes	6.8
Breadth of nose at its base	3.4
Width of mouth (internally)	4.0
Width of mouth (externally)	5.0
Length of ears (both sides equal)	6.1

After these measurements had been taken, about fifty minutes were devoted to the making of plaster molds of the entire head.

A cast has since been made from these molds, and two photographic views, in full face and in profile, are presented here. Unfortunately the left ear in the mold had been broken during transportation from Auburn, and the fragments were pieced together with difficulty. The defects have been rectified in the photograph. On the subject, the ears were perfectly symmetrical, both as to form and size.

The molds were made upon the head, while the body lay prostrate upon the table. This attitude gave rise to the prominence of the "Adam's apple," and to the slight parting of the lips. The hair was rubbed well with vaseline, and flattened as much as possible to prevent the plaster from adhering.



Photograph of a cast of the head, from plaster molds made by the writer soon after death.

DEFECTS.—Unfortunately, the left ear in the mold had been broken in transit, and the fragments were pieced together with difficulty. The defects were rectified in the photograph. On the subject, the ears were absolutely symmetrical.

On the skull the following measurements were taken:

	CENTIMETERS.
Max. antero-posterior diam	18.0
Max. lateral diam	14.7

(Cranial Index=81.66.)

The head of Czolgosz, as is typical of the Poles, falls into the sub-brachycephalic class; according to Weisbach, the cephalic index of forty Poles was 82.9 82.88 in Czolgosz).

At the time of Czolgosz' reception at the Auburn State Prison (September 27), measurements of his body were taken according to the Bertillon system by J. N. Ross. I reproduce here the more important figures:

	CENTIMETERS.
Stature (5 ft. 7½ in.)	171.4
Stretch	181.0
Trunk	91.1
Head, length	18.6
Head, width	15.6
Cheek width	14.5
R. ear, length	6.3
L. foot	26.0
L. Mid. F.	11.7
L. Lit. F.	9.0
L. Cubit	47.2

"These measurements are all medium, and each is consistent with the others. The stretch and cubit measurements might be said to be slightly out of proportion, indicating that his forearms were slightly longer than those of a majority of men of his stature, but this excess of length is not sufficient to call for comment."

His weight on that day was 141 pounds.

The marks and scars are here reproduced in the order in which they appear on the prison department's identification card.

"I. Sev. sm. cics. post. first finger, left hand near 2d. joint. Cic. of 1 ob. ex. on 1st Phal. third finger left hand post.

"II. Cic. of 3 rec. ver. crossing third joint, mid. fgr. right post. Cic. of 1 circ. at 5 over right wrist post.

"III. Mole at 5 under left cheek-bone and 9 to left med. line.

"IV. Sev. moles on front and back of neck."

Next the cranium was opened and the brain removed. The scalp was divided by means of a median incision passing from the glabella to the inion. On incising the scalp, a quantity of dark fluid blood escaped. The scalp was of moderate thickness, firm and well adherent to the skull. The two flaps of the scalp were dissected from the skull, and drawn down on either side of the head. The sutures were well-marked, and no synostosis was observed. Supernumerary or abnormally developed bones were not discernible.

The calva was removed by a saw-cut passing around the cranium, about 1.5 cm. above the glabella and about 2.5 cm. above the inion. In Fig. 7 is shown the outline of the thickness of the skull along this section. In the removal of the calva, the saw was supplemented by the chisel and hammer. The calva came off readily, the dura being non-adherent. There was no marked escape of cerebrospinal fluid. Along the saw-cut the skull was slightly flatter in the frontoparietal region on the right side, while it was more curved or rounded on the left. The right parieto-occipital region was a trifle fuller than on the left side. The markings on the internal surface of the calva, such as the groove for the superior longitudinal sinus and for the meningeal vessels, the digitations, and the impressions for the Pacchionian bodies, etc., were all distinctly marked. The dura was grayish-white, moderately translucent and somewhat dry; there existed a marked engorgement of dark fluid blood. The dura was neither tense nor loosened. The Pacchionian bodies were of the usual number and distribution. The inner surface of the dura was fairly moist. There were no evidences of hemorrhagic pigmentation or of pachymeningitis.

The brain invested by the pia-arachnoid was exposed by crucial incisions into the dura, which was perfectly non-adherent to the membranes within. The brain was carefully removed, and during most of the subsequent examination was kept in a salt-solution (about 1 part in 20 of water). At the time of removal, still invested by the pia-arachnoid and with the ventricles unopened, the entire brain weighed fifty-one and a half ounces avoirdupois (1,460 grams).

The base of the skull was normal in every respect.

The pia-arachnoid was of normal thinness, and devoid of opacities or other signs of disease—past or present. The only unusual appearance was an injection of bright red blood in the finer vessels of the pia, due, if we may judge from previous reports of autopsies on electrocuted criminals, to the high electromotive force exerted by the fatal current in this part of the body. The pia was stripped off with ease, being nowhere adherent to the cortex.

Profile view of the plastercast.

Examination of the Brain.—In general, the brain presents no marked peculiarities of shape or size. It is firm to the touch, and no portion of it, despite most careful examination, feels softened or indurated. (Figs. 1, 2, 3 and 4.)

The brain was divided into its natural segments according to the following method: The ectal border of the optic tract and the tænia thalami ("ripa" of Wilder) are used as guides for a single simple incision; those of either side converge cephalad to meet in front of the chiasm; the usual cut through the callosum and the terma (lamina terminalis) completes a tri-section which leaves the cerebrum (prosencephal) and brain-axis separated as nearly the ideal as can be. This mode of dissection is a modification of Meynert's plan, and is a method by which each hemicerebrum, with the insula intact, is separated from the brain-stem; whereas, Meynert, by trenching round the circuminsular boundaries, separates the convex cortical mass from the brain-stem plus the insula, leaving a cortical component attached to the axial structures. The Meynert method consequently does not give the weight of the cerebral hemispheres strictly speaking. As far as the caudatum and lenticularis are concerned, this would not be a serious objection; but as it also excludes the important cortical area of the insula—no inconsiderable portion of the cerebral projecting and associating tracts—it falls short of the method adopted here.

After the brain had been thus dissected and drained and the pia-arachnoid stripped off the cerebrum, the segments were found to have the following weights:

	Grams.
Left hemicerebrum (without pia)	585
Right hemicerebrum (without pia)	600
Cerebellum (with pia-arachnoid)	166
Isthmus (with pia-arachnoid)	64
	1,450

or a trifle less than 50 ounces.

Examination of the paracœles (lateral ventricles) in both hemicerebra revealed the veins of the striatum (the striatal veins) injected with deep violet-colored blood. The cornua were of normal extent and conformation throughout. The endyma was smooth, the choroid plexus was normal and contained little blood; the velum interpositum ("velum" of Wilder) was normal.

Description of the fissures and gyres:

Left Hemicerebrum.—The sylvian fissure is 6½ cm. in length; the episylvian, 2¼ cm.; the hyposylvian is absent. The presylvian ramus is 2 cm. in length, the subsylvian 1 cm. in length.

The central fissure is fairly flexuous and ramified; it is uninterrupted throughout its length, and is separated from the sylvian by a narrow isthmus. At its ventral end the fissure terminates in a hook-like manner. The dorsal end appears on the mesial surface. The supercentral fissure is confluent with the superfrontal, but is separated from the precentral. The superfrontal is distinct in the mid and postfrontal regions, but is absent in the prefrontal regions. The three-tier type is preserved in the prefrontal region by the existence of a medifrontal fissural segment about 4 cm. in length, and which is confluent with the orbitofrontal. This is not very clearly seen in the figure, owing to the effect of the convexity. The reader is referred to the schematic outline in Fig. 8.

The precentral fissure is confluent with a small diagonal fissure, and this in turn with the presylvian.

It sends an "anterior precentral ramus" across the medifrontal gyrus to anastomose with the superfrontal fissure.

The subfrontal fissure is independent and sends off several rami into the neighboring gyres. There is a long radiate fissure.

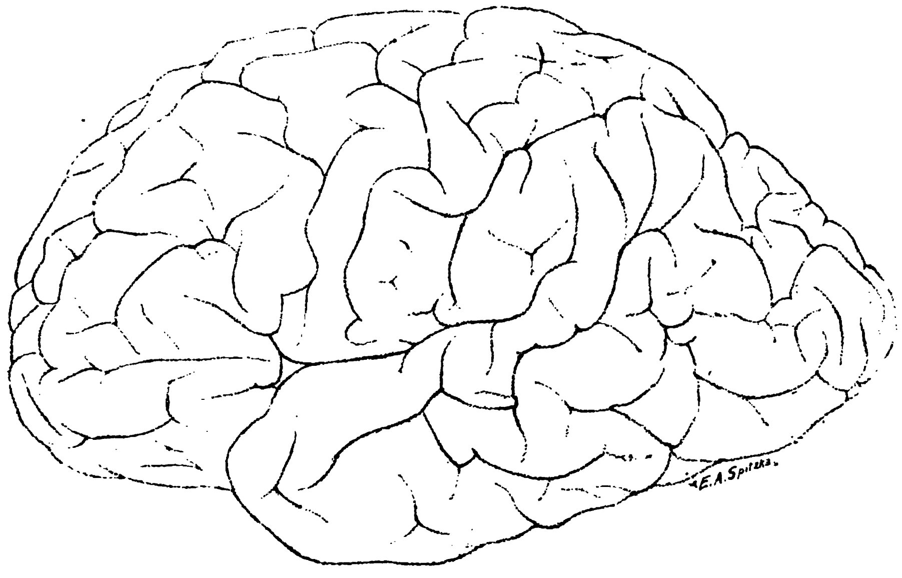


Fig. 1. Lateral view of the left hemicerebrum of the assassin Czolgosz. This drawing, as were the others of the brain, was made from the fresh specimen immersed in a salt-solution. Although the author cannot aver photographic accuracy, these drawings show the disposition of the fissures and gyres in a fairly correct manner.

The precentral gyrus is not very broad as compared with the postcentral. The three frontal gyres are fairly massive and marked by fissures which run generally transverse.

The postcentral fissural complex consists of three segments. The dorsal one is very flexuous and ramified, but independent. The middle segment is confluent with the parietal, and is only superficially joined to the third segment, the subcentral. The transpostcentral is hardly visible on the external surface, but on examination is found to communicate with the circuminsular fissure.

The parietal fissure is notable for the angle which it makes with the intercerebral cleft, converging rapidly toward it as it passes caudad. It communicates with the paroccipital fissure over a vadum about 6 mm. in depth. Otherwise the paroccipital does not communicate with any other fissure. There are two transparietal fissures; the cephalic one communicating with the precuneal fissure on the mesial surface.

The temporal lobe is of good size and shape. The supertemporal fissure is uninterrupted throughout its length, and communicates with the intermedial over a slight vadum. The meditemporal fissure is represented by four segments. Numerous fissures, the "lateral occipital" among them, mark the region of the occipito-temporal transition. The post-calcarine fissure appears on the lateral surface for about 2 cm.

The postcentral gyrus is of good development and is fairly wide. The marginal, angular, and postparietal gyral portions of the subparietal lobule exhibit a moderate development. The parietal gyrus is of cuneiform shape, broad cephalad, narrow caudad. The supertemporal gyrus is very sinuous. The remaining temporal gyres are fairly wide and well developed.

The subcalcarine gyrus is wide in its caudal portion. The cuneus is small, rather unusually so. The precuneus is of good size and conformation. The paracentral gyrus is of typical appearance and of the usual size. It is traversed by a well-marked inflected fissure and by a tri-radiate intraparacentral fissure. The mesial surface of the superfrontal gyrus is of moderate size and is marked by five or six transverse fissures, three of which are rami of the supercallosal. The callosal gyrus in its cephalic half is doubled by a long fissure running parallel with the supercallosal; in its caudal part it is traversed by several transverse fissures.

There are two well-marked rostral fissures (rostral and subrostral) and a short transrostral. The supercallosal fissure is long and anastomoses with the paracentral over a vadum of 5 mm.

The paracentral fissure in turn anastomoses with the precuneal over a vadum of 3 mm. The occipital and calcarine fissures anastomose freely. A "posterior cuneolingual" subgyrus tends partially to separate the calcarine from the postcalcarine. The collateral fissure is fairly well ramified.

The insula exhibits a good development. There are six gyres proper, with seven peri-insular digitations. The insula was completely covered by th opercula.

Right Hemicerebrum.—The sylvian fissure is 5½ cm. in length; the episylvian, 3 cm.; the hyposylvian, 1½ cm.; the presylvian, 2½ cm.; the subsylvian is very short. The central fissure is uninterrupted throughout its length, and is separated from the sylvian by a very narrow isthmus. Its dorsal end crosses the dorsi-mesal margin. The supercentral fissure anas-

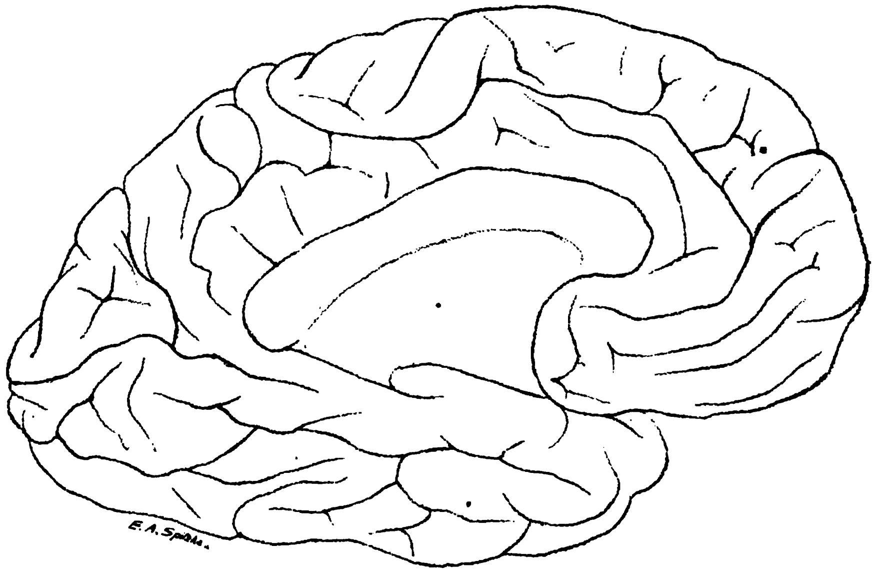


Fig 2. Mesial view of the left hemicerebrum.

tomoses with a long superfrontal fissure, but not with the precentral.

The precentral fissure joins both the transprecentral and the diagonal, and by means of these the sylvian cleft.*

This fissure gives off an "anterior precentral ramus," from which springs the caudal segment of the subfrontal fissure.

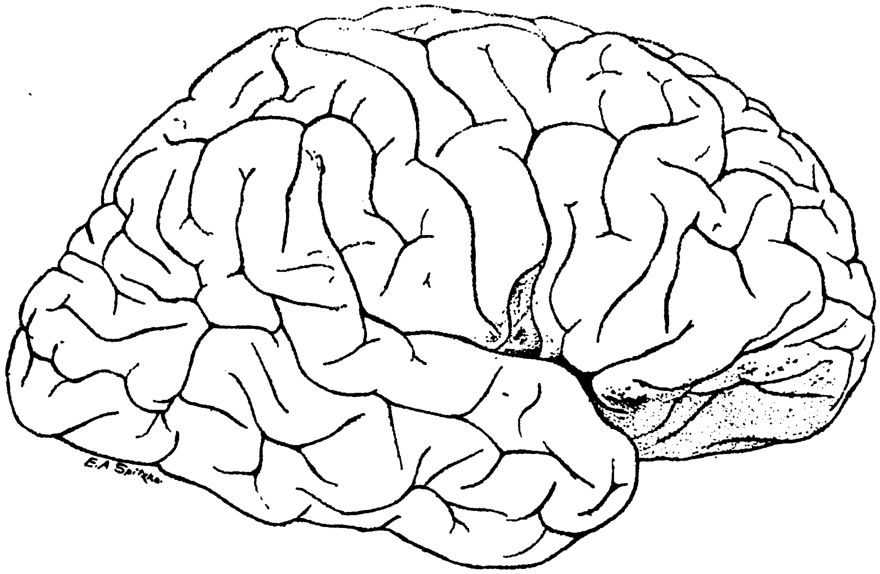


Fig. 3. Lateral view of the right hemicerebrum.

The superfrontal fissure is long and uninterrupted, extending nearly to the frontal pole. There is no true medifrontal fissure present. The subfrontal fissure is in two segments, the caudal segment being confluent with the precentral by means of its "anterior ramus," the cephalic segment anastomoses with the orbito-frontal. Besides an independent radiate fissure, there are other unnamed fissures in the subfrontal region. There are two long sagittally directed orbital fissures; the lateral one of these communicates with the orbitofrontal.

As in the left half, the precentral gyrus is rather narrow as compared with the broader postcentral gyrus. The three frontal gyres are all of good width and are chiefly marked by transverse fissures.

The postcentral fissural complex is made up of two segments superficially confluent with each other. The dorsal segment is short. The ventral segment is longer, and is confluent with the parietal fissure. The parietal fissure is uninterrupted, deep, and separated from the paroccipital fissure by an isthmus. There is a well-marked post-paroccipital fissure, and one distinct transparietal.

The subtemporal fissure is long, uninterrupted, and not deeply confluent with any other fissure. There are four meditemporal fissural segments. The intermedial joins the parietal. There is a fairly well-marked "lateral occipital" fissure.

The postcentral gyrus is fairly wide and flexuous. The parietal gyrus is wide, and exhibits the same cuneiform shape as described for the left side. Of the subparietal gyres the angular gyrus is of fair size, while the remainder of this territory shows only a moderate development. The paroccipital gyrus is very small, but quite flush with the general surface of the brain.

The gyres of the temporal lobe show very good development, and in the occipito-temporal transition the markings are quite complex.

On the mesial surface the supercallosal fissure consists of two segments, and there is a similar duplication of the callosal gyrus (in its cephalic portion) as has been described in the left half. A notable peculiarity consists in the confluence of the inflected fissure with the paracentral stem, while the cephalic paracentral limb is separated from its stem, but is joined to the caudal end of the supercallosal. There is a triradiate intraparacentral. The precuneal fissure would be independent, but for a superficial junction with the paracentral.

The occipital fissure is deeply confluent with the calcarine. The postcalcarine is triradiate and separated from the calcarine by a "posterior cuneolingual" isthmus.

The superfrontal gyrus is fairly well marked by many transverse fissures, and by two long and distinct rostral (rostral and subrostral) fissures. The precuneus is large, a little larger than its fellow on the left side. The cuneus is as small as on the left half. The subcalcarine gyrus is of considerable width in its caudal portion.

The insula presents an ordinary degree of development, and, as on the left side, possesses six gyres, with seven peri-insular digitations.

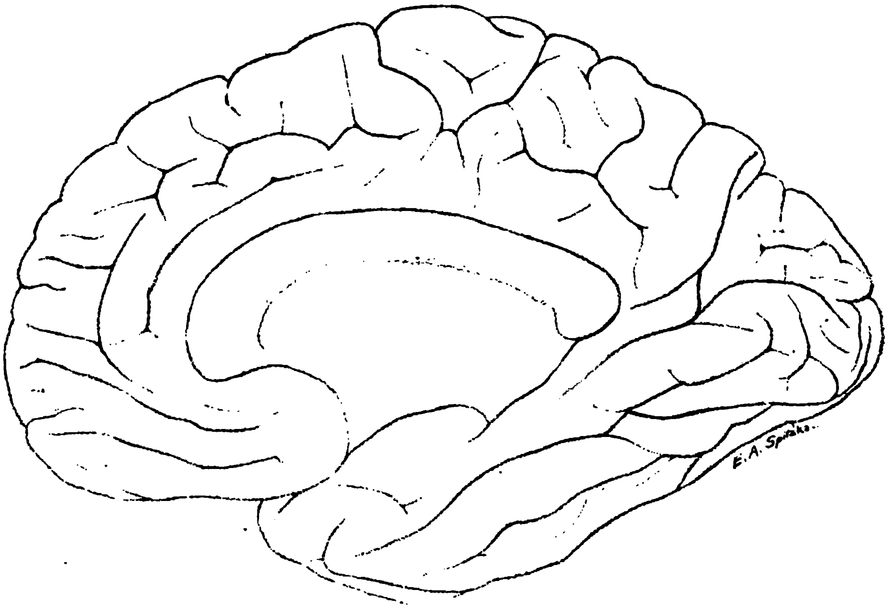


Fig. 4. Mesial view of the right hemicerebrum.

Sections of the Brain.—In cutting the brain, the resistance to the knife suggested neither increased nor diminished consistence. The cut surface was moderately moist, the gray, as well as the white, matter was of normal color, the cortex was of the usual thickness, and there existed neither anæmia nor hyperæmia. No hemorrhages, sclerotic patches, neoplasms, or other lesions were discoverable.

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*Found by Sernoff in 40 per cent. of Polish brains.

The basal ganglia, crura, cerebellum, pons, and oblongata were all perfectly normal, there being even an absence—so far as the naked-eye examination could determine—of the small hemorrhages in the floor of the fourth ventricle, which have been usually found in electrocuted criminals.[2]

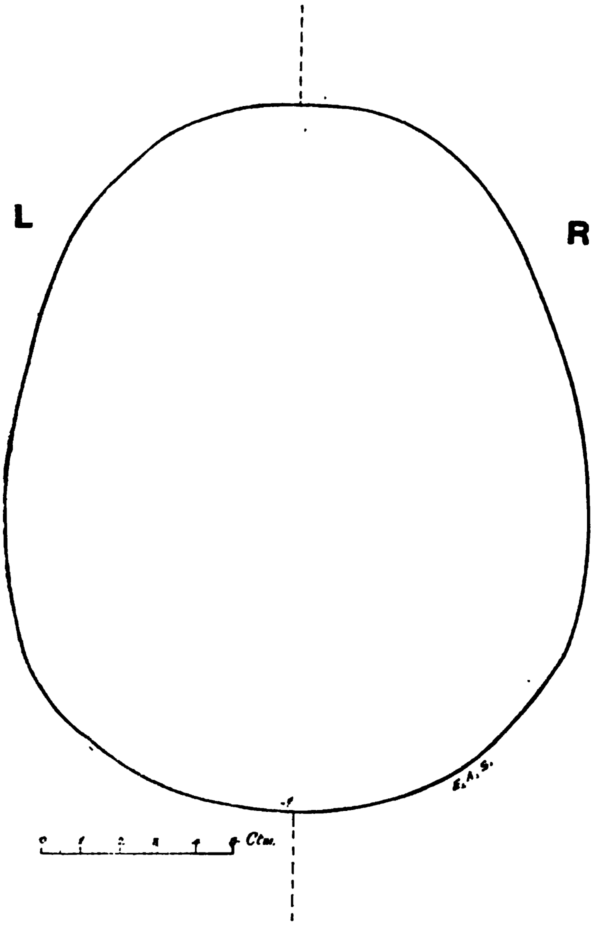

Fig. 5. Horizontal outline of the head (by lead-strap)

The spinal cord was not examined.

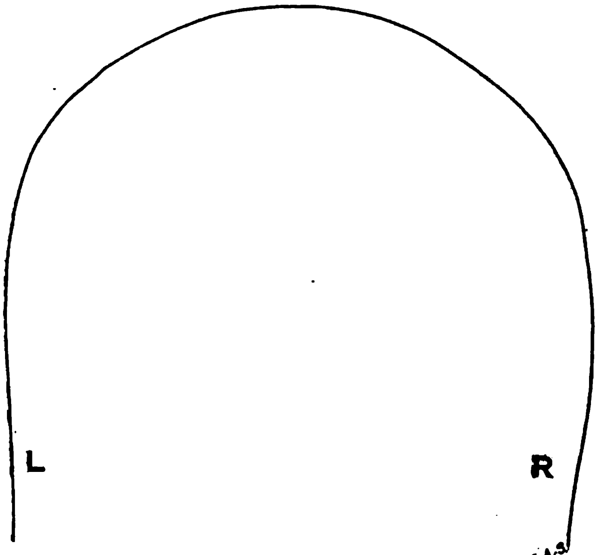

Fig. 6. Outline over the vertex, from ear to ear (taken just in front of the roots of the zygomæ)

Examination of the Thorax and Abdomen.—An incision was made from the top of the sternum to the pubic symphysis, a quantity of dark fluid blood escaping. The diaphragm was found attached to the sixth rib on both sides of the sternum. About three to four fluid drachms of clear fluid were found in the pericardial sac. The heart was firm and appeared to be in a tetanized condition; it had ceased in systole.

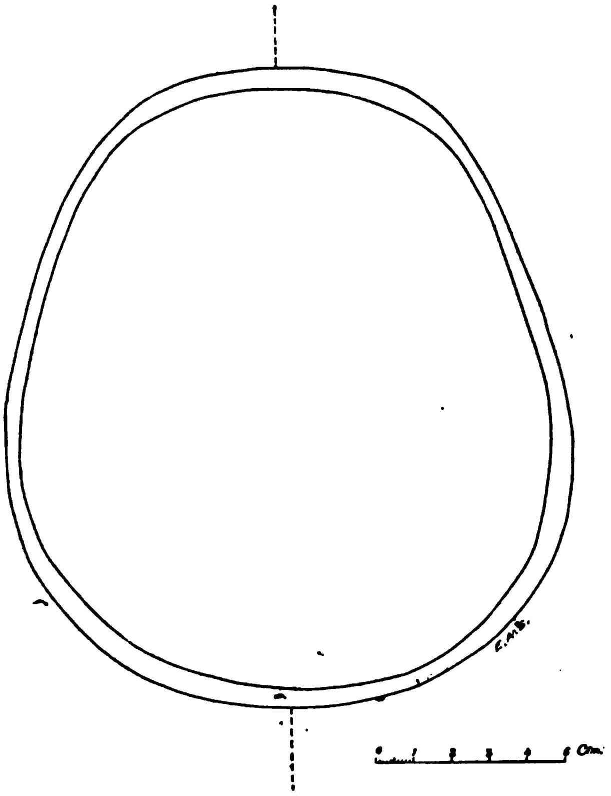

Fig. 7. Outline drawing of the skull in the plane of the saw-cut described in the text, showing the thickness of the bones.

This contracted condition of the heart is doubtlessly due to the high electromotive force of the fatal current. The ventricles were empty; the heart walls, endocardium, and valves were normal. The weight of the heart was eleven ounces. Both lungs were somewhat emphysematous, floating a trifle more than half out of water. They were moderately pigmented and of firm consistency. None of the bronchial lymph nodes were enlarged. Except for a few bands of pleuritic adhesions of the right lower lobe, there were no lesions in either lung. The left lung weighed 7¾ ounces, the right lung 8½ ounces.

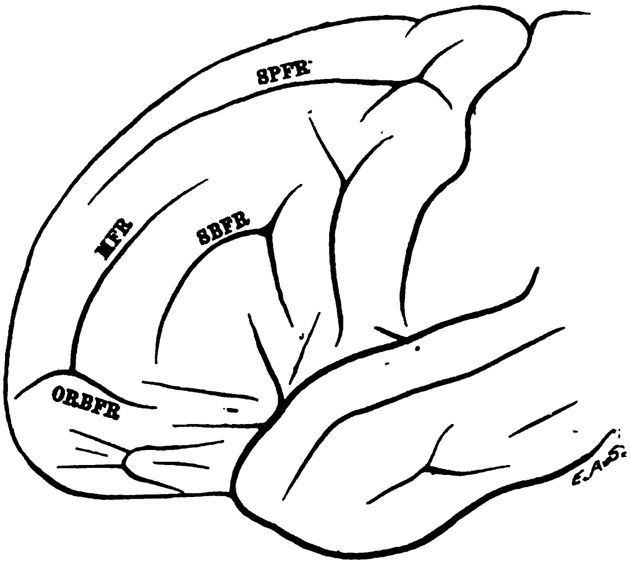

Fig. 8 Diagrammatic sketch, showing disposition of the fissures and gyral tiers in the frontal lobe of Czolgosz

The larynx, aorta, and the venæ cavæ were normal.

The stomach was in a normal position, well contracted, and well under the diaphragm, with only a small residue of food near the pyloric end—the prisoner having had nothing to eat since the evening before the execution.*

The examination of the intestines was a brief one, as nothing unusual was seen. The appendix was 8 cm. in length, free, and lay dorsad and mesad of the cæcum.

The pancreas was normal.

The liver was dark, hyperæmic, but healthy; there were no patches, infarctions, or other lesions. The gall-bladder contained about one ounce of clear bile. The liver weighed 61 ounces.

The spleen was also hyperæmic, mottled with light pink streaks, but of normal structure. Weight, 7⅜ ounces.

The kidneys were moderately supplied with fat, markedly hyperæmic, but all the structures could be made out clearly to be of normal condition. The left kidney was somewhat larger than usual. The capsule was non-adherent in both instances. The left kidney weighed 7½ ounces; the right weighed 5½ ounces.

The bladder was somewhat contracted, firm, and contained about three ounces of clear urine. The bladder wall and mucous membrane were normal in all respects. The prostate was rather firm, but not enlarged. The urethra, testes, etc., were normal.

It had been the writer's purpose to make a fuller anatomic and anthropometric investigation upon the assassin, but the peculiar circumstances which arose in the matter of the disposal of the body, and the anxiety of the prison's warden to put the body under earth, forced me to conclude my researches after having obtained the most essential data for purposes of record and future study.

The results of the necropsy can be summed up by saying that Czolgosz was in excellent health at the time of his death. There was, of course, a marked condition of hyperæmia of all the viscera, and the blood was considerably altered in that it remained fluid, doubtlessly due to the destruction of the fibrin ferment, or of the fibrinogen, or both. These phenomena, as also the seemingly tetanized condition of the heart, have been observed by E. C. Spitzka, Carlos F. MacDonald, VanGieson, and E. W. Holmes[3] on criminals executed by lethal currents of electricity.

The external appearances of the body of the assassin, especially the facial expression, have been admirably described by Murat Halstead, who happened to be present, in a short but vivid account of the autopsy entitled "Czolgosz After Death."

"The spectacle was interesting; the assassin had been dead but a few minutes, and was lying at full length on his back on the table provided for the surgeons, his body white as marble, his face not at all distorted. One might say he was as if sleeping, but that would not describe the expression of the features, though that was almost of perfect repose. The head rested on the back part of the table so as to elevate the chin and allow the forehead to slope downward. There was no sign of a great agony; the hair had not been removed for the electrode, but was full of water from the sponge, and in disorder. If there was any mark on the head made by the deadly shock it was not visible. There was a red blotch on the right leg below the knee. . . . The strong throat, with a distinct "Adam's apple," was prominent. The lips were slightly parted with more than the curl they had in life. . . . There was nothing in the appearance of the body of the emaciation from imprisonment so often referred to. Any physician would say the corpse was that of a well-nourished young man. The figure was of good proportions, his limbs especially so. The arms were not muscular. Evidently he was not a man who had cultivated his muscles by exercise or expanded them by labor. The arms were of a young man of leisure—smooth, round, and fair. His hands were not in any way notable. He had high insteps, neat ankles, and long toes. The muscles of the legs were better developed than those of his arms, indicating he was swift of foot. He was not noticeably spare in body; his chest was round and symmetrical—not lean—but the ribs quite distinct. With his head thrown back, it seemed to have been well poised in life, more so than is shown in his pictures—all of which that are familiar having been taken in prison. Nothing in his face or his person gave indication of heavy feeding or drinking, or of evil indulgence. There were none of the inevitable traces of confirmed dissipation."

The question as to whether his body invested a healthy mind opens up a wide topic for discussion which it is not entirely in the writer's province to pursue. So far as our knowledge of the correlation of brain-structure and brain-function extends, nothing has been found in the brain of this assassin that would condone his crime for the reason of mental disease due to intrinsic cerebral defect or distortion. The brain-weight, though by itself unimportant, when considered in its other relations, points to a good condition of the organ. Divested of its membranes, dissected, drained and after being immersed in a salt-solution for several hours, its weight was 1,415 grams, a trifle less than fifty ounces. This weight is even a little over the average. Giltschenko[4] records observations upon the weight of 102 Polish brains, the average being, for males, 1,397.8 grams, with an average stature of 168.12 cm. The development of the fissures and gyres, from a morphological viewpoint, has taken place in the direction usual in ordinary average brains. There are no marked evidences of arrested development or of pithecoidal anomalies. Generally speaking, this brain does not exhibit that especial kind of asymmetry of gyral structure in the cerebral halves that is so characteristic of the brains of highly endowed individuals. There are many features in the one hemisphere that are reproduced almost exactly alike in the other. The few peculiarities encountered in the course of the fissures, such as the confluence of the left precentral, by its anterior ramus, with the superfrontal—across the medifrontal gyrus, or the separation of the right cephalic paracentral limb from its stem, while at the same time the inflected joins the paracentral (a feature found by the writer in nine out of 160 hemicerebra in which the inflected was present)[5] and also the smallness of the cuneus—are insignificant so far as individual brains are concerned, and will be discussed at length in a later contribution.[6]

The skull is not symmetrical, but the asymmetry is slight and fully within the normal range of variation. An absolutely symmetrical skull probably does not exist.

It is a probable fact that certain oft-mentioned aberrations from the normal standard of brain-structure are commonly encountered in some criminal or degraded classes of society, and those who have attempted to found a school of degeneracy have endeavored to explain crime and social wickedness as due to the "accidental persistence of lower types of human organization." But these structural anomalies, so far as they have been described in the brains of criminals, are too few and too insufficiently corroborated to warrant us in drawing conclusions from them. Various perversions or anomalies of mind may exist in this class without presenting a uniform criminal type, either from the sociological or the anatomic aspect. Of course, it is far more difficult—and it is impossible in some cases—to establish sanity upon the results of an examination of the brain than it is to prove insanity. It is well known that some forms of psychosis have absolutely no ascertainable anatomical basis; and the assumption has been made that these psychoses depend rather upon circulatory and chemical disturbances. So far as this question touches upon the brain and body of Czolgosz, there have been found absolutely none of those conditions of any of the viscera that could have been at the bottom of any mental derangement. Taking all in all, the verdict must be, "Socially diseased and perverted, but not mentally diseased." The most horrible violations of human law cannot always be condoned by the plea of insanity. "The wild beast slumbers in us all. It is not always necessary to invoke insanity to explain its awakening."

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*The "hearty breakfast" so graphically described in most newspapers was but a figment of the imagination.

In conclusion, the writer wishes to express to Dr. Carlos F. MacDonald his appreciation of and thanks for the exceptional opportunity afforded in the performance of this autopsy.

66 East Seventy-third Street

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A CASE OF FACIAL HEMIATROPHY.

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MILWAUKEE, WIS.

The case I am prompted to report is one of such great rarity that this feature alone may truly claim our interest. While our knowledge regarding linear atrophies of the skin, striæ atrophicæ, is quite complete, and many cases have been reported in which nervous disturbances have resulted in more or less atrophy of the skin, the cases of so-called idiopathic atrophy are very rare, and little is known of their pathogenesis.

The patient is an unmarried woman of about twenty-four years of age, of healthy parentage without hereditary taint, excepting one sister who died of tuberculosis. Her father and mother are fifty and fifty-two years old, respectively, are in good health, as are also four brothers and five sisters. When thirteen years old, she was taken ill with scarlet fever, accompanied by an unusually severe angina. She has never suffered from any nervous affection, nor has she had any symptom pointing to nervous exhaustion. Her health seems to be perfect, excepting a condition and appearance of anæmia. At the age of nineteen the present disease began to show itself on the forehead of the left side of the face in the formation of pigmented patches accompanied at their appearance with considerable pruritus. At present the most conspicuous and noticeable feature of the malady is the presence of irregularly distributed patches of chloasma below the general level of the integument of the left side of the face. This symptom is especially prominent on the forehead, the atrophic and pigmented area extending from the base of the nose about an inch into the scalp, rendering the portion affected hairless. One rather deep-running sulcus marks the median line of the forehead and the chin. A similar scleroderma-like patch, also pigmented, is noticeable in the temporal region, and from the malar bone prominence to the angle of the mouth. Irregularly defined chloasma spots mark the left side of the neck. The disease began visibly with the appearance of the pigmentation on the forehead, spreading thence to the lower portions of the face and attended by considerable itching, tingling, and burning, accompanied by gradual atrophy of the part affected. There is no dilatation of capillaries. The tip of the nose and the left half of the upper lip are drawn toward the affected side, as is also the muscular part of the left side of the chin, undoubtedly due to traction on the parts from atrophy of the adipose element of the integument.

I am indebted to Dr. Carl Zimmermann for the examination of the patient in regard to her naso-pharyngeal, laryngeal, ophthalmological, and aural condition, and the following description of the changes noted:

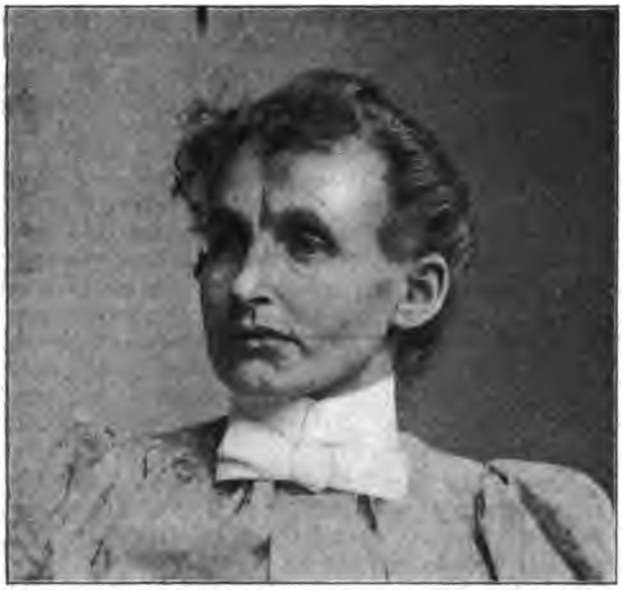
Nose.—The cartilage of the left ala nasi is so atrophic that it feels flabby, as if it consisted only of skin. The left nostril shows no irregularity, but the left choana reaches up higher than the right. The left side of the palate also shows a little higher arch than the right. The left faucial tonsil is hyperplastic. The left half of the tongue is atrophic, and so is the left lingual tonsil, so that the left side of the anterior surface of the epiglottis is more open to view than the right; the space between tongue and epiglottis being larger on the left than on the right side; the larynx shows no asymmetry.

Eyes.—The surface of the left upper lid is smooth; its fold is entirely gone. Instead of a convexity below the supraorbital margin and above the eyeball, due to the support of the latter, there is a deep excavation on the left side. The left upper and lower tarsi are thinner than the right, and the eyeball is therefore felt nearer to the finger through the closed lids. Intraocular tension is diminished on left side. The left caruncle and semilunar fold are sunk back, and in closing the eye the lacrymal canaliculi leave a space between each other, but the palpebral fissures are equal. The lashes and hair of the eyebrows on the left side show no difference from those on the right side. The left eyeball is not smaller, but a little farther in the orbit (enophthalmos). The scleral vessels are slightly injected. The pupils react equally and normally to light, directly and consummately, but the left pupil is a trifle wider than the right. Visual field and color perception are normal. The ophthalmoscope shows hypermetropic astigmatism, and a scleral ring about the optic disks a little more marked on left eye. The fundus shows no difference of pigmentation from that of the right eye.

Ears.—The left auricle is smaller and thinner than the right. The left vertical diameter is five-eighths inch shorter than the right; the horizontal, one-quarter inch. The cartilage of the left auricle and meatus is atrophic, and therefore the left meatus is wider. It gaps so much that the whole posterior portion, hammer, and a small portion in front of the hammer can be seen without straightening the curvature of the meatus by pulling the auricle upward and backward, and without a speculum. There is no difference in the secretion of the ceruminous glands.

Hearing.—Watch, right, one foot; left, four feet; whispered voice, right, twelve feet; left, fifteen feet. Tuning fork in front of ears better heard in left ear.

The following sketch, showing inch measurements of both sides of the face, will illustrate the actual difference in size of the two halves of the face:



The principal and apparent symptom in this disease is the circumscribed atrophy of the skin of the face. This atrophy begins at any part of the face, usually the forehead or cheek, accompanied by discoloration. The atrophic region is of irregular outline and growth, sometimes traversed according to location by grooves and ridges. The extent of the atrophy is variable; it may remain localized to a certain part of the face, and may even extend into the other side of the face into the scalp, neck, and ear. Sometimes only the skin is affected, usually the adipose tissue, muscles, and bones. Oftentimes the hemiatrophy extends to the cartilages of the nose, the tongue, palate, uvula, and tonsils.

Of concomitant symptoms attending the above tissue changes the most frequent are hyperæsthesia of the trigeminus, paræsthesias in the region of the skin lesion, and spasms of the masticator muscles. Rarely the sympathetic, causing dilatation of the pupils and innervation of the bloodvessels of the face, is affected, but exceptionally there is lessening of susceptibility.

The hemiatrophia facialis progressiva (aplasie lamineuse progressive, trophoneurosis faciali) was first described by Romberg, and but one hundred cases have so far been reported. The disease is not known to be hereditary. All authors seem to agree as to three etiological factors: (1) Its beginning in youth (seventy-five before the twenty-fifth year thirty before the tenth, twenty-four before the twentieth, and ten after the twentieth year; (2) The predominance of the female sex (sixty out of ninety). (3) The greater frequency of the affection on the left side of the face (fifty-three to thirty-three of the right side). In a majority of cases a peculiar sequelar connection with some infectious or contagious disease, as morbilla, angina, scarlatina, typhoid fever, pneumonia, inflammatory rheumatism, erysipelas, or abscess of tooth seems evident. Traumatic influences due to a blow received, injury to the eyeball, a fall, etc., have been mentioned in a few cases as exciting causes.

Pathologically, the results obtained are not very satisfactory, the principal post-mortem investigation having been made by Mendel (*Neurol. Centralblatt*, VII, 1888), who comes to the conclusion that hemiatrophia facialis is caused by an interstitial neuritis of the trigeminus. Most observers admit the affection to be a trophoneurosis of the trigeminus, facial, and sympathetic, or a morbid condition of the G. Gasseri and sphenopalatinum, since other trophic disturbances, as herpes zoster, discoloration of the hair, neuroparalytic affection of the cornea, are known to be caused by irritation of the sympathetic. Other observers call the disease a primary atrophy of the adipose tissue *per se*, causing contraction of the elastic fibers whereby the bloodvessels and sebaceous hair follicles are mechanically compressed, leading to permanent atrophy. Professor Nothnagel distinguishes two pathogenic forms of hemiatrophia facialis: a lesion of the highest cervical ganglion of the sympathetic, through which all vasomotor fibers of the facial region pass; and an interstitial neuritis of the trigeminus, with degeneration of the descending roots of this nerve in the brain.

2300 GRAND AVENUE.

Abscess of the Liver in the Temperate Zone.—Abscess of the liver is comparatively rare in the temperate zone, especially in children, and it is also more fatal here; the diagnosis is very difficult, due to the lack of our clinical material, and the disease is thus often discovered only at the autopsy. Rumiantseff reports a case of abscess of the liver in a boy fourteen years of age. The enlarged spleen and the chills aroused the suspicion of malaria, but quinine was given without result, and the plasmodium malariæ was not found in the blood. The examination of the urine, and the absence of pain upon pressure of the abdomen, gave negative results. Only at the end of the disease the appearance of jaundice and other symptoms of disease of the liver led to the suspicion of abscess of the liver, which was confirmed at the autopsy. Oddo, in view of the difficulty of diagnosing the disease, divides it into three groups: (1) Ordinary cases characterized by the predominance of local symptoms and most accessible to diagnosis; (2) Concealed forms of the disease in which the general or extrahepatic symptoms are the most pronounced; and (3) Mixed forms of the disease, in which the general symptoms predominate and conceal for some time the local hepatic symptoms.—*Meditsinskoe Obozrenie.*

Hemorrhage Into the Labyrinth (Menière's Disease).—M. G. Dadin reports a case of hemorrhage into the labyrinth. This is regarded as one of the rarest of the diseases of the ear, and in all the literature on the subject the author could not find more than twenty-seven cases. The symptoms which came on suddenly were: Complete deafness, noises in the ears, headache, and dizziness. The external and middle ear being uninjured, and the structural and functional nervous disturbance having been excluded after a careful examination, the proper differential diagnosis was arrived at. The acute symptoms subsided somewhat after a few months, but all modes of treatment proved unavailable. The disease is incurable. Regarding the etiology in this case, Dadin thinks that it might have been either congestion due to the fact that the patient had to stand for several hours a day near a hot stove in a small kitchen, or it might have been a sequela of the grippe, from which the patient had suffered some time previous to the hemorrhage, the influenza poison being capable of affecting not only the nervous, but also the vascular, system.—*Meditsinskoe Obozrenie.*

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New York, January 4, 1902.

THE COMMUNICABILITY OF HUMAN TUBERCULOSIS TO CATTLE.

So firmly established has become the belief in the intercommunication of human and bovine tuberculosis that even the dictum of so distinguished a bacteriologist as Robert Koch has not proved sufficient to insure acceptance of the contrary view. The validity of the opinion expressed by Koch at the recent Congress of Tuberculosis held in London was at once questioned, and already the matter is being subjected to rigid scrutiny, investigations having been set in progress that, it is hoped, will solve definitely this most important problem. A long time may, in the nature of things, elapse before it can be proved that bovine tuberculosis is transmissible to human beings, but it should be a comparatively simple matter to show whether human tuberculosis can be communicated to cattle. Evidence in support of the belief that human beings may acquire tuberculosis from cattle has already been brought forward, and at a recent meeting of the Pathological Society of Philadelphia, Dr. M. P. Ravenel reported the case of a laboratory assistant who developed tuberculosis of the skin as a result of inoculation from a cow. In the cutaneous lesions were found numerous tubercle bacilli and also typical giant cells, and with some of the tissue it was possible to inoculate and develop tuberculosis in guinea-pigs. It seems almost likely that it will be found that human and bovine tubercle bacilli are identical, though representing varying degrees of infectivity and pathogenicity, or that they are, at any rate, so closely related as to be included in the same family. A small number of observations demonstrating incontrovertibly the communicability of human tuberculosis to calves has recently been reported in a preliminary communication by Professor Sheridan Delépine of Manchester (*British Medical Journal*, October 26, 1901, p. 1224). In order to insure at least an average degree of virulence on the part of the bacilli, a mixture of tuberculous sputum from six patients was employed in the experiments. With this, one calf was inoculated directly into the lung; another, subcutaneously; a third, into the peritoneum; while to a fourth was given, in two meals, milk containing ten times as much sputum as the others were given by inoculation. The first animal presented after death a generalized tuberculosis, which, it is thought, had antedated, and was not due to, the inoculation. In the second animal, marked enlargement of a gland five inches from the site of inoculation was present, without other traces of tuberculosis, while living and virulent tubercle-bacilli were found in the affected gland; but, as the bacilli injected under the skin might have been carried from the site of inoculation and remained alive without actually producing tuberculosis, this experiment is discarded, although it is in perfect agreement with the results obtained in guinea-pigs that have been proved to indicate early tuberculous infection in these animals. In the third calf no definite reaction to tuberculin was obtained twenty-six days after inoculation, although it appeared sixty-eight days after inoculation, and post-mortem examination seventy days after inoculation disclosed marked tuberculosis of the peritoneum, extending gradually to the pleura and the pericardium, and involvement also of a few of the lymphatic ganglia connected with the peritoneum. The fourth calf died twenty-six days after ingestion of tuberculous material, and only tuberculosis of the glands connected with the alimentary canal was found, with tubercle bacilli in the œsophageal glands. Thus, of four calves inoculated with human tubercle bacilli, tuberculosis developed in two that survived long enough for definite results to appear. Observations of a similiar character have previously been made by others, and there can be no question as to their significance. Taken in conjunction with existing evidence, it must be conceded that they prove conclusively the communicability of human tuberculosis to cattle.

MENTAL DISEASE AND ITS PROGRESSION.

NERVOUS affections are at once the outcome, and the bane of modern civilization. They are the tribute exacted from those who wilfully rebel against the laws of health, by continually living at too high pressure. The people of the present day, through heredity, and other causes, are, for the most part, not best fitted to withstand the excessive mental and physical strain to which so many subject themselves.

Nevertheless, by reason of inherited temperaments, few seem able to live placidly, but hurl themselves with ever-increasing vehemence into the maelstrom of business, dissipation, politics, and the rest.

Thus, while conditions adverse to the conservation of vital and mental force are always intensifying, the human product of latter-day civilization is at the same time more impelled to strive, and less capable of bearing the effort.

The modern man has evoked a Frankenstein which not infrequently devours him. In no country is this state of affairs so manifest as in the United States, and consequently nowhere are mental disturbances more common.

A proper conception of disorders of the nervous system, until recent years, has not been evinced by the neurologist.

Dr. Theodore H. Kellogg published in *The Journal of Nervous and Mental Diseases*, November, a paper entitled "The Stadia of Mental Disease," in which he demonstrates his views with regard to the course of progression pursued by mental maladies. He holds that such affections are essentially progressive, and that like most other diseases, have well-marked stages. For instance, almost all nervous affections plainly have incubatory, acute, and convalescent stages, and while mental diseases are often greatly prolonged, and have multiform symptoms, it is possible, by the careful study and comparison of very large numbers of cases to deduce the rule of the stadia, which form attacks of insanity, and to discover general uniformity in the order in which they occur.

Dr. Kellogg's main conclusions are in brief as follows: The vast majority of attacks of mental disease have but four simple stadia. The main stadium acutum is constituted chiefly of the maniacal, melancholic, or stuporous states, which are mere symptoms—complexes alternating or replacing one another, though sometimes mistaken for separate attacks of insanity.

Mental disease must be regarded as one continuous pathological process, with periodic fluctuations so constant that remissions and intermissions are to be viewed as part of the morbid phenomena.

The diversified curricula of insanity, and the artificial variety of its forms described by modern writers, may, in great measure, be reduced to clinical simplicity by the law of the stadia, conjoined with the maniacal, melancholic, and stuporous states, as here rightly assigned to the position of symptomatic syndromes, rather than independent forms of alienation.

In fine, and in fact, the law of stadium and rhythm and of the dominant states of expansion, depression, and stupor are the only stable data capable of any wide purpose for the logical unification of the multiform manifestations of mental disease.

It will be observed that the point in Dr. Kellogg's argument, which he especially wishes to impress upon the minds of his readers, is that mental disturbances proceed in progressive order, and that independent insanities in rapid succession do not occur.

Dr. Kellogg, referring to the stadia of strongly hereditary insanities, says: "The incubatory stadium progresses on predestined hereditary lines throughout childhood; the stadium acutum begins with the first decided mental disorder at the pubescent crisis, and covers the whole course of life. The apparent recoveries between the attacks are not real, but are only intermissions in the progressive malady which, if life is sufficiently prolonged, ends in a stadium dementiæ of the active kind peculiar to the degenerates."

An intelligent understanding of mental disease can only be arrived at by a close study and observation, and by long and varied experience. The advance in knowledge of nervous affections has been most marked within recent years, and the observations of Dr. Kellogg go to show that this rate of progress is being well maintained.

TREATMENT OF CONSUMPTION BY THE ADMINISTRATION OF UREA.

It has been proved to the satisfaction of a large number of persons that gout and genius are closely allied. For a considerable time, too, the fact has been noted that those possessing the so-called gouty diathesis are seldom the victims of tuberculosis. Gout, then, in addition to having a peculiar affinity with those of that abnormal brain development known as genius, would seem to confer a large degree of immunity to perhaps the most fatal disease from which the civilized race suffers.

Many physicians have, within recent years, drawn attention to this coincidence, Sir Herman Weber in particular.

Dr. Henry Harper, Nottingham, England, has, during the past year, contributed three articles to the *Lancet*, March 9, June 15, and December 7, 1901, in which he gives at length the results of experiments, and deductions therefrom, in regard to this matter. He concluded that if the gouty diathesis renders a person immune, or partly immune to tuberculosis, that the administration of urea, or uric acid, might have a favorable influence upon the disease itself. For reasons which are described at length, urea was chosen as the experimental agent, and, after a trial of two years and a half, Dr. Harper declares that in certain forms of tuberculosis this treatment has met with great success.

Indeed, he goes so far as to assert that urea exerts a specific action on tuberculosis quite as marked as mercury on syphilitic node, salicylate of soda on a painful joint in rheumatic fever, or iodide of potassium on bronchial asthma.

The cases which Dr. Harper considers suitable for the administration of urea are: (1) Circumscribed pulmonary tuberculosis of the lung, in which the sputum exhibits abundance of bacilli and only a limited number of cocci; (2) Enlarged tuberculous glands situated on any part of the body; (3) Tuberculous pleurisy; (4) Tuberculous laryngitis; (5) Lupus; (6) Tuberculosis of peritoneum with fluid in the peritoneal cavity; (7) Hydrocephalus in children, and (8) Tabes mesenterica or carreau. Cases which are unsuitable are: (1) Pulmonary tuberculosis where cocci predominate; (2) Acute miliary tuberculosis with a high temperature (103° F., or over); (3) Gastritis; (4) The last stage of tuberculosis where the patient is dying, and (5) When the patient has a temperature over 101° F.

Mode of administration, beginning with small doses, 10 to 15 grains thrice daily, gradually increasing up to 40, 50, or 60 grains as a maximum.

The best and most obviously apparent good results have been gained from the use of urea in diseases like lupus and superficial tuberculous glands.

Mr. Arthur H. Buck of Brighton in the *London Practitioner*, July, strongly corroborates Dr. Harper as to the value of urea in the treatment of tuberculosis, and gives an account in that journal of a remarkable cure of a case of lupus vulgaris by the administration of urea.

Dr. Harper holds the view that the less animal food ingested, the greater the number of tuberculous cases, and vice versa, and lays down the dictum that "nitrogen and nitrogenous products are the remedy par excellence of the tubercle bacilli."

Our knowledge of tuberculosis and its treatment is constantly growing, and it is possible that Dr. Harper's favorable experience with urea may impel others to experiment along the same lines, and to prove its value and its limits.

The Supply Table of the army medical department, which was revised in 1899-1900, is now undergoing a second revision by a board of medical officers, with a view of correcting any deficiencies and inaccuracies developed by practical experience in the field with respect to the supply table of 1900. Comparisons made on the spot of the equipment of the medical departments of the various foreign armies lately operating in China showed the great superiority of the equipment supplied in the United States service, and Surgeon-General Sternberg is making every effort to maintain this superiority and bring even closer to perfection an equipment already of a very high character.

THE GENERAL MEDICAL COUNCIL OF GREAT BRITAIN.

IT is curious to observe into what ill-odor the General Medical Council of Great Britain seems to have fallen. The references made to it in the correspondence of British medical writers to American journals display a scarcely veiled contempt for its proceedings, and on occasions are indicative of a distinctly harsh and critical attitude toward its composition and all connected with it.

There must, then, be "something rotten in the State of Denmark," or there would hardly be so surprising a unanimity of opinion with regard to the seeming lack of usefulness presented by this ruling body of English medical men.

Perhaps the special correspondent to the MEDICAL RECORD hits the right nail on the head when, in his letter of November 22, he remarks "so little is hoped for from the council, with its solid phalanx of corporation interests."

Mr. Victor Horsley, ever since his election, has been a thorn in the flesh to the reactionary or unprogressive members of the council, and will probably continue to vex their souls with his radical views. It might be to the advantage of the British medical profession at large if more new blood were brought into the council, and if many of its time-honored traditions were upset once and for all. The fight of the coming session will wage fiercely around the midwives' question, To register or not to register.

RELATIVE RANKS IN MEDICAL DEPARTMENTS OF ARMY AND NAVY.

The reappointment of Surgeon-General Van Reypen, of the Navy, to serve in his present position until his statutory retirement for age in the coming spring, calls attention to the inequality of the emoluments and reward for service in the several medical departments of the Government. Surgeon-General Van Reypen, under the existing law, will retire with the rank and pay of rear-admiral—equal to that of a major-general of the army—while Surgeon-General Sternberg, who retires for age at about the same time, must content himself with the emoluments of his present rank of brigadier-general. Without contrasting the relative magnitude of the worth and responsibilities attached to the offices of the medical heads of the army and navy, it would seem that while the naval branch has certainly not received too much at the hands of Congress, the rewards in the military branch are not commensurate with the distinguished services rendered the profession and country.

INCIDENTS IN THE CAREER OF THE LATE SIR WILLIAM MACCORMAC.

Perhaps the most stirring part of the late Sir William MacCormac's active and varied life was the time he spent as a surgeon with the French troops during the Franco-Prussian War.

When he first joined the Anglo-American Ambulance, a body consisting of sixteen medical men, of whom eight were English and eight Americans, it was under the control of Dr. Marion Sims. On the reconstruction of this body, according to a writer in the *Lancet*, December 5, MacCormac was placed second in command, which position he shortly afterward, on the return of Dr. Marion Sims to New York, changed for that of surgeon-in-chief.

Each day considerably more than one hundred major operations were performed, and MacCormac's share of these was more than would have fallen to him by lot. A day of his work at Caserne d'Aspeld cannot be better described than in his own words: "I did not succeed in keeping a record of all the work that was done that day. Indeed, I only wonder I kept any record at all. I find, however, that I performed several amputations of the leg, the thigh, the forearm, and the arm; that I excised the shoulder and the elbow-joints, and also performed partial resections of the upper and the lower maxilla, and of nearly the whole ulna. The number of bullets and pieces of shell that were extracted are too numerous to mention."

Sir William MacCormac's literary output was by no means large. The most popular, perhaps, is: "Work under the Red Cross," an illustrated diary of his experiences during the Franco-Prussian war.

It is undoubted, says the aforementioned contributor to the *Lancet*, that Sir William MacCormac's sudden death was mainly due to the arduous work performed by him in the South African War. He contracted dysentery in South Africa, which so undermined his constitution that he never recovered his wonted vitality. He was to a great extent a martyr to duty and science.

PURCHASE OF MEDICAL SUPPLIES FOR THE ARMY.

The medical department of the army is endeavoring to secure the reënactment by Congress of an old law, which permitted the purchase of medical supplies without the usual formality of advertising for competitive bids in each instance. Because of the peculiar nature of these supplies, it is scarcely practicable to fix a standard upon which intelligent competition can be based. There is, for instance, no established standard for many drugs and chemicals, and different bids for articles of the same name may be for articles of widely different quality, variety and usefulness—price thus becoming the factor least worthy of governing the choice. There are also certain kinds of service, such as laundry work in hospitals, which cannot very well be let out to the highest bidder. Army red tape in this instance certainly stands in the way of an efficient administration, and it is to be hoped that Congress may appreciate the fact and place this matter on a sound business basis.

THE OVER-SUPPLY OF MINISTERS AND PHYSICIANS.

The medical man is apt in these days to bewail his hard lot in having to contend with competition both from without and within, and to declare that it becomes daily more difficult to make a decent living at the practice of his profession. The path of the ordinary medical practitioner is, indeed, not strewn with roses; but, as was pointed out in the MEDICAL RECORD about a year ago, the minister has, in many respects, a rougher road to travel than his medical brother.

The relative earnings of the two professions were then shown to exhibit a decided advantage in favor of the doctor.

Neither of these callings, however, is perhaps paid in proportion to the merits of its followers, or to the expenditure of money and brains requisite to become qualified.

The cost of gaining an entrance to the medical profession is, on the whole, considerably greater than of being admitted to the ministry, and, therefore, it would seem but fitting that the doctor's opportunities of making money should be wider than those of the preacher.

In both instances the reasons for the meager returns are the same, over-supply and consequent bitter competition.

"A Pastor," writing recently to the Chicago *Interior*, decries in strong terms the tendency of the age to aid young men to enter the church, and goes on to say that the apparently inexhaustible supply of young ministers has operated to create a general spirit of restlessness among our churches, so that there is not another business, not another profession, not another enterprise of an honorable character, in which a competent and faithful man holds his position with so much uncertainty as does a pastor.

"We should," remarks the writer, "be willing candidly to acknowledge that we have trained a larger number of ministers than can be respectably supported, and we should cut off the aid now so indiscriminately offered to young men, excepting those who may be willing to go to the foreign field."

If Pastor's facts are true, we agree with him that it is by no means in the best interests of religion that the cost of the training for the church of an altogether superfluous number of young men should be defrayed by charity. The remedy for over-supply in both the medical and clerical profession would be to make the test of education much more severe than it is at present.

SICKNESS IN THE PHILIPPINES.

The report of the Philippine Commission, recently made public, deals largely with matters relating to the public health. Consumption is stated to be the greatest cause of mortality among the natives in Manila, and the Commission says that "measures are now being taken to ascertain the exact whereabouts of all persons in Manila suffering with this disease, with a view to the possible establishment of a consumption colony outside the city limits for those cases where danger of infecting others is greatest." While the number of lepers in the Philippines has been estimated at as high as 30,000, the Commission is rather inclined to the belief that there are actually less than a third of this number of cases of leprosy. "A leper census of the islands is being taken, with a view to the eventual segregation of all persons suffering with this disease on the isolated but fertile and healthful island of Cagayan, where they can be given better care, allowed greater liberty, and made more contented, than when confined in hospitals." The constant presence of bubonic plague in Manila and the adjacent towns, together with the prevalence of smallpox among the natives in a number of provinces, causes the Commission to say that the board having charge of the health interests of the islands has plenty of work to do. For its assistance in the study and diagnosis of disease, the Commission recommends the establishment by the Government of a number of laboratories. The Commission combats the statement made generally in the press that a large number of soldiers serving in the islands have been made insane by climatic conditions, and says that "the truth is that the large majority of cases of insanity among the soldiers have been produced by drinking so-called 'vino,' which has been shown by chemical analysis to contain in some instances as high as 17 per cent. of fusel-oil, and is therefore a deadly poison." Rinderpest is stated to prevail extensively among the cattle of the island.

Explosion in a Utica Hospital.—By the explosion of a water sterilizer, the Fox Hayward surgery in Faxton Hospital, Utica, N. Y., was wrecked on Thursday night of last week. No one was in the room at the time. The damage amounts to about $1,500. The explosion awakened the patients and medical attendants in the institution and caused much alarm until the nature of the accident was ascertained.

News of the Week.

The Quarantine Against Mexican Gulf Ports, established in the spring, has been raised by the Texas State Board of Health and the Marine Hospital Service, these ports being officially declared entirely free of yellow fever.

An Old Primipara.—A woman, sixty-five years old, gave birth last week, in a New Jersey town, to a healthy girl. The woman's husband is seventy years old, though both are said to be young looking for their years, and the couple had passed forty years in a childless wedlock.

Smallpox.—Compulsory vaccination has been decreed in Boston by the Board of Health, an order having been recently issued that all the inhabitants of the city who have not been successfully vaccinated since January 1, 1897, be vaccinated or revaccinated forthwith. There is some question as to the legal right of the board to enforce such an order, which is unqualified in its construction, but it is believed that the board will be backed up in its new position by public opinion, and that no efforts will be spared to carry the order into effect. Since January 1, 1901, there have been 400,000 vaccinations in the city. In Philadelphia the energies of the Health Department are directed to disinfection, 150 formaldehyde generators being in constant use. Not only the infected buildings, but those adjoining them, are regularly disinfected, and the authorities will also disinfect every building, whether public, parochial, or private, which is used for school purposes. There has been a marked falling off in the number of new cases in that city during the past two or three weeks. Five cases of smallpox were found in one house in Jersey City last Saturday, one of the patients being moribund when the health authorities made their discovery. The father was a disbeliever in medical science, and had called in no physician, although his wife and four children were taken down with the disease one after the other. After the sick had been removed to the smallpox hospital, the father himself came down with the same disease. Five other cases have been found in the same neighborhood, all doubtless originating through intercourse with the children of this family.

Sickness Is Very Rife in London, and this fact, in conjunction with the gloom imparted by the Boer war, has caused a feeling of pessimism among all classes. The fever returns of the capital of England have been of late very disquieting It is stated that there were on November 30, 4,985 patients in the several fever hospitals of the board, 3,203 being cases of scarlet fever, 1,521 of diphtheria, and 249 of enteric fever.

The Army Medical Department will not be represented at the Exposition at Charleston, but is already preparing estimates as to the funds and space required for a large indoor and outside exhibit at the St. Louis Exposition in 1903.

Private Julius Heinze, Hospital Corps, U. S. Army, has recently been recommended for a medal of honor as a reward for heroism at the battle of Ganda River, Island of Samar. Heinze fought as long as he was able while shot through both arms and with a bad bolo wound in the back. After recovering from a fainting spell, with both arms in slings, he directed the work of transporting the other wounded until they arrived safely at Calbayoga. The medical officer present recommended Heinze for a certificate of merit, but the commanding general regarded the man's heroism as worthy of the higher award of a medal of honor. This is not the first time that Private Heinze's bravery has won high praise from his superiors, for in the campaign in China, in which he participated, he was recommended for a certificate of merit for distinguished bravery at the battle of Tientsin.

The Marine Hospital Service.—A bill has been introduced into Congress by Mr. Hepburn calling for many changes in this service. It is proposed to alter the name to the United States Health Service, in order to bring the title more into harmony with the work which the evoluted service is now doing. The officers of the new service will be the same as of the old, except that those in charge of the administrative departments in Washington will be called assistant surgeons-general, and the pay of the surgeon-general will be increased to equal that of the surgeon-general of the army. A consulting board is to be created to advise the surgeon-general of the new service in matters relating to public health, and this officer will also consult with delegates from the health departments of the various States and Territories of the Union. Uniformity in the registration of vital statistics is provided for by the bill. It will be the duty of the surgeon-general of the new service to prepare proper forms for collecting the data, in conjunction with the State boards of health, and to compile and publish them as a part of the reports of the service. The consulting board above mentioned will consist of the Surgeons-General of the Army and the Navy, the Chief of the Bureau of Animal Industry in the Agricultural Department, and the Director of the Laboratory in that bureau, and five other members not regularly in government employ. The service will remain a bureau of the Treasury Department, and the Secretary of the Treasury is instructed to prepare rules for the service and to prescribe uniforms for its officers and employees. His annual report will contain a detailed account of the work performed by the health service.

Food Allowance for the Insane.—The State Commission in Lunacy has established a new ration allowance for patients in the State hospitals, which is being made the subject of much sharp criticism. Among the changes it has cut out potatoes from the dietary, substituting therefor certain cereals which a learned comparison of chemical constitutions and calories has demonstrated to be of equal nutritive value. It has also stopped the use of butter at dinner. The managers of the Hudson River State Hospital have sent a formal protest to the commission against the new ration.

Dr. Gordon G. Burdick has been elected a member of the faculty of the Illinois School of Electro-Therapeutics of Chicago.

A Tuberculosis Ordinance in St. Louis.—A bill has been introduced into the City Council of St. Louis making obligatory the reporting to the health authorities of all cases of undoubted pulmonary tuberculosis. Examination of the sputum for diagnostic purposes will be made, on request of the attending physician, by the Board of Health officials. After notification of a case of consumption, the Health Commissioner is ordered to give, through the physician in charge, such printed instructions in relation to the management of the sanitary features and surroundings of the case as will insure the best means of preventing a spread of the disease. The apartments occupied by a consumptive are to be regularly cleaned and disinfected, but it is forbidden to placard any house in which a case of the disease exists. The penalty for not reporting a case of pulmonary tuberculosis is a fine of not less than $50 nor more than $250. This bill was prepared to obviate certain objectionable features in a bill of similar import, which was recently defeated in the council.

Advisory Board of the Pathological Institute.—The Lunacy Commission recently appointed an advisory board for the Pathological Institute of the New York State Hospitals, with whom Dr. Meyer, the new Director, is expected to confer from time to time regarding the scheme of investigation and research. This board consists of Drs. Cattell, Department of Psychology, Columbia University; Ewing, Department of Pathology, Cornell University; Herter, Department of Pathological Chemistry, University and Bellevue Medical College; Bumpus, Department of Biology, American Museum of Natural History; Hun, Department of Nervous Diseases, Albany Medical College; C. W. Pilgrim, Superintendent Hudson River State Hospital for the Insane, Poughkeepsie; A. E. Macdonald, Superintendent Manhattan State Hospital for the Insane, Ward's Island, and Frederick Peterson, President of the Lunacy Commission, *ex officio*.

Metropolitan Medical Society of New York.—At the last meeting in 1901 of this society, the following officers were elected for the ensuing year: *President*, Dr. W. M. Leszynsky; *Vice-President*, Dr. F. L. Wachenheim; *Recording Secretary*, Dr. W. M. Brickner; *Corresponding Secretary*, Dr. S. Yankauer; *Treasurer*, Dr. I. Pierce Oberndorfer.

Philadelphia Neurological Society.—At a stated meeting held [December 23, Dr. D. J. McCarthy gave a "Demonstration of the Absence of the Supraorbital Reflex After Removal of the Gasserian Ganglion." He described this reflex, which consists in fibrillary contraction of the lower fibers of the orbicularis palpebrarum on irritation in the distribution of the supraorbital nerve, and he exhibited two cases, one of removal of the Gasserian ganglion and another in which the sensory division of the fifth nerve had been divided, in both of which this reflex was absent. There thus seems good reason for believing the manifestation a true reflex whose arc is comprised in the supraorbital division of the fifth nerve, the medulla oblongata, and the seventh nerve. Dr. G. Betton Massey read a paper entitled "Static Electricity in the Diagnosis and Treatment of Hysteroidal Disorders." He pointed out the marked tolerance by such patients of current-strengths that cannot be borne by ordinary patients, and he considered this merely as a manifestation of the general state of hypalgesia. Dr. John K. Mitchell made some remarks upon "The Treatment of Locomotor Ataxia," referring especially to the useful influence upon the motor manifestations of rest and massage, of deep pressure and of the application of a flannel bandage in the treatment of the lancinating pains, of lavage in the relief of gastric crises, and of the rapidly interrupted faradic current in that of the rectal crises. Dr. William G. Spiller read a paper entitled "The Area of Anæsthesia Caused by Destruction of the Spinal Cord in a Case of Fracture of the Tenth Thoracic Vertebra, with Exhibition of the Specimen." In this case the knee-jerks were absent, and there was anæsthesia as high as the level of the umbilicus. On post-mortem examination not only was the cord found crushed in the situation of the injury to the vertebra, but there was also inflammation below. Dr. Alfred Gordon read a paper entitled "Remarks on Verbal Amnesia Apropos of a Case of Sensory Aphasia." The patient was a woman with valvular lesions of the heart who, following an apoplectic seizure, presented right hemiparesis, with defect of speech consisting principally in inability to recall the desired word. She heard, saw, and comprehended perfectly, but she exhibited difficulty in reading and in writing. Drs. C. P. Van Epps and D. J. McCarthy read a paper entitled "Gelatinous Exudates in the Cerebral Ventricles," showing a specimen from an insane patient in which a gelatin mass was contained in one of the ventricles.

The Section on Laryngology and Rhinology.—At a meeting of this section of the New York Academy of Medicine, held December 18, 1901, Dr. Emil Mayer was elected Chairman, and Dr. Z. L. Leonard, Secretary.

Prize for an Essay on the Effects of Morphine.—Dr. J. B. Mattison of Brooklyn has offered a prize of $400 for the best paper on the subject: "Does the Habitual Subdermic Use of Morphine Cause Organic Disease? If so, What?" The contest will be open for two years from December 1, 1901, to any physician in any language. The award will be determined by a committee consisting of Dr .T. D. Crothers, Hartford, Conn., editor *Journal of Inebriety*, Chairman; Dr. J. M. Van Cott, Professor of Pathology, Long Island College Hospital, Brooklyn, and Dr. Wharton Sinkler, Neurologist to the State Asylum for the Chronic Insane, Philadelphia. All papers must be in the hands of the Chairman by or before December 1, 1903. They will become the property of the American Association for the Study and Cure of Inebriety, and to be published in such journals as the committee may select.

Memorial Tablet to a Physician.—A tablet to the memory of Dr. Charles Meigs Wilson was unveiled at the Philadelphia Lying-in Charity and Nurses' Training School on December 28. The memorial was erected by fourteen nurses who had been pupils of Dr. Wilson when he was physician to the school. Dr. Wilson was graduated from Jefferson Medical College in 1884 and died in 1891. He was the founder of the Nurses' School, and was chiefly instrumental in having the present hospital building erected.

Generous Bequests.—By the will of the late George W. Farr, Jr., of Philadelphia, residuary bequests are made as follows: Rush Hospital for Consumptives, $5,000; Pennsylvania Hospital, $10,000, the income of which is to be used toward ameliorating the condition of the insane poor by establishing two free beds, one in memory of the testator's father, John C. Farr, and the other in memory of his mother, Clementine A. Farr; Wills Eye and Ear Hospital, $5,000 in memory of his father; Philadelphia Home for Incurables, $5,000, for a free bed in memory of his sister, Emma S. Farr; Polyclinic Hospital, $2,000.

Obituary Notes.—Dr. JAMES M. WALLIS died at Philadelphia on Dec. 28, seventy-seven years old. He received his academic education at Dickinson College and his professional training at the University of Pennsylvania, graduating from the medical department of the latter institution in 1847. On the outbreak of the Civil War he entered the Federal Army and was assigned to duty at Mower General Hospital at Chestnut Hill. He subsequently became Post-Surgeon at Baldwin, Fla., with the Olusteo expedition. At a later period of the war Dr. Wallis was in medical charge of Battery Gregg, and of Fort Wagner, opposite Charleston, S. C., of the Post Hospital at Jacksonville, Fla., of the Annapolis General Hospital, of the hospital at Horn Point, Md., and of the Satterlee General Hospital in West Philadelphia. At the close of the war he resumed the practice of medicine in Philadelphia, retiring, however, some twenty years ago. He is survived by two sons, Dr. J. Edward Wallis and Dr. J. Frank Wallis, and by two daughters, one of whom is the wife of Dr. J. F. Roderer.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

GENERAL MEDICAL COUNCIL ELECTION—SMALLPOX—RELATION OF LYMPHADENOMA TO TUBERCULOSIS—CANCER SUGGESTIONS—SIR C. NICHOLSON—PRINCE'S APPOINTMENTS—OBITUARY NOTES.

LONDON, December 13, 1901.

THE election to the General Medical Council has resulted in the return of Mr. George Brown for another period of five years, and Mr. George Jackson of Plymouth, who is a new member. Both are general practitioners and ran together. Mr. Victor Horsley opposed them with all his power in the hope of securing Dr. Woodcock, who only received 3,161 votes, while Mr. Brown had 5,369 and Mr. Jackson 6,518. It should be a lesson for Mr. Horsley, who will have to face an election next year, and has given much offence by his electioneering, and certainly has compromised his dignity by throwing about imputations of untruthfulness. Not half the voters returned their papers. With so many abstentions, it would seem that the constituency expects little from the council.

Dr. Bruce has been re-elected for Scotland.

Smallpox steadily increases—the fifth hundred, under treatment, has been passed.

The Pathological Society's debate on lymphadenoma and its relation to tuberculosis was opened by Mr. Butlin, who referred to the confusion which exists as to nomenclature, one surgeon designating a case lymphoma, another calling it lymphosarcoma, and a third lymphadenoma. Others depended on examination of the blood for diagnosis. Contrary to the common statement, Mr. Butlin denied that there is any hypertrophy of lymphoid tissue, but held that the disease presents as definite a structure under the microscope as epithelioma.

As to its relation to tubercle, he said, it is not tuberculous infection of a gland, but it does not exclude tubercle; nor does it give immunity, and he was not sure that it may not render the patient even more susceptible to tuberculous infection. Dr. F. W. Andrewes discussed the histological and bacteriological aspects of the question at length, and summarized his views in the following conclusions; (1) Lymphadenoma is a distinct and separable disease, histologically recognizable, and is not due to the tubercle bacillus; (2) There exists a form of tuberculosis of the lymphatic glands clinically indistinguishable, but recognizable histologically and bacteriologically; (3) Secondary infection with tubercle is not sure in lymphadenoma, and such infection may be local and trivial, or may gain the upper hand, the patient dying from generalized tuberculosis, with a puzzling mixture of lesions, whence has arisen the erroneous belief that lymphadenoma is only a form of tubercle.

Dr. Lee Dickenson related a case in which tubercle supervened on a case of lymphadenoma.

Professor MacFadyean had not met with lymphadenoma in animals, and doubted if a genuine case had ever been seen. Growths occurred in the spleen of the horse, which certainly were not tuberculous, nor had they the structure of the specimens exhibited by Dr. Andrewes. In tuberculosis the glands first affected were not the same as in lymphadenoma.

Dr. Newton Pitt doubted the possibility of distinguishing a tuberculous from a lymphadenomatous gland. Out of 7,000 necropsies, eighteen had been regarded as lymphadenoma, but three of these were found to be tuberculous, although during life they were not considered so. In three other cases there was caseation, but he thought that in them tubercle had been superadded. He suggested the use of tuberculin as a diagnostic. It had been said that lymphadenoma might be a para-tuberculous process, as tabes is a para-syphilitic process, but he did not think it could be, and mentioned a case of death within nineteen days from lymphadenoma affecting gland, spleen, and liver, without a trace of tubercle. He referred also to another case which ran a rapid course to the fatal end.

Cancer is a subject of perennial interest to the public, and every little while some new cure or preventive is announced in the newspapers. Lately we have had rather a surfeit of this sort of writing, and some papers have been busy with the cause of the disease. As you may suppose, most of the communications indorsed by sensational newspapers are merely revivals of old, long exploded notions, and those which have anything new about them are as absurd as their predecessors. Leaving them to their ephemeral notoriety, I may mention some professional contributions to the subject which have just been made.

Foremost perhaps should be that of Mr. T. Bryant of Guy's, who lately wrote to the Southwest London Medical Society an account of some cases treated at the Bolingbroke Hospital by the *x*-rays. He said that not only in lupus is the beneficial effect such as is generally known, but that he had had good success in rodent and epithelial ulcers of the skin, and in one typical epithelial tumor of the lip, which did not seem suitable for operation. This patient was shown to the society. Further, a private patient on whom he operated a year ago for cancer of the breast, and in whom recurrence took place in August last, was so much benefited by the rays that she was willing to be shown at the meeting. Pain ceased about a fortnight after the treatment began, and now, three months afterward, the report is that many active tubercles have entirely disappeared, and all others are disappearing. An ulcerated nodule, the size of a crown, upon which there was a scab, has healed under the scab, and flattened out; the nodule next to it has assumed a like shape, and is far less prominent. The skin which was fixed has become movable. A tubercle on the scar in the axilla is withering. In a second case, recurrent cancer, now in hospital, similar changes are going on. Mr. Bryant emphasized that the treatment is painless, and gives reason for hope, but that we must not yet talk of cancer cures, though we seem justified in saying the *x*-rays will kill pain and retard growth. How much more they may do has to be worked out. The treatment of all the *x*-ray cases at the hospital was carried out by Mr. C. R. C. Lyster, Medical Superintendent, and his assistant, Mr. E. M. Perkins, and these gentlemen expressed their readiness to demonstrate their methods and appliances to any member of the society.

Other gentlemen have observed cases improve after the *x*-rays, but the position of Mr. Lyster leads me to give prominence to his statement, and it is not necessary to say that he knows well enough that tumors apparently cancerous have disappeared after different remedies—or none at all. I indorse then his statement that we must not yet talk of cures.

Some years ago, a very eminent clinical teacher told me confidentially that he had had several successive cases apparently cured, and felt inclined to believe he had really hit on a cure, which was, if I remember rightly, a form of chalybeate. The cases he was successful in were uterine.

Now, here is Dr. Robert Bell of Glasgow saying he cures such with thyroid preparations. Long ago, you will remember, how another gynecologist assured us we might repose our faith in Chian turpentine. I might mention other instances which have been so disappointing that when I hear of such cures I "listen and perpend." But before turning from the subject of cancer, I must mention a notion as to its cause. No, not the innocent tomato which has been blamed by newspaper quidnuncs, but something more universally ingested. Nothing less than salt. This notion is propounded by Dr. James Braithwaite, the editor of the *Retrospect*, which is issued half-yearly under this name, and has been for two generations. He is also obstetric physician to the Leeds Infirmary and lecturer on gynecology in the Yorkshire College. The paper in which he put forth that excess of salt in the diet is a probable factor in the causation of cancer was read at the Leeds Medical Society, and has been accorded a place in the *Lancet*.

He does not assert that he has proved his point. He admits "the theory is more a suggestion than anything else—merely a new idea for consideration." Not a theory at all, then, at the utmost, therefore a—guess, or shall I say—hypothesis?

The idea has the merit of not being dangerous, as it would not interfere with other treatment to restrict the use of salt in the diet, though it would not be easy to exclude it altogether.

But what a shock this idea must give to Mr. Godfrey Gümpel, who wrote a five-shilling volume in 1898, entitled "common salt," to prove it to be essential to health and a cure for most diseases, and since then has published pamphlets on cholera and plague to show they are amenable to salt, and this year another on epidemic diseases in India and the Tropics, in which he lashes impartially the Indian Government and the medical profession for their neglect of his sovereign remedy—salt.

The Prince of Wales, Junior, as he is reported to have called himself, has made the medical appointments to his household, which correspond pretty nearly with those to the King's.

The funeral of the late Sir Wm. MacCormac took place on Monday. The king was represented, as were also the French and German embassies, the royal colleges, St. Thomas's hospital staff, the army and navy departments, and many other institutions.

Surgeon-General Harvey, C.B., D.S.O., etc., who died on the 1st inst., was a very distinguished officer. He entered the army in 1864, and soon after went into the Indian medical service, in which post after post has been conferred upon him, up to the director-generalship and sanitary commissionership of the Indian Government. He was the son of Professor Harvey of Aberdeen, where he graduated in 1863, being then twenty-one years old.

Another nonogenarian has finished his course, Dr. J. W. Edger, who was reported to be the oldest doctor in the country, ninety-eight. He practised a long time at Kirkby Stephen. He had three brothers, all doctors, who died at the respective ages of ninety-four, ninety-three, and eighty.

Sir Charles Nicholson, Bart., M.D., J.P., etc., the eminent Australian, is still with us, having come back to the old country to retire. He has entered his ninety-third year, and is in good health.

The deaths are announced of Dr. W. Dobie, J.P., of Keighley, where for many years he held a most influential position. He was sixty-five years old.—Alderman J. D. Harries, consulting surgeon to the Salop Infirmary, and for above forty years surgeon to the county jail, aged sixty-six.—Dr. Campbell Clark, Superintendent of the Lanark Lunatic Asylum, whose "Manual of Mental Diseases" was published in 1897, you may know. He graduated with honors at Edinburgh in 1866.—Deputy Inspector-General Piers who entered the naval medical service in 1846, and was on the expeditions in search of Franklin, which discovered the Northwest Passage. He held the Arctic Medal. He died on the 30th ult., aged eighty-four.

OUR PARIS LETTER.

(From Our Special Correspondent.)

MEDICAL PLAYS PRODUCED IN FRANCE—EFFICACY OF MEASURES USED AGAINST CONSUMPTION—OXYDE OF CARBON IN THE BLOOD OF ANIMALS LIVING IN PARIS—SEROTHERAPY OF TYPHOID FEVER BY CHANTEMESSE—THE SANITARY CONDITION OF CANNES—THE WINE LAWS IN FRANCE—DR. DEBOVE NAMED DEAN OF THE FACULTY.

Paris, December 13, 1901.

Theatrical works that have to do with medical subjects are getting to be more and more frequently produced in France. A play recently brought out, called the "Baillon," destined to show the disastrous effects of professional secrecy in cases of contagious disease. A woman, a consumptive, has one lover who jilts her because he finds that she is a consumptive. She gets married later on, but is separated from her husband and kept away from children, and finds out at last that it is because she is suffering from tuberculosis. Another play, called "Les Avaire's," which means the damaged ones, deals with the disastrous results of syphilis in a family. A young man consults a doctor who warns him that he must not get married. A year or two later the doctor is called in to see an infant suffering from hereditary syphilis, and discovers that the father is the young man he had already seen. The nurse must be discharged, but the mother-in-law and son try to bribe her without letting her know what the child is suffering from; she is informed of the nature of the disease by a servant who had been eaves-dropping and breaks out into reproaches, which are overheard by the wife, who happens into the room just at that moment. This play was forbidden by what is called the "censure," but was read before a select audience at the theater Antoine. The play was much appreciated, and some critics felt that it was hardly just to forbid the production of a play which would have so educational a tendency. Brieux, who is the author of the play, is a member of the Ligue against syphilis.

The tuberculosis commission established recently had asked the railway companies to place spittoons in the stations. Statistics have been made to see how much these spittoons were used, and it has been found that a great many people expectorated on the floor. Out of forty-three persons who had expectorated only six had used the spittoons. One can see by this how long it will be before the public will learn the elementary principles of hygiene. According to a report presented to the Society of Biology by Dr. Nicloux, oxyde of carbon is always found in the blood of animals living in Paris. Dogs that had been kept in the open fields twenty-four kilometers from the city were found to have their blood impregnated to some slight extent by oxyde of carbon. The quantity of this gas doubled and even tripled after a sojourn of twelve days in Paris.

Professor Chantemesse chose as the subject of his first lecture at the School of Medicine the serotherapy of typhoid fever. Dr. Chantemesse had already described at the congress of Madrid in 1898 the method he used in preparing the toxin of typhoid fever, and in obtaining a serum. He has been trying it recently on a number of patients in his service as well as in those of his colleagues. A hundred cases were experimented on and only six deaths took place. These statistics would seem to be much more favorable than those obtained at the same time by Brand's treatment, the mortality being, in the latter conditions, as high as 29 per cent. A noticeable fall in the temperature is noted after the injection, and if the injection has been made before the tenth day, there is no need of repeating it in most cases. The fall in the temperature is not the only result of the injection, there being also a large increase in the quantity of urine excreted. The dose of serum injected is about 10 to 12 c.c. If a second dose is used, not more than 5 c.c. are used. The preparation of the serum is a long and tedious performance, taking five to six months.

Last April an epidemic of fever was observed at Cannes, and it was thought at the time that the disease was typhoid fever. Articles were published in the foreign newspapers concerning this epidemic, and the sanitary conditions of the town were criticized. Dr. Roustan, a physician of the place, has written an article in the *Presse Médicale*, in which he seeks to prove that most of the fever cases were due to the grippe, and especially to its abdominal form. He bases his statement on the short duration of the illness, its sudden onset, the frequency of relapses and the absence of mental symptoms. Dr. Roustan used Marmorek's serum in several cases with what seemed to him good results.

The recent laws on the taxation of wine in France have tended to make wine cheaper, so much so that in certain parts of France a bottle of wine can be bought for a cent. It was thought that if claret became very cheap there would not be such a large quantity of spirits drunk. Statistics have not shown this to be the case so far.

Professor Brouardel, the dean of the Faculty, handed in his resignation recently, after fifteen years' service, and Professor Debove has been named in his place. Dr. Debove had at first refused to be a candidate because a certain number of the young professors insisted on certain details of his administration. He was able, however, to have his wishes carried out and was elected by a large majority.

THE NEW YORK ACADEMY OF MEDICINE; THE DUE QUESTION AND THE REAL DISTINCTION OF MEMBERSHIP.

To the Editor of the Medical Record:

Sir: It is unfortunate that the last meeting of the New York Academy of Medicine, which was notable for an unusually large attendance, should have been marred by certain proceedings which were, to say the least, in very bad taste. The presentation of letters of resignation and the dropping of members in arrears of dues afforded an opportunity for certain playful allusions by members of the Council. If there had been nothing but humor, there would have been no occasion to trespass upon your space, for it would have served as a good setting for the excellent intellectual scientific treat which followed; but there was a serious side which seems to call for criticism.

When one member gave as his reason for his resignation that practically the same privileges were extended to outsiders as the members of the Academy, one of the trustees felt called upon to reply quite sharply to this simple, candid statement of a well-known fact. Certainly no one will deny that, aside from receiving the programmes and having a little more liberty in the use of the library, a member of the Academy has no privileges which may not be enjoyed by a non-member. It is true that one who is not a member is deprived of the honor that goes with the membership, but in these days when the medical profession is none too prosperous, I suspect that there are not a few who ask themselves, in the privacy of their homes, whether the honor of being a member of the Academy is a satisfactory equivalent for the twenty dollars a year paid in dues. We hear very little of this in public because many are not so outspoken in their opinions as the writer of that letter of resignation, and as they do not feel that it is a heinous offense to hold different views from the Council of the Academy, they shrink from the unpleasant publicity that the expression of their heterodox notions might entail. Let us, then, commune together in the bosom of the Record family, and speak frankly and fairly. If the majority feel that they receive the just equivalent for their money, and that the present regulations regarding membership are what they should be, then let the minority accept the verdict; on the other hand, if there is any widespread dissatisfaction it is for the best interests of the Academy and of all concerned that it be made known. It seems to the writer not unduly mercenary for the members to insist that a substantial distinction should be made between the privileges of members and non-members. What would be thought of the Union League Club, for example, if it should announce to those eligible to membership that they were entitled to the same privileges as the members, but it was considered preferable for them to become members and so contribute to the support of the club? It is probable that such a proposition would be unanimously regarded as absurd and unbusiness-like in the extreme, and yet if the principle involved were merely one of honor, as the Council of the Academy seems disposed to think, it would certainly be as quickly recognized and appreciated by club men as by medical men.

Let me make another suggestion, and I am done. It is that the executive sessions of the Academy be private. We all know that the proper conduct of a society requires of its officers, at times, the performance of such unpleasant duties as the reading of the names of delinquent members, or the dropping of their names from the roll, and I should be the last to object to the enforcement of strict business rules in this connection; yet these acts are manifestly out of place in a public meeting. It was bad enough that such proceedings as I have described should have taken place at any public session of the Academy, but how acking in good taste and how edifying to the invited guests must have been this wrangling over dues and this tirade against those who honestly believed they had not been fairly treated!

A Mortified Listener.

Progress of Medical Science.

Boston Medical and Surgical Journal, December 26, 1901.

A Plea for Pain and Patient.—Edmond R. Moras asks what one would think of a man who would throw a bucket of water on the obliging individual who warned him that his house was on fire. Yet all physicians do that very thing when, in the event of pain, they smother nature—the individual uttering the cry, the warning. Opiates, bromides, chloral, etc., never do and never can reach the pain or the seat of pain, excepting through the healthy medium of the well man, and they never reach the special afflicted nerves until they have dulled the general sensory nerves. The first thing to do is to make a correct diagnosis of the ailment before the disease has been masked by symptoms due to drugs.

Congenital Elevation of the Shoulder.—Joel E. Goldthwaite reports two cases, illustrative of the two types of the deformity. In one the position was probably due entirely to the imperfect development of the muscular structures, and was analogous in every way to congenital torticollis in which the sternocleidomastoid is imperfectly developed. In the other case, the position of the shoulder is associated with an embryological condition, there being a distinct articulation between the upper angle of the scapula and the vertebra. In the first case the attachment of the trapezius to the spine of the scapula, both rhomboids, and the levator anguli scapulæ were divided, and the lower portion of the serratus magnus shortened. The scapula was brought down as far as possible, and the tendons of the trapezius muscles reattached a little higher on the spine than normal, and the wound closed. In the second case an osseous band 1¼ inches long, ¾ inch wide, and ½ inch thick, extended from the upper angle of the scapula to the vertebral column, with articulation at each end. Both were removed. Both cases were improved in appearance by operation, and function became practically normal.

Journal of the American Medical Association, Dec. 28, 1901.

Food Products from Diseased Animals.—D. E. Salmon says that the great difficulty in meat inspection is the question as to where to draw the line between meat that shall be passed as fit for food and that which shall be condemned. The great majority of carcasses are unquestionably good or unquestionably bad, but between these extremes there are all shades of gradation. He does not believe that female animals in advanced gestation are proper for food. Females in which parturition has recently occurred are also under condemnation. Certain animal parasites render the flesh of the affected animals positively dangerous (echinococcus, trichina, tænia, etc.). The author enumerates the various ways in which tubercle bacilli may enter the body through food and drink. He believes that the bacilli may be present in the milk, although there are no signs of tuberculosis of the udder.

New York Medical Journal, December 28, 1901.

The Prevention of Laceration of the Perineum in Labor.—This forms the title of three separate papers. G. B. Finchell says that when a child is to be born the oval vulvar opening is not stretched as by an entering wedge, but by having the lower end pushed away from the upper. That is, if, in the swinging of the head, as it extends, it *slides* on the perineum, the space between the pubes and the fourchette will increase; on the other hand, if the head *does not slide* during this swing the opening will not increase and the perineum will follow the motion of the head. This causes a decided stretching of the perineum, but no increase in the size of the vulvar opening. The perineum under such circumstances may become very thin and get ready for a nasty stellate tear. Different degrees of this sliding will occur in different cases. Even with perfect sliding, a precipitate labor may cause a split. The more perfectly this mechanism is carried out, the safer will be the perineum. Consequently it is of primary importance to keep in the vagina a lubricant to facilitate the normal extension. The natural lubricant is the best and should be preserved. Consequently douches, and especially antiseptic (usually irritating) douches, are to be avoided except when their use is imperative. Digital examination removes a great deal of the lubricant and gets the perineum ready for a tear. External palpation should be practised more. The vast majority of digital examinations made during labor are without reason. Artificial lubricants do not replace the natural one.

M. A. Walker advises the removal of all possible aids to the action of the abdominal muscles. Too precipitate delivery is to be prevented by pressure against the vertex. This pressure is applied, the patient being recumbent, with the fingers pointing posteriorly and pressing against the (maternal) posterior segment of the head during each pain. This manœuvre increases flexion and retards the entire head, while it allows of some anterior or pubic motion of the part, thus presenting the smallest diameter of the "passenger" to the vulvar ring, allowing time for the passage to be made larger, and directing the "passenger" through the axis of the outlet instead of permitting a large part of the uterine force to be expended directly on the perineum. In many cases a modified Walcher's position, resting the hips on the edge of the bed, the feet being on the floor, is of value in protecting the perineum, not only on account of its relaxing effect on that part, but also because it permits easy and constant observation of the parts. An anæsthetic is required toward the end of the second stage, not so much for the purpose of simple analgesia as for its property of preventing voluntary and lessening involuntary muscular contraction in case of endangered perineum. In the intervals between pains, the hand that has been used to retard, flex, and push forward the head may be consigned to the duty of peeling back the perineum from the head, and delivery should take place after the pain has terminated, while everything is relaxed.

J. L. Andrews analyzes the mechanical forces in labor and says that the whole subject of the prevention of perineal laceration may be summed up in a few words by: (1) Patiently and persistently endeavoring to bring the longest diameter of the presenting part in relation with the longest diameter of the outlet, and (2) Securing perfect dilatation of the soft parts at the outlet. Anæsthesia is to be freely used, and the head kept well flexed by pressure upon the occiput through the perineum. Extension should be allowed slowly. The ideal emergence of the head is between pains. The vulva must be accessible to sight and touch. Proper use of the forceps will often prevent laceration.

Medical News, December 28, 1901.

On the Rôle of the Prostate Gland in Gonorrhœa.—Frederic Bierhoff believes that there is probably no other condition so often responsible for the persistence of a gonorrhœal urethritis as an involvement of the prostate gland. He refers to 151 of his own cases of posterior urethritis in which he found the prostate involved in every case. This complication is supposed to develop generally in the third week of a gonorrhœa. The development of posterior urethritis and prostatitis is favored by any condition that causes congestion of the deeper urethra, or which introduces the living microorganism into the posterior urethra and ducts of the prostate. He believes from his experience in palpating the prostate, that a large percentage of adult males suffer from catarrhal changes of this gland whether they have ever had an attack of gonorrhœa or not, and that these changes are easily perceived by palpation. The two chief etiological factors of this condition are masturbation and coitus interruptus. The order of infection is probably as follows: Involvement of the anterior urethra; extension past the compressor along the chronically congested mucous membrane of the bulbous, membranous, and prostatic urethra, to the prostatic ducts, and on to the walls of the gland or its interstitial connective tissue, or even the periglandular tissue. In the more acute forms of gonorrhœal prostatitis, the neck of the bladder is regularly involved. In the male the diagnosis of gonorrhœal cystitis should never be made without a previous careful examination of the prostate. The prognosis is, on the whole, good.

The Neurotic Element in Infantile Eczema.—Jerome Kingsbury declares that disturbances of the nervous system comprise an important etiological factor of eczema, and will also intensify a previously developed attack of this disease of whatever type it may be. For general purposes the writer classifies these neurotic elements caused by reflex action as gastrointestinal, sexual, and local nerve irritation. Of the latter class, that of teething infants is the most striking. Perhaps dentition never produces a true eczema, but it is often observed that with the eruption of each new tooth, the eczema is much aggravated. Irritation from the alimentary canal, however, is a far more important cause than dentition. The quantity and quality of food often given to infants is indeed appalling. But neither does the breast-fed infant escape. It is often just as necessary to treat the mother as it is the child. Tea should be cut down to the minimum, and beer and ale must be forbidden. The presence of pin-worms in the rectum or even in the vagina should be considered. The penis and clitoris should always be carefully examined. All constriction of these organs should be removed. When merely adhesions exist, a well-oiled probe should be passed around the entire surface of the glans, after which the prepuce can be retracted, and the smegma cleaned out. When necessary, circumcision should be insisted upon. In each case the exciting cause must be searched for and removed.

American Medicine, December 28, 1901.

Nephritis in Malaria.—John T. Moore concludes that: (1) Nephritis is not likely to occur in a single tertian infection for a short interval, say of five days; (2) A double tertian infection will produce a nephritis in a large percentage of cases, if it runs only for a short time. This percentage has been estimated at 80, but the writer thinks this too large; (3) The more chronic any case of infection becomes, the more likely is the occurrence of nephritis; (4) Malaria of long duration, or often-repeated attacks, will produce chronic renal disease, as shown by continuous presence of albumin and casts; (5) Estivo-autumnal malaria probably gives the greatest percentage of cases of nephritis, viz., 68.7. (6) The age of the patient, height of temperature, or specific gravity of the urine showed no relation to the presence of albumin and casts in the writer's cases.

Trophoneurosis Affecting the Hair.—F. Savary Pearce reports this case. The patient is an American woman twenty-seven years old. Formerly her hair was heavy and dark brown in color, while her eyebrows and lashes were jet-black. For two years the hair had been falling out rather freely. Ten days before the rapid alopecia developed, she caught a hard cold in the head, followed by a herpetic eruption of the face, the back of the neck, and the region about the mouth. There was severe itching of the face and vulva. The ears and dorsum of each arm were red and swollen. The rapid alopecia began on November 18, 1900, and within three weeks her hair rapidly fell out until all of it with the exception of a few hairs on the temporal and occipital regions had been shed. These were shaved off and massage and electricity were applied to the scalp. Two months later the hair had grown an inch and was snow-white. The eyebrows and upper lashes were white, but the lower ones and the hairs upon the arm were brown. In April, 1901, there was a recurrence of the herpetic attack and the white hair began to come out freely, but not to the same extent as at first. No medicinal treatment had any effect on the white hair. Semi-rest treatment very much helped the neurasthenic condition. The static breeze applied to the scalp did not have any effect in renewing the color of the hair. In October, 1901, there were a few black hairs on top of the head. There are marked dyspeptic symptoms, a sense of heat in the head, and a chronic otitis media, with discharges and progressive deafness. Her hands are subject to vasomotor attacks. There is no history of a hereditary predisposition to white hair. The nails apparently have not been affected. A trophoneurosis seems best to explain the development of the alopecia and whitening of the hair.

Massive Infiltration Anæsthesia with Weak Analgesic Solutions (Modified Schleich Method).—Rudolph Matas describes an improved apparatus for massive infiltration anæsthesia. After considerable experience, he concluded that a glass bottle for the solution was unsafe, as the pressure necessary to force the fluid into chronically inflamed tissues was apt to break the bottle. The present receptacle consists of a polished copper cylinder, nickel-plated on its outer and inner surfaces, 8 inches in circumference and 5⅝ inches in length. On the top is a metal

T-tube, allowing the air to enter and the fluid to escape, both ends of the T being provided with stop-cocks. The cylinder holds 13 ounces, but only 10 ounces of fluid are used, so as to allow enough space for the air charge. The fluid is introduced into the cylinder through the bottom, which is tightly closed. There is a glass water gauge to indicate the amount of fluid which is being used. The pumping outfit consists of the smallest bicycle hand pump. This is attached to a small metal cylinder filled with sterile absorbent cotton, used as a filter for the air injected into the reservoir. After the sterilized solution has been placed in the receptacle, this is charged with air until the piston offers marked resistance. The attachments to the filter and pump are unscrewed and the apparatus is ready for use. The injection needles are of various sizes, lengths, and curves. The rubber tubing which connects the cylinder and needle is about 15 inches long. The advantages of this apparatus are: That it allows the operator to infiltrate and œdematize large areas rapidly, continuously, or interruptedly without delay caused by recharging or exchanging syringes; that by the use of long needles it tends to diminish the traumatism caused by frequent punctures made necessary by the shorter needles used with the ordinary quickly exhausted syringes. The rapidity and thoroughness of the work as accomplished by the use of this apparatus are astonishing.

Philadelphia Medical Journal, December 28, 1901.

The Relation of the Middle Turbinate Body to Chronic Diseases.—Charles H. Baker calls attention to the great influence that the middle turbinate has upon the course and progress of nasal disorders. The indications for removal of this body are: The presence of polypi which cannot be seen till the middle turbinate is removed. Sinus occlusion by swollen membrane which is not yet polypoid, and which does not respond to other recognized modes of treatment by cleansing and disinfection. Fetid crusting of the discharges in the upper portion of the nasal chambers in non-specific cases. The so-called "bullous" hypertrophy of the bone. The close proximity of the body to the most sensitive area of the nasal mucous membrane so that when contact occurs, various disturbances of the nervous system arise. Vasomotor rhinitis, running along into other than the normal period of the year, which is attended by sneezing, asthma, cough, etc. The writer then describes his method of operating.

Cystic Liver.—Israel Cleaver describes this organ, whose dimensions were: Width, 12½ inches, the left lobe being 4 inches, vertical length 8 inches, and thickness 5½ inches. That part of the cyst projecting above the surface of the liver measured 7½ inches in circumference, occupied the under surface of the right lobe, and crowded the gall-bladder, which was also much enlarged. Another cyst, the size of a walnut, was sessile on the upper margin of the left lobe. There were four more of the size of hulled shellbacks, on the surface of the same face, at the right of the large cyst. The gall-bladder contained twenty-six calculi, varying in size. Sections of the liver in parts not occupied by the cysts macroscopically looked normal. The patient from whom the specimen was taken was a man eighty-one years old, never intemperate, and for the last sixty years, a teetotaler. Eight years previous to death he began to be troubled with rheumatoid arthritis, which gradually grew worse. Later the tongue became heavily coated, sometimes with a brown crust, but it was generally white or somewhat yellow. The bowels were constipated, but the stools were of normal color. A few weeks before death, the right hypochondrium showed enlargement. Enlarged liver was diagnosed. There was no jaundice at any time. At this time there was first noticed an elevation of the surface about the size of an egg, 1½ inches to the right of the median line and below the ribs. It was fluctuating. Distended gall-bladder was the diagnosis, and was confirmed by the consultant. Autopsy revealed the true state of affairs.

Berliner klinische Wochenschrift, December 9, 1901.

Westphal-Piltz Pupil Phenomenon.—A. Westphal reiterates his assertion that the contraction of the pupil which takes place when the eyelid is closed is complementary in nature. Schanz has supposed that it is due to mechanical causes, originating in the uneven pressure of the orbicularis muscle upon the eyeball. Animal experimentation shows that this is not the case, as mechanical irritation of the eyeball fails to produce a contraction of the pupil. It has also been claimed that it is produced, reflexly, by an irritation of the sensitive nerves of the eyeball. While this explanation may hold true for doves, it fails to account for the phenomenon in man. This has been proven as the result of much experimentation. It is not possible in the present knowledge to say whether or not this phenomenon may be utilized from the standpoint of diagnosis.

Present Status of Light Therapy.—S. Bang says that photobiological researches have established the following facts: (1) The violet and ultra-violet rays produce a specific inflammation of the skin which is different from all other cutaneous inflammations; (2) These rays stimulate the body as a whole, chiefly acting in a reflex manner; (3) These rays possess strong bactericidal power. Much has recently been written in regard to the satisfactory results obtained in the treatment of constitutional diseases by light. Astonishing results have apparently been obtained in this manner in the treatment of pulmonary tuberculosis, syphilis, arthritis, diabetes, and a number of other diseases. In most of the cases of such conditions hitherto reported as treated by light, other therapeutic measures and various climatic influences have been brought into play. For this reason it is at present impossible to say exactly what value light therapy possesses when employed in constitutional pathological conditions. That some benefit is to be derived therefrom seems certain, but that in the future it is to work miracles in these diseases is not to be believed. At present it is in local cutaneous and tissue affections that the benefit of light therapy is the most satisfactorily observed. It possesses a specific influence over lupus vulgaris. Of 640 cases of this disease so treated by Bang, 456 were entirely cured. No recurrence has taken place in 130 of these, although from one to five years have elapsed since their recovery. In only eleven cases was it necessary to discontinue the treatment on account of unfavorable signs. Cases of lupus erythematosus, alopecia areata, acne vulgaris, and nævus vascularis have also been treated by this method with good results. The efficiency of light in the treatment of disease is very largely dependent upon the so-called chemical rays of the spectrum. In the majority of cases, the heat rays are directly injurious. For this reason all apparatus for the therapeutical administration of light should be so constructed that a maximum number of chemical rays and a minimum amount of heat rays reach the patient. In most apparatus now in use the heat rays are not sufficiently excluded. Bang has devised a mechanism which seems to fulfil all the necessary requirements. By its use he obtains in five minutes, with eight ampères and 40 volts, a light reaction of equal intensity to that produced by other forms of apparatus with 60 to 70 ampères and 55 volts in 1½ hours. The bactericidal power of the light thus obtained is exceedingly great, far exceeding that produced by any other so-called "light-machine."

Münchener medicinische Wochenschrift, December 10, 1901.

Nature of the Temperate Elevations Following Muscular Exercise Observed in Phthisical Patients.—A. Ott confirms the observations of Höchstetter and finds that in all cases non-febrile phthisical patients show an increased body temperature as the result of physical exercise. The question is whether this increased temperature is to be regarded as a febrile process due to pathological causes or is to be considered as a mere physiological process. In order to solve this problem, he utilizes the established fact that albumose occurs in the urine in 90 per cent. of all fevers. He selected twenty-five non-febrile phthisical persons. These were made daily to take a walk of prescribed length. Temperature observations and urinal examinations were made before and after this exercise. In nine of these, albumose was found in the urine after the exercise. In ten a doubtful result was obtained. In the remainder no albumose was present. It is probable that in the ten cases where the result was doubtful, albumose was present in the urine in too small an amount to be detected by the test used. Ott believes as the result of these observations that the increased body temperature present in such cases is of pathological origin and that in all instances the exercise prescribed for phthisical patients should be so regulated that a minimum increased temperature results therefrom.

Gelatin Injections in Pulmonary Hemorrhage.—A. Hammelbacher and O. Pischinger report two cases of hæmoptysis which they treated with subcutaneous injections of gelatin. Two-and-one-half-per-cent. solutions were used. In both a favorable result was obtained. In neither case was a single injection sufficient to control the hemorrhage permanently. For this reason several injections were given on successive days. The symptoms following this treatment were the same in both cases. There were a temporary rise in temperature and pain and discomfort at the site of the injection. These, however, quickly disappeared. Immediately following the injections there was present a peculiar taste which was described as being similiar to that of sealing wax. The hemorrhage was immediately relieved, although after a variable time (a few hours or days) it reappeared. Only by continuing the injections was it possible to relieve the conditions permanently. In cases in which it is impossible to control hæmoptysis by other means, the use of gelatin injections is advised provided the gelatin solution is absolutely sterile, and proper antiseptic precautions are observed.

Causation of the Primary Apex Localization of Pulmonary Tuberculosis.—Dr. Schmorl says that the primary apex localization of pulmonary tuberculosis may be explained upon anatomical grounds. As is well known, Birch-Hirschfeld has shown that in the vast majority of cases the initial portions of the lungs affected are those supplied by the third, fourth, and fifth bronchi of the upper lobe. This he ascribes to the small respiratory capacity or power of this portion of the lung, which favors the retention of infected particles which may become lodged therein. Schmorl believes that the cause of this diminished respiratory power and the peculiar arrangement of the smaller bronchi found in this portion of the lung is to be ascribed to a furrow on the surface of the lung which runs from the apex of the lung behind and above, downward and forward. He has observed this furrow in numerous autopsies. The pleura covering the furrow is slightly thickened, but no adhesions to the thorax wall are present. Oftentimes the depression is a mere line, but frequently it is well developed, distinctly separating the apex from the contiguous portion of the upper lobe. It is believed that the chief factor in the production of this furrow is deficient development of the first rib. In this manner, pressure is produced upon the expanding lung. In the majority of instances, persons in which this furrow is well developed show either apex tubercular deposits or a catarrhal inflammation in this location. This has been amply demonstrated as the result of numerous post-mortem examinations. A point which is apparently against the opinions here expressed is the fact that in children this furrow is well marked, yet in them beginning apex tuberculosis is rare. It is thought, however, that here the great elasticity of the first rib allows extensive expansion of the apices, and thus the injurious consequences of the furrow are overcome.

Deutsche medicinische Wochenschrift, December 12, 1901.

Employment of the Danysz Bacillus for the Extermination of Rats.—Rudolf Abel has undertaken experimental work in order to ascertain whether cultures of the Danysz bacillus can be successfully employed in the extermination of rats. As is well known, this bacillus was isolated by Danysz from field mice during a fatal epidemic among these animals. It is also pathogenic for rats, but not for the various domestic animals and man. Abel obtains irregular results by feeding agar cultures of these organisms to rats. In some cases, death promptly followed, but in many others the animals remained sound. It is certain that the continued transmission of the bacillus from rat to rat causes its virulence for these animals to be greatly attenuated, so that very soon it entirely loses its pathogenic properties for them. It cannot, therefore, be recommended as a reliable agent for their destruction. It is probable, however, that by feeding rats on large amounts of fresh agar cultures a reduction in their number may be obtained in regions where they greatly abound. Since the destruction of rats is of prime importance in those countries where plague is prevalent, further work along this line is greatly to be desired. In this manner the most favorable conditions for the employment of this organism can be ascertained.

Expulsion of Fibrin-like Bodies in the Urine.—Alfred Rothschild reports the interesting case of a patient who expelled in his urine a sausage-shaped, fibrin-like body about ½ cm. in diameter and the length of the little finger. Previous to the expulsion, there had been intermittent attacks of hæmaturia accompanied by symptoms of bladder irritation. The general condition was good. The urine was normal, with the exception that at times 5 per cent. albumin, a few red blood cells, and fibrinous threads had been observed therein. The expelled fibrin-like body was sectioned and submitted to microscopical examination. When it was stained with hæmatolin-eosin, there was observed a dark, homogeneous external layer, which contained scattered epithelial cells. The internal portion was also homogeneous in character, but much lighter in appearance, and contained no cells. Weigert's fibrin stains gave a negative result. From this examination it was thought that the body had its origin from a tumor located somewhere in the urinary passages. Palpation gave negative results. Cystoscopy showed no abnormality, except a hypertrophied prostate. The patient was lost sight of for about six months. At the end of that time he returned for treatment. He had become very much emaciated, and was in poor general condition. The urinary examination gave results identical with those previously obtained. Cystoscopy showed that the left ureter was discharging no urine. Palpation showed the presence of a tumor in the left kidney region. Nephrectomy was performed. There was found a tumor of the left kidney which involved two-thirds of that organ and protruded into the pelvis of the kidney, completely blocking up the ureter outlet. Microscopical examination showed that this tumor was a sarcoma with giant cells. In addition, there was lodged in the ureter a body entirely similar to that which had been expelled six months previous.

Parasitic Nature of Carcinoma.—Alexander Katz says in answer to Ribbert's arguments against the parasitic origin of carcinoma that cell misplacement may be the starting point in the origin of this disease, but this does not necessarily imply that such is the single and essential cause of carcinomatous growth. The deteriorating differentiation of cells is a negative process. How is it possible that a negative process can give rise to such a measureless cell proliferation as is seen in cancerous growths? It is true that in human pathology we are unacquainted with any irritative factor which can cause unlimited cell proliferation, but this does not prove that such a factor does not exist, and we must presuppose its existence until this is definitely disproven. As for the assumption that a symbiotic life between the parasite and the cell must always result to the detriment of the latter, it can be said that such is not borne out by comparative observations. Such favorable symbiotic life is known to occur in certain plant cells. Also the physiological process of fecundation is an example of such favorable symbiotic life. The fact that in carcinoma only a certain variety of epithelial cells is affected and that other varieties never become involved is at first thought a strong argument against the parasitic origin of the disease. It is, however, possible to suppose that in given cases certain varieties of epithelial cells are originally submitted to parasitic irritation and acquire certain properties thereby. These properties are then transmitted by inheritance to the subsequent daughter cells, and thus transferred to countless generations of such cells. According to this view an original parasitic irritation is necessary; but this need not be continuous, and the parasites may be absent in the fully developed growth and the metastases. Ribbert contradicts himself when he says that old age may favor the development of carcinoma, and in the next sentence claims that unhygienic conditions are the principal factors involved in its origin. Ribbert, in answer to the above, said that while he had always taught that the misplacement of cells was an important factor in the origin of carcinoma, he had never held that it was the only one, but that cell simplification was an important secondary factor. The separation of cells from their organic combinations is in no way a negative process. If in such a simplification in their structure takes place this is only a secondary appearance. The comparison of various plant tumors with carcinomatous growths is not permissible, as the former are decidedly of an inflammatory nature. Physiological fecundation is not to be conceived as symbiotic in character. The supposition that parasites are originally necessary for the origin of carcinoma, but subsequently unnecessary for its growth, is illogical from all sides, and is not likely to be accepted by the supporters of the parasitic theory, for they seek the organisms in the full-grown tumor and metastases. So far as the statistics are concerned he has already said that if cancer is actually on the increase this does not necessarily involve a parasitic origin. The validity of the statistics, however, is not sound, as a large portion of the same has been gathered without pathological foundation.

French Journals.

Concerning the Action of Sodium Sulphate on Contractions in Tetanus.—A. Gelibert reviews the experimental work on this subject, and then gives an account of two cases which they have recently treated, and which terminated in a cure. One patient was a boy of six years, the other sixteen. The most striking feature of this treatment was that after the first injections of the persulphate the patients rested easily and passed a good night, although after the administration of chloral and bromide they were able to get only a few minutes of consecutive sleep. After the first injections of the persulphate the spasms which were so painful, and which were caused by movement or which occurred spontaneously, disappeared completely. The contractions began to diminish on the second day of treatment in one case and on the third in the other. Their complete disappearance took place at the end of seven days in one patient and at the end of ten days in the other. The injections appeared to improve the general condition also. The solution should always be fresh and never be stronger than 5 per cent.—*Lyon Médical*, December 15, 1901.

A Foreign Body in the Œsophagus; External Œsophagotomy; Cure.—Leon Labbé reports this case of a man thirty-five years old who swallowed a dental plate containing five teeth. The physician first called ordered an emetic, but as all efforts to relieve the patient were unsuccessful he was taken to Paris and put under the care of the writer. After examination, operation was determined upon, and external œsophagotomy was performed. The writer concludes after a study of the case that emetics in such cases should be avoided as they rarely serve to expel the foreign body, while their administration is attended by danger of contraction of the muscles of the part, and of bruising, and even of perforation at the point of contact of the foreign body. Attempts to remove the body by the mouth should not be persisted in, as they are not without danger and are frequently unsuccessful. As soon as the body is located, external œsophagotomy should be performed, even if the body is in the upper thoracic region, which is generally accessible to curved forceps. It is not indispensable in this operation to use the sound, as it is not without its risks. It is indispensable to insert an immovable sound after the operation to feed the patient. The writer prefers one passed through the nose. Then cicatrization can take place more rapidly in the wound. The wound in the neck should be drained directly over the œsophagus.—*Gazette des Hôpitaux*, December 14, 1901.

A Typhoid Form of Generalized Staphylococcus Infection.—Edgard Hirtz and Gabriel Delamare describe this case. The patient was a workman, aged thirty-three years. He was of robust appearance, but was an inebriate. For fifteen days he had headache, epistaxis, fever, vomiting, and a yellow fetid diarrhœa. Incontinence of urine developed. He was dull, and responded stupidly to questions. His tongue was moist, red on the borders and white in the center. The abdomen was distended. The liver and spleen were enlarged. The pulse was rapid, soft, and compressible. The face was cyanosed, dyspnœa increased, and death occurred before sero-reaction had been tried. At autopsy the kidneys, the liver, the spleen, and the mucosa of the ileum in the neighborhood of the cæcum showed an eruption of small whitish nodules, surrounded by a hemorrhagic areola. The brain was congested, and presented on its convexity some ecchymoses. Histological examination showed these nodules to be staphylococcic embolisms. The port of entrance of infection was uncertain. In general, it is through the skin that this microorganism finds access to the organism.—*La Presse Médicale*, December 14, 1901.

A Case of Latent Spina Bifida, with Unilateral Trophic Troubles and Lumbar Hypertrichosis, with Metameric Distribution.—Gangolphe and Pinatelle report this interesting case. The patient was a man of twenty-seven years. He entered the hospital to have a revolver ball removed, and his condition was then discovered and studied. He was a degenerate physically, with various anatomical stigmata. He was brachycephalic, the forehead tapering, the cheekbones prominent, while the helix and lobule of the ear were atrophied. He was small of stature, with arrested development of the trunk, and thoracic malformations. No longitudinal fissure could be determined, but the lumbar vertebræ, from the second, appeared sunken, indistinct, and without distinct intervertebral discs. There was evidently spinal malformation. Trophic troubles associated with spina bifida are frequent and varied, but they are almost invariably bilateral. The unilateral distribution in this case is most interesting. In the metameric distribution of the hypertrichosis there is another important sign. The lumbosacral location is a most valuable diagnostic point of latent spina bifida. The absolute latency of the spina bifida marks this case as very unusual.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, December 15, 1901.

Therapeutic Monthly, November, 1901.

Therapeutic Action of Nitroglycerin; A Valuable Drug for Relieving Muscular Spasms.—H. E. Randall declares that nitroglycerin is one of our most valuable drugs, but it should always be used with caution and with knowledge of exactly what it is desired to accomplish. In muscular spasms, as in hysteroepilepsy, puerperal eclampsia, tetanus, spasmodic asthma, as well as in renal and gallstone colic, nitroglycerin promptly relieves some of the cases. In paroxysms of hysteria with cold hands and feet it acts like magic. The drug in hysteria is worthy of a more extended trial. The writer usually gives it in $\frac{1}{100}$ or $\frac{1}{50}$ grain tablets, repeated in five minutes, if necessary.

Yeast Treatment of Leucorrhœa and of Gonorrhœal Vaginitis.—Ph. Chapelle ascribes to the method of treating with yeast chronic leucorrhœa and vaginitis due to gonorrhœal infection considerable success. It should be tried in obstinate cases which do not yield to tonics and the usual local treatment. The desiccated form may be used in a pessary of cocoa butter and placed in position on going to bed, or as a paste made up with glycerin of starch and retained with a tampon of absorbent cotton. The quantity is not important, as it is perfectly harmless. The theory is that pure ferments, like yeast, attract pathogenic germs, allow themselves to be penetrated by them, and then destroy them by a true phagocytosis.

The Importance of the X-Rays as a Means for the Early Diagnosis of Tuberculosis.—Espina y Capo calls attention to the value of this method, especially in glandular tuberculosis; the commencement, in many cases, of pulmonary tuberculosis, and in all cases the inseparable companion of the disease. He speaks of the phenomenon of tachycardia, which is of so much importance in the early diagnosis of tuberculosis. This is seen in more than 94 per cent. of cases with great clearness with the fluoroscopic screen. This tachycardia is not rhythmical in the tuberculous patient. Another phenomenon is the visibility of the diaphragmatic excursion, both in inspiration and expiration. In this disease the phenomenon just mentioned is neither rhythmical nor symmetrical. If one side is healthy, the diaphragm is seen to rise higher on this side than on the affected side. When the two lungs are affected, the ascension is shorter on the worse side. From the revelations of radiography, the writer believes that the tuberculous heart is below the normal in size. He calls attention to the frequency of tuberculosis in subjects with small hearts and narrow aorta. The intercostal spaces are also peculiar, as they are extremely narrow. The thorax in these patients is conical in form. The scapula and clavicle are also abnormal in shape. The ribs are disposed in roof-tile fashion. The writer then speaks of the greater extension of the heart toward the lines of Traube and Friedrich on the right side, and also the special form of the left ventricular border of the heart of these patients, which he compares to the deformed foot of a Chinese woman.

Bulletin of the Johns Hopkins Hospital, November, 1901.

Congenital Absence of the Abdominal Muscles, with Distended and Hypertrophied Urinary Bladder.—William Osler reports this case of a boy, aged six years. In erect posture the attitude is remarkable. It is fuller on the right side than on the left. The navel appears stretched and distended. It is linear, and below are crow's feet. The attachment of the recti to the sternum and costal margin can be seen above. The skin over the abdomen is thin, the veins a little prominent. In the recumbent posture, coils of intestines can be seen in peristalsis. He cannot raise himself without turning over. The lower part of the sternum is thrust forward, forming almost a right angle with the xiphoid. The deficiency in the abdominal muscles and the high position of the bladder are associated conditions due to arrest of development.

On a Family Form of Recurring Epistaxis, Associated with Multiple Telangiectases of the Skin and Mucous Membranes.—William Osler reports this very rare condition, which has nothing to do with hæmophilia. Two of the three cases reported belong to a family, seven members of which were afflicted with epistaxis. The attacks had occurred since boyhood. The second patient died, and autopsy revealed angiomata in mucous membrane of the nose and stomach. The septum of the nose showed many large dilated veins just below the epithelium. The third case had also had attacks of epistaxis since the tenth year. The telangiectases were most numerous on the face, which they greatly disfigured. The angiomata were scattered over the body. Angiomata have a curious relationship with affections of the liver.

Tuberculous Dacryoadenitis and Conjunctivitis.—Edward Stieren declares that: (1) Tuberculosis of the conjunctiva may be either ectogenous or entogenous; tuberculosis of the lacrymal gland must be hematogenous: (2) The presence of the tubercle bacillus in tuberculous conjunctivitis and tuberculous dacryoadenitis is not a *sine qua non* of the disease. In the present case, repeated examination of the matter from the ulcers of the conjunctiva failed to show the presence of tubercle bacilli, nor did inoculation in animals produce the disease; (3) Tuberculous dacryoadenitis and conjunctivitis may undergo cure; surgical intervention is indicated only after therapeutic and proper hygienic measures fail, since it is a universally recognized fact that tuberculosis in other parts of the body is often cured outright spontaneously, the cure being effected by a marked increase of connective tissue.

Osteitis Deformans with Report of a Case.—Arthur W. Elting concludes: (1) That osteitis deformans is a chronic disease of the bones which develops in middle life or later; (2) That the disease is of more frequent occurrence than is generally supposed; (3) That the onset is insidious, sometimes in a single bone, but usually manifesting a tendency to symmetrical involvement of the bones; (4) That there is an especial tendency to involvement of the tibia and femur as well as the frontal, occipital, and parietal bones; (5) That it attacks both sexes and does not appear to be related to any constitutional disease; (6) That the etiology is not understood; (7) That it requires from five to fifteen years to reach its maximum development; (8) That it is characterized by hypertrophy and deformity of the bones involved, either with or without pain. (9) That it is characterized microscopically by a rarefying osteitis combined with new bone formation; (10) That the duration of the disease is indefinite, and that the disease has but comparatively little influence upon the general health, and furthermore that it is not a direct cause of death; (11) That treatment must be purely symptomatic.

Zeitschrift für klinische Medicin, Bd. 44, H. 3 und 4.

Enlargement of the Hands and Feet of Neurotic Origin.—Hans Hirschfeld reports three interesting cases of chronic enlargement of the hands and feet evidently of neurotic origin. All three cases were fatal. It is possible that they were related to those conditions known as erythromelalgia and acromegaly. The most striking symptom present was a symmetrical enlargement of the hands and feet. This was not due to enlargement of the bones of the involved regions, nor was muscular hypertrophy present. The principal anatomical lesion was increased in the thickness of the cutaneous structures. In two cases, cyanosis and intermittent œdema of the affected extremities were present. There was also a drum-stick deformity of the extremities of the phalanges. Intermittent pains were present in all cases. In only one case was it possible to establish, with surety, the primary pathological lesion. Here an interstitial neuritis of the larger nerves of the involved extremities was present. After reviewing the literature of allied diseases the author concludes that the symptom complex of these cases shows the greatest similarity with the disease known as osteoarthropathie hypertrophique pneumique, previously described by Marie. The pathology and etiology of the condition are obscure, and can be elucidated only by the observation of a large number of cases.

Pulsus Alternans.—Under this name K. F. Wenckebach describes an alternating condition of the pulse in which a powerful pulsation is regularly followed by one of greatly diminished intensity. He reports the case of a man twenty-six years of age, in which such a pulse was observed following an attack of influenza. Arterial sclerosis of a medium grade was present, but no organic heart lesion. In the course of time the pulse regained its regularity, except during periods of muscular activity. By auscultation it was found that corresponding with the high and low pulse waves the heart sounds were of increased and lowered intensity. As a rule there was a shorter interval between the strong and the weak sounds than between the weak and the strong. That is to say, the weak sound antedated itself. If at any time the lower pulse wave became imperceptible to the finger, only the higher pulse waves were felt, and an apparent regularity was established. Auscultation, however, showed that this was a misapprehension, and that the characteristic alternating heart sounds were present. The pathology of this form of pulse is somewhat obscure. It is probable that for its occurrence a hypodynamic condition of the heart muscle is necessary. Even in such, however, so long as the rhythm remains normal, a regular pulse is present. When, for any reason, the slightest arhythmia occurs, an alternating pulse is immediately observed. In this condition a stimulating impulse reaching the heart too soon finds the weakened muscle unable to respond promptly, and thus a weakened contraction is produced. For the production of pulsus alternans, then, two factors are necessary: (1) Reduced tone of the heart muscle, and (2) Abnormal rhythm.

Revue de Chirurgie, December 10, 1901.

The Reflex in Gastro-Enterostomy.—G. Tavel writes of the incoercible or severe vomiting which is so apt to occur after gastro-enterostomy, and describes the various operatory modifications proposed for its relief. The simple operation of gastro-jejunostomy does not prevent the reflux. Concomitant entero-anastomosis is fairly efficacious, and entirely so as performed by Roux, who divides the jejunum and implants the duodenal end about 10–20 cm. above the opening of the peripheric end, which in its turn is fixed to the posterior surface of the stomach. Gastro-duodenostomy, where possible, will also prevent reflux.

Tuberculous Rheumatism or Infectious Pseudo-Rheumatism of Bacillary Origin.—Patel states that in tuberculous infections there are often found certain articular troubles which have hitherto been considered of rheumatic origin, but which are really due to bacillary intoxication. They consist of symptoms simulating arthralgia, chronic-articular and nodular rheumatism, and rheumatism deformans. Pathological anatomy and positive inoculations have confirmed the statement. Tuberculous toxins are able to produce a variety of lesions in the joints, from simple arthralgia to the classic tumor albus, lesions varying in severity according to the virulence and number of the bacilli, the general condition of the patient, and the local condition of the joint affected.

Subserous Appendectomy.—Vignard says that in internal operations, the appendix may be quite free, or else, on the contrary, deeply buried in adhesions. The latter condition is fraught with difficulties and dangers, which are almost entirely obviated by subserous appendectomy, by which he means ablation of the appendix after stripping from it its peritoneal sheath. Instead of laboriously searching for the extremity of the organ, with the risk of tearing or breaking some unsuspected abscess, one need merely draw out the base of the cæcum and pass the finger along the three longitudinal bands which surround it and which lead to the base of the appendix. The serous covering is incised circularly at about two cm. from the base, then everted and stripped for about one and a half cm., at which point the appendix is ligated and cut. The stump is covered by the portion of the serous covering left behind, which is closed by a few stitches.

Revue de Médecine, December 10, 1901.

Pneumo- and Cardio-Paludism.—Naamé calls attention to a pulmonary condition sometimes found in malaria, consisting of symptoms indicative of consolidation of the apex of one or both sides, the most important, as a rule, being the absence of adventitious sounds, and the presence of an expiratory souffle. These characterize the onset of the trouble; at a later stage there is respiratory roughness and absence of souffle. The cardiac disorders often found in malaria are dilatation, a galloping, tricuspid diastolic sound, heard in the xiphoid region, and a divided pulmonary sound. There may sometimes be brachycardia. All these symptoms disappear under quinine treatment.

Articular Traumatism and Sensory Disturbances.—Chavigny reports twenty-one cases illustrative of the fact that sensory troubles frequently follow traumatism of the knee, even when the nerve trunk cannot have been involved. Traumatic hydrarthrosis of the knee is usually accompanied by hypoæsthesia all along the line of the crural nerve. Sensations of cold along the thigh are rather rare, having been found in only three out of twenty cases. Patients suffering from acute articular rheumatism did not have sensory disturbances, even when muscular atrophy was marked; this fact might serve as a diagnostic point between this and simple rheumatic arthritis.

A Study of Epidemics of Streptococcal Infection.—Raymond Bernard lays emphasis on the fact that the streptococcus is of itself capable of causing much injury, that it is in fact a specific agent. This specificity is not always apparent, but is seen and acknowledged in certain epidemics. The streptococcus is always with us, in the dust, in the air, and within our own organs and tissues. Under certain influences, these microscopic plants germinate, develop, and fructify. Thus in catarrhal diseases, cold causes a reflex congestion of the respiratory passages, which induces an increased secretion of mucus; this mucus provides the necessary culture medium for the streptococcus, and the result is what is known as "a cold" or "catarrhal trouble," but it is in reality a streptococcal infection.

Virchow and Berlin.—As regards the city of Berlin's own peculiar debt to Virchow, a late number of *Die Woche* is authority for the statement that the city's magnificent sewer system was developed from suggestions made by Virchow in an official report in 1873. Virchow has also taken an active part in the building of Berlin's hospitals, and to the newest and finest of these the name "Virchow Hospital" has been voted by the authorities.

Double Crico-Arytenoid Arthritis from Grippe.—Mounier reports a case of this nature occurring in a boy of nine years. The attack began with general malaise and sore throat. There was extreme tenderness on pressure over the sides of the neck, corresponding to the situation of the cricoid cartilage, while both phonation and deglutition was extremely painful to the patient. Laryngeal examination revealed an inflammatory condition in the general crico-arytenoid region causing considerable dyspnœa. Revulsive measures applied to the neck externally and antirheumatic treatment internally led to a complete cure.—*Annales des Maladies de l'Oreille*, etc.

Society Reports.

THE WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Proceedings of the Eleventh Annual Meeting, Held in Chicago, December 18 *and* 19, 1901.

The association met at the Great Northern Hotel, under the Presidency of Dr. A. F. Jonas of Omaha, Nebraska.

An address of welcome was delivered by Dr. Alexander Hugh Ferguson of Chicago, to which an eloquent response was made by Dr. Joseph Eastman of Indianapolis, Indiana.

An Old Shoulder Dislocation, with Report of a Case.—Dr. J. Rudis-Jicinsky of Cedar Rapids, Iowa, read a paper with this title. The object of the author in making this report of an apparently simple case was to show what the *x*-ray could do for the profession in the investigation of injuries to the joints, in luxations, fractures, and in observations of the growth of the callus, the bones themselves, etc., and to furnish an aid in the interpretation of the *x*-ray findings. Before one could interpret correctly the fluoroscopic image or the skiagraph of certain parts, when their relationships were altered by disease or trauma, he should have always before him a skiagraphic picture of the normal parts and of their normal relations. After taking all the other precautions of a proper technique into consideration, one could not go astray. Moreover, the eye would be prepared to take in much which would otherwise not be seen.

After reporting a case at great length of an old shoulder luxation, the author dwelt upon the value of the *x*-ray in cases of fractures, etc.

Dr. Lewis Schooler of Des Moines, Iowa, indorsed the value of the *x*-ray in old dislocations of the shoulder, especially in cases where the swelling was so great as to obscure some of the landmarks and render the diagnosis difficult by the usual method. While in nearly all cases the examining surgeon could make a diagnosis with satisfaction without the aid of the *x*-ray, yet it was a consolation to have one's diagnosis verified by a competent operator of the *x*-ray machine.

Dr. Jicinsky, in closing, said the *x*-ray enabled one to determine through a plaster-of-Paris or any other dressing the exact position of the fragments, and whether the object sought, namely, the reduction of the dislocation, was accomplished.

Treatment of Irreducible Backward Dislocation of the Astragalus by Opening the Joint and Repositing the Same.—A paper on this subject was read by Dr. W. Jepson of Sioux City, Iowa. After detailing a case and going extensively into the literature of the subject, the author summarized his observations as follows: (1) His own experience and the results of recorded cases led him to believe that it would rarely be possible with present knowledge and technique to bring about a reduction of a backward dislocation of the astragalus without opening the joint and bringing about a reposition of the bone by direct manipulation; (2) With our present command of aseptic surgery he could see no reason why this should not be undertaken in all cases uncomplicated by severe infection, with good prospects of securing nearly a perfect result; (3) Removal of the astragalus should be reserved for such cases as where the bone was completely separated from its ligamentous attachments, consequently having no adequate source of blood supply; (4) If amputation be resorted to only when the dislocation was compound and infected to a degree impossible of removal, the patient's life was jeopardized by the septic intoxication of infection.

Some Internal Injuries of the Knee-Joint.—In a paper on this subject, Dr. M. L. Harris of Chicago called attention to two varieties of injuries to the inner structures of this joint, which, he believed, were more common than the attention heretofore given them would seem to indicate. These injuries might be produced in one of two ways: First, by the direct application of force, as might occur in a fall upon the knee, or by the forcible impingement of a more or less pointed object against this portion of the joint. Second, by pinching or crushing the apex of the mass in the angle between the femur and tibia, as might occur when these bones were slightly separated during hyperflexion or sudden wrenching. The cases narrated by the author illustrated the serious and persistent disablement that might occasionally result from comparatively slight pathological changes affecting the inner structures of the knee-joint, and showed the necessity of operative treatment in those cases following an injury in which the characteristic symptoms persisted after the usual treatment of the joint by rest and immobilization.

Ankylosis of Joints.—Dr. John B. Murphy of Chicago read a paper on this subject, in which he recommended arthroplasty for the relief of ankylosis without destructive bone defects. Ankylosis and contractures were of three varieties: First, atrophy of soft parts; second, union (fibrous and bony) between joint surfaces; third, a combination of one and two.

The essayist referred to the experimental work of Chlumsky of Würzburg, who decided that the best way to relieve such joints was to treat them precisely on the same basis as one would non-union of fractures from the interposition of foreign material between the fragments. He experimented with several kinds of material, absorbable and non-absorbable, to determine the best material to use, but finally abandoned the use of foreign materials and resorted to a plastic operation in the neighborhood of the joint for its relief. The method of Chlumsky was described, the essayist stating that he had adopted it in several cases with good results.

Treatment of Dislocation of the Clavicle Through Open Wound.—Dr. James E. Moore of Minneapolis, Minn., said that some recent writers had advocated the treatment of such a dislocation by wire suture, but he had been unable to find any literature upon the subject. Quite recently he had treated a case by cutting down upon the dislocated bone, replacing it and the surrounding soft parts, and fastening them there by means of silver wire and catgut sutures. The result was very satisfactory, and the findings were instructive.

Etiological Factors in the Production of Tumors.—Dr. George Halley of Kansas City, Mo., read a paper with this title. The origin of the term tumor went back to the infancy of medical knowledge, and simply meant a raised or elevated part of the body, unnatural, and only found in morbid conditions. The early concept was that something had raised or enlarged the part. Scientific investigations had been enlarging the scope of knowledge along the lines of etiology, hence tumors were very early divided into benign and malignant. No theory had been broad enough to account for all the phenomena characteristic of benign or malignant tumors. Inflammatory conditions that almost invariably produced some kind of tumefaction were for a long time regarded as the principal factor in their production. Many things, however, in the inflammatory conditions in no way comported with the ordinary processes found in tumor growths, and the products of most of the tumor growths were utterly unlike those of the inflammatory process. But as inflammation was believed to be principally due to irritation, it was held to be the prime factor in the production of morbid growths. The author dwelt at length upon the various forms of tumors.

One constantly occurring element in all benign tumors was the connective tissue. Sometimes it predominated and sometimes it was held in abeyance. Its presence was never wanting. Of all the tissues in the body, it most readily responded in physiological activity to irritating processes. In inflammatory changes it was found to be the reconstructing agent. It was not wonderful, therefore, that we had in this tissue the essential part, if not the entire mass, composed of this tissue. Was the connective-tissue germ-cell altered in quality? Had it been inoculated by a plastic material altered in quality by an irritant, or had there been a coalescence of protoplasmic germs from other tissues? We had not yet determined this, but he took it that along these lines, if not exactly, yet relatively near to it, would be found the true etiology of the benign tumor.

Surgical Procedures in the Removal of Fibromyoma of the Uterus.—A paper on this subject was read by Dr. Joseph Eastman of Indianapolis, Indiana. He said the morphology of the tumor and the environment of the patient should be considered before selecting the method to remove the tumor. Clay of Manchester, in 1844, operated for the first time for the removal of fibromyoma of the uterus. After speaking of the early history of removal of myoma of the uterus, Dr. Eastman described the first case that he operated upon, February 3, 1887; also the method pursued by him at that time, which can be found in the literature on this subject.

Myomectomy; Its Place in the Treatment of Fibromyoma of the Uterus.—This was the title of a paper read by Dr. O. Beverly Campbell of Chicago. The operation of myomectomy was not applicable to all cases of fibromyomata of the uterus, but could apply only to well-selected cases. This operation did not supplant panhysterectomy, hysteromyomectomy, and the different procedures for the relief of fibromyomata, but took its place as one of the recognized rational procedures, and as it was a conservative measure, it should be the favorite procedure when possible. A critical bimanual examination through the vagina and rectum under complete anæsthesia would usually admit of the diagnosis of cases amenable to this operation. All of the different varieties of fibromyomata, namely, the subperitoneal, the interstitial, and the submucous, may be treated by this method. By many operators it had been limited to the pedunculated subperitoneal variety. However, it had now been successfully applied to every variety of fibromyomata, with satisfactory results as to the immediate mortality rate and permanency of cure. The author concludes that myomectomy should be the preferred method in every case where possible to do so without extra risk to the patient, and where the ovaries can be conserved with the uterus. Operative interference should be advised in every case of fibromyomata where, after a careful examination, myomectomy was considered possible. The operation of myomectomy was, at all times, as safe in cases where it was applicable as hysteromyomectomy and panhysterectomy, and very many times almost a minor procedure practically free of risk. The early diagnosis of fibromyomata should be insisted upon, with a view of enlarging the percentage of cases in which myomectomy may be applicable.

Management of Uterine Fibromyomata Complicated by Pregnancy.—Dr. Miles F. Porter of Fort Wayne, Indiana, followed with this paper. After referring to the literature on the subject, and reporting an interesting case, the author concluded (1) That pregnancy was a frequent and serious complication of uterine myofibromata; (2) If, because of their size or location, they were likely to interfere with gestation or jeopardize the patient's life, they should be removed; (3) Each case was a law unto itself, and should be treated accordingly; (4) The tumor and not the pregnancy was the disease, and therefore any procedure which resulted in leaving the tumor and removing the pregnancy was unjustifiable. This, of course, was not meant to apply to those cases in which the fibroids did not interfere in any way, either with gestation or labor; (5) Pregnancy did not materially add to the risk of operations for uterine fibroids, so far as the mother was concerned; (6) The life of the mother, the life of the child, and the question of future offspring were the most important matters to be considered in reaching a conclusion as to the treatment of a case of uterine fibroids complicated with pregnancy.

The Treatment of Fibroids of the Uterus by Electricity and Present Status was the title of a contribution by Dr. Franklin H. Martin of Chicago. In the light of our knowledge, there was a time when the galvanic treatment of fibroids of the uterus by experts was legitimately the most conservative treatment possessed for a majority of those troublesome neoplasms. Now, the removal of fibroids with the knife by experts was the most conservative treatment for the majority of these difficulties. There was a time when the author submitted practically all his fibroid cases to the Apostoli treatment, because this treatment scarcely ever failed materially to benefit the patients; it symptomatically cured quite a large percentage, and occasionally the tumor seemed to disappear. It accomplished these results without subjecting the patient to a procedure which possessed any legitimate mortality. Gradually the evolution of the surgery for fibroids had reversed the relative position of the galvanic treatment. He considered vaginal and abdominal hysterectomies and myomectomies for fibroids, giving rise to serious symptoms, with their legitimate mortality reduced to 1 and 2 per cent., as remedies more conservative in their results than the treatment of the same tumors with electricity. He believed this, because hysterectomies and myomectomies, with a small percentage of risk, were the only remedies which absolutely relieved the difficulties in all cases. Electricity relieved frequently, symptomatically cured, but seldom actually removed, the tumor, and the treatment was tedious to the patient, and occupied much time of the physician in administering it. The present status of the electrical treatment of fibroids of the uterus was in his opinion that it had been properly superseded by surgery as a conservative remedy. He now recommended its employment in the following cases only: (1) As a local and general tonic, and as a relief of pressure and reflex pains and of hemorrhage in cases with complications contraindicating surgery; (2) In all interstitial fibroids where operative assistance was absolutely refused by the patient; (3) In tumors of small size of the interstitial variety in which hemorrhages were the principal symptom in women within one or two years of the menopause.

Dr. W. O. Henry of Omaha, Nebraska, thought that the electrical treatment of these tumors was overdone, and that to-day it was largely abandoned. As to myomectomy, where there were no complications requiring the removal of the tubes and ovaries, where the growth did not involve the entire depth or thickness of the uterus, so that this organ might be left intact, it was *the* operation to be performed. He agreed with Dr. Porter as to the removal of fibroid tumors that complicated pregnancy. As to panhysterectomy for uterine fibroids, he objected to it, as a rule. He thought it was better to save as much of the cervix as possible, thus securing a better vault for the vagina, and a better support for the uterus.

Dr. Van Buren Knott of Sioux City, Iowa, said that myomectomy as a conservative procedure in the treatment of neoplasms of the uterus needed no support. It was commonly accepted to-day as the method of election in cases in which it was applicable. He recalled a case of myomectomy performed on a woman three months advanced in pregnancy, who was subsequently delivered at full term of a healthy male child.

Dr. B. B. Davis of Omaha, Nebraska, said, as to myoma complicating pregnancy, that the tumor should be removed, if possible, before the woman became pregnant, but frequently patients consulted physicians with that complication. He indorsed practically all Dr. Porter had said in regard to the subject. He condemned the induction of abortion before delivering or removing the tumor, and mentioned a case in which he was called in consultation, one of the physicians recommending that that would be the best method.

Dr. C. H. **Mayo** of Rochester, Minn., mentioned the case of a woman, thirty years of age, upon whom he operated last June for a tumor complicating her first pregnancy. The tumor proved to be a degenerating fibroid, with free fluid in the abdomen. The adhesions and tumor were much larger than the pregnant uterus. The tumor was removed; the woman made an uninterrupted recovery, and he expected later to be compelled to do a Porro operation; but in due time the woman was delivered of a healthy living child and recovered.

Dr. A. C. **Bernays** of St. Louis, Mo., expressed himself in favor of myomectomy where it can be done. He recalled two cases of very large fibroids in which he found that myomectomy was an excellent method of enabling him easily to make a hysterectomy. He believed that in both of those cases he could not have made a hysterectomy without making a myomectomy of the very large tumor first.

Dr. **Charles H. Wallace** of St. Joseph, Mo., was interested in the paper of Dr. Campbell, and said that myomectomies were of recent origin. Myomectomy was comparatively easy of performance in properly selected cases. As to tumors complicating pregnancy, he would follow the advice of Dr. Porter.

Dr. J. N. **Warren** of Sioux City, Iowa, combated the idea that myomectomy was an easy operation to do, and without any particular danger attending it. He regarded it as a formidable operation, and always attended with considerable hemorrhage, excepting in the subserous variety, where there was a pedicle, and the surgeon could incise the serosa around it and simply peel the tumor out; but in the majority of cases where he had a combination of the interstitial and subserous varieties, it might be necessary to go through the entire thickness of the uterine wall; then it was not a simple operation. It was one that required not only great dexterity, but good judgment, in determining exactly the limits of the myomatous mass which was to be removed.

Dr. W. A. **Tichenor** of Chicago seconded the remarks of the last speaker as to the formidability of myomectomy. If there were one or two small tumors close to the peritoneal surface, it was not difficult to shell them out. On the other hand, if there were eight or nine tumors of fair size, and the surgeon undertook to remove them all from the surface of the uterus, he would get the uterus pretty well riddled with incisions for their removal, and it was not a safer operation, in his judgment, than a hysterectomy.

Dr. **James E. Moore** of Minneapolis, Minn., endorsed the paper of Dr. Campbell. All would agree that what was conservatism a few years ago was no longer conservatism. There was one point he wished Dr. Campbell had emphasized, namely, the possibility of doing myomectomy through the vagina. Within three weeks he operated through Douglas' pouch for the removal of a tubal pregnancy before rupture, and incidentally removed two fibroids, one of which was situated in the anterior wall of the uterus, well down toward the bladder, yet it was not difficult to remove it.

Dr. **Donald Macrae, Jr.**, of Council Bluffs, Iowa, commended the paper of Dr. Campbell, and said it was the sinew of conservatism. These fibroid tumors should be operated upon, and removed as soon as they are diagnosticated.

Dr. **Lewis Schooler** of Des Moines, Iowa, said the trend of the discussion seemed to be in the direction of operating on uterine fibroids by some method or other. He thought there was hardly a practitioner in the room who did not know of some of these fibroids having existed for ten or fifteen years in women without producing any disturbance. He did not think it was well to operate for their removal as soon as they were discovered. There were some women who had passed the menopause, others who were near it, and still others who would probably not give birth to children, in whom these fibroids caused absolutely no trouble. Some of these cases could be let alone.

The discussion was then closed by the various essayists.

The Use of the Gall-Bladder as a Suspensory Ligament for Prolapsed Liver.—This was the title of the presidential address, delivered by Dr. A. F. **Jonas** of Omaha, Nebraska. He said that the liver was sometimes displaced downward to a considerable degree; that there was usually modified function and a well-defined clinical picture belonging to this change of position. Mrs. S., aged forty-one, had for three years suffered from paroxysms of severe pain located in the right hepatic region. These pains, always sudden in onset, sometimes subsided in the course of one or two hours, but occasionally continued until relieved by opiates. Whether they were relieved spontaneously, or by anodynes, they were always succeeded by nausea, and an aversion for food lasting for two days to a week. During the intervals she had a dragging pain in the right hypochondriac region. A year previously she had a moderate degree of jaundice. Otherwise her history was negative. On examination her abdomen was distended, tympanitic, the abdominal walls were pendulous, soft, and flabby, and covered with numerous striæ, the result of childbearing. On palpation, pain on pressure was elicited over the region of the gall-bladder, but no enlargement of that viscus could be made out. A movable lump was found between the right costal arch and the iliac crest, which proved to be the right kidney. The diagnosis was biliary calculi in the gall-bladder, and movable right kidney. Cholecystotomy and nephrorrhaphy were recommended and agreed to by the patient.

After the usual preliminary preparations a vertical incision was made, beginning at a point over the median end of the ninth rib, and extending down four inches. On entering the abdominal cavity, the lower margin of the liver was three fingers' breadth below the costal arch. The liver could very easily be elevated to its normal position, but it descended very slowly when pressure upward was released. In appearance it was normal. The gall-bladder was easily found, and several calculi could be felt through its walls. The displaced and movable kidney could be made out. The liver could be held in place by little effort, particularly when an ordinary amount of traction was made on the gall-bladder, so the question presented itself, Why not use the gall-bladder as a suspensory ligament? Accordingly, it was sutured in the uppermost part of the wound, snugly against the costal arch, the sutures passing through the gall-bladder wall, the parietal peritoneum and muscles. Before closing the peritoneal cavity, an exploration was made for the movable kidney, but it had receded to its normal position, and could not be displaced. The peritoneum was then closed, the remaining wound sutured in the usual way, save to allow for opening the bladder. This was done and several calculi removed. A long drainage tube was introduced, and the wound was then dressed by an antiseptic, hygroscopic pad. The drainage tube was removed in one week. The wound closed at the end of four weeks. The patient was directed to wear a snugly fitting abdominal band. Subsequently several examinations were made. On percussion, the liver had remained in its normal position, and the dragging pain had disappeared. No displacement of the kidney could be made out, although she assumed several positions, straining in various ways. It was evident that the descended kidney was dependent on the descent of the liver. In this case, unfortunately, it was not ascertained whether there was associated a downward displacement of the stomach and colon. The author concluded (1) The cause of hepatoptosis consisted in a modification of one or more of its normal supports, or an increase in the size and weight of the liver; (2) It was impossible for the liver to descend without producing a descent of the hollow abdominal viscera; (3) The utilization of the gall-bladder as a suspensory ligament to maintain and hold in its normal position a prolapsed liver, together with certain other abdominal organs, seemed practical.

Heart Suture.—Dr. B. Merrill Ricketts of Cincinnati, Ohio, made some remarks on this subject. He referred to malposition, displacement, and malformation of the heart, and then detailed a series of experiments which he had conducted on animals with reference to suturing the heart. He stated that there were twenty-seven cases of suture of the heart for wounds in human beings reported up to the present time, with recovery in seven instances. In this work it was necessary to use a suture that was longer-lived than ordinary catgut, and he had employed kangaroo tendon in ligating the coronary arteries and fine silk sutures in the walls of the heart. The sutures should be applied in systole of the heart, and not during its expansion. Certain hearts were softer than others; they broke down under the use of forceps, and forceps should not be used in this work. The indications for suturing the heart had to be worked out; but it was interesting to see how readily the chest could be opened with the right kind of forceps. He had used a kind of pruning forceps in his experimental work. He had opened the chest, reached the heart, and sutured it in forty seconds(?), and he did not think it would require much more time to do this in the human being. The aspirator should not be used for anything about the heart, because injury to the coronary arteries would often result in hemorrhage and death. The time had arrived when surgeons should no longer hesitate to open the chest for injuries of the lung and of the heart in cases of emergency.

Fracture of the Metacarpal Bones, and Oblique Fracture, Simple or Compound, of the Forearm.—Dr. W. W. Grant of Denver, Colorado, spoke of the application of Buck's extension in the treatment of fractures of the femur to fractures of the forearm and hand, although the application was as appropriate in certain inflammatory conditions of the wrist and elbow joints. He then detailed a case in which the second and third metacarpal bones were fractured near the metacarpo-phalangeal articulation; the third had a second fracture near the proximal end, and the fourth metacarpal also near the wrist was fractured; the ulnar artery was severed at the wrist, and the pisiform and cuneiform bones so badly damaged that they were removed. He obtained a very good result in this case.

Dr. John P. Lord of Omaha, Nebraska, narrated in an interesting manner some of the observations that he had made during a trip in Europe.

Total Extirpation of the Prostate Gland Through a Median Incision in the Perineum.—Dr. Alexander Hugh Ferguson of Chicago read a paper on this subject. In several cases operated upon by the author his results were better than he had ever secured by the suprapubic route.

Speaking of the advantages of the operation, he stated (1) That it was the most direct route to the organ, and that the prostate could be removed without injuring any important structure; (2) The operation was easily performed. In all those cases in which the gland had been repeatedly inflamed, it made it more difficult to operate, but not as difficult even then to remove the prostate from below as to do the suprapubic operation; (3) The removal of the gland, piece by piece, enabled the surgeon to work through a small opening, and prevented the bruising of the surrounding parts by the finger, which was accompanied with the removal of the gland *en masse* through the perineum; (4) Hemorrhage was avoided, so long as one was careful to work within the capsule. The hemorrhage in suprapubic prostatectomy, or in the combined method, was often very alarming. On one occasion the writer had to leave pressure forceps on blood vessels, and pack the bladder tightly with gauze twenty-four hours. The patient narrowly escaped death from both hemorrhage and sepsis. Perineal drainage after suprapubic prostatectomy was not as complete as when the prostate was attacked from below. It was found by the writer that the danger from septicæmia was not at all prominent after perineal prostatectomy, and so far had given no anxiety whatever. There was less danger of uræmia. The operation took the shorter time; the anæsthesia having therefore less effect upon the kidneys, and a minimum opportunity for sepsis made it easier for the kidneys to perform their functions. The suprapubic operation was accompanied with far more shock than the author had found following perineal prostatectomy.

Dr. Lewis Schooler of Des Moines, Iowa, read a paper in which he spoke of the symptoms, signs, diagnosis, prognosis, and palliative treatment of hypertrophy of the prostate. The palliative treatment was divided into (*a*) Massage; (*b*) Aspiration; (*c*) Catheterization; (*d*) Dilatation, and (*e*) Cystotomy. In considering all of the above methods, none were intended to be radical; none were calculated to remove the cause. All were intended, to partially, at least, restore functional activity, and to produce results sufficiently satisfactory to prevent the need of more radical procedures, and until within the last five years they were the best that the profession possessed. The dissatisfaction with them was clearly shown by the constant aim to discover something that would give better results. In a few cases they had served the purpose well, and in the future would be resorted to in very few select cases. But the better knowledge of the anatomy of the prostate gland and its pathology called for an advance in therapeutic resources that did something more than to secure relief with a constant menace to the life of patients through infection, as well as a method that did not require eternal vigilance, and a knowledge of the fact that the life of the individual depended upon the mechanics of artificial urination.

The Pathology and Etiology of Prostatic Hypertrophy and Suprapubic Drainage as a Method of Treatment.—Dr. A. C. Bernays of St. Louis, Mo., dealt with this phase of the subject. Suprapubic cystotomy was an operation which found its application in stone in the bladder, tumors, and growths, hypertrophy of the prostate, foreign bodies, exploration of the bladder, and drainage of the viscus. It was a recognized and successful method of treatment in all of these conditions. The technique varied with the object in view. Some ten years ago the speaker had the notion that suprapubic drainage would cure prostatic hypertrophy. He reasoned that by the drain he could give complete physiological and mechanical rest to the bladder; he could prevent the unrest due to the alternating filling and emptying of that viscus. He had hoped that the hypertrophied prostate under the influence of rest would undergo absorption and atrophy, and that a decrease in size, which might be permanent, would take place. In this latter hope he was doomed to disappointment. In all cases of hypertrophy of the prostate in which he made free permanent drainage for from three to ten weeks, the urine became normal in color, the cystitis was much improved, and in some cases entirely cured. He was convinced that as a radical cure of prostatic hypertrophy the suprapubic drainage was a failure. He spoke of hypertrophy of the prostate as a form of neoplasm or tumor. It was either a diffuse myomatous hypertrophy, or it was a localized formation of nodular myomata except in rare instances. Myoma could not be made to disappear by castration, either in men or in women, nor could it be made to do so by giving the parts in which the myomata were located physiological and mechanical rest by means of the suprapubic drainage. His training and feelings were so much opposed to operations in the dark that the Bottini and even the popular internal urethrotomy could receive no support from him.

Suprapubic Prostatectomy.—Dr. C. H. Mayo of Rochester, Minn., discussed this subject. Prostatic surgery had developed from suprapubic cystotomy. Statistics should only be considered in a general way, as representing the developing stage of prostatic surgery. One-half of the enlarged prostates could be reached either from above or below equally well, one-fourth better from above, and one-fourth better from below, and a few would require a combined operation. The method of operation was influenced by the condition of the gland, and by other known and oftentimes unknown conditions. The lateral lobes were glandular and encapsulated; the middle might be glandular and encapsulated, or a muscular bar, or hypertrophy of mucous glands and bladder tissue. Of known conditions which influenced one's choice, the fleshy individual with thick perineum, long prostatic urethra, and high-lying prostate was one for suprapubic or combined operation. Large dilated bladders were easily reached from above, and small, contracted bladders more easily from below. Those with stone present and enlarged prostate were best made from above. Of unknown conditions which influenced one's choice, he had cases of symptomatic stone not found by search and emergency operations made in the country. These were the cases in which the suprapubic incision was the most satisfactory. Those with cystitis and old or acute secondary changes in the testes would often improve after castration. There was still a large class of prostatic sufferers in whom there were no symptoms of stone, little or no cystitis, and short perineal distance in which a perineal operation was unquestionably the better method. The ease of operation, perfect drainage, and earlier recovery in chosen cases, no doubt, justified this choice. The special retractors of Syms and Ferguson simplified the accessibility of the gland from below, and it was quite possible from present indications that this method would be developed into the operation of the future by making earlier diagnosis of conditions, and operating before the patients reached the stage of necessary suprapubic incision. Before suprapubic operation, a hypodermic of morphine was given to reduce the amount of the anæsthetic. Usually chloroform was indicated, but ether was preferred. The Trendelenburg position was employed with air inflation of bladder and finger enucleation of enlargements after incising the capsule. Suprapubic drainage should be established by closing the bladder over the tube by Witzel's method.

The Indications and Limitations for the Bottini Operation.—Dr. Louis E. Schmidt of Chicago read a paper with this title. After discussing at length the indications and limitations of this operation, he concludes that good results of the Bottini operation will depend (1) On the correct selection of cases; (2) On the proper technique of the operation and proper after-care; (3) The immediate correction of errors or mishaps.

How Shall We Treat Sepsis Following Labor and Abortion?—Dr. W. O. Henry of Omaha, Nebraska, in a paper on this subject took the ground, first, that it was important to remember that sometimes malarial and other fevers followed closely upon abortion and labor, and all such cases should be carefully distinguished from true puerperal sepsis; but having once fully determined that infection has really occurred along the genital tract, only one line of treatment was justifiable in the present state of our knowledge. Although he admitted the different varieties of infection, yet since it was both unsafe and impractical at the present time to wait for bacteriological examination, and since, further, the treatment he recommended was safe, practical, curative, and within the reach of every physician, he insisted upon its universal adoption. After giving somewhat elaborately the reasons for his belief, he summarized as follows: (1) Remove early with the finger, sharp curette, and flushing all débris, decidua, blood clots, and sloughing tissue, which may be infected, from the uterus and from all raw surfaces in the cervix, vagina, and vulva; (2) Dry all of these raw surfaces and freely apply to them 95-per-cent. carbolic acid, washing away the surplus acid with sterile water; (3) Unless hemorrhage requires, leave no tubes or packing of any kind in either the vagina or uterus; (4) Have simply carbolized 2-per-cent. vaginal douche used twice a day thereafter; (5) Open the bowels freely with calomel, one-half grain every hour for four hours, then follow with Rochelle salts, until sufficient action has occurred; (6) Give quinine, three grains, every four hours, followed by tincture of chloride of iron, fifteen drops, in water; (7) Give good nourishment with milk, eggs, and stimulants every four hours; (8) Let this be the routine early treatment, and hysterectomy will be rarely required; (9) When fixation of uterus occurs, and infiltration takes place in Douglas' cul-de-sac or the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina; (10) If multiple abscesses occur in the uterine wall, or the walls become badly infected, or, if necessary, to get perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route. The abdominal route is dangerous in all acute cases, and is seldom, if ever, justifiable.

A New Method of Anchoring the Kidney was described by Dr. Byron B. Davis of Omaha, Neb. This method can best be explained by giving a report of the only operation yet done by it. A. J., unmarried female, aged twenty-one years. Had frequent gastric crises, and a good deal of constant lumbar pain, on right side especially. Had lost twenty-five pounds in weight during the past year, and was very anxious for relief. On examination the right kidney was found freely movable, falling so low that the upper pole could be felt on bimanual examination. The left kidney was also somewhat movable. Patient entered hospital November 9, 1901, for operation on right side, which was done November 11. The incision extended from the lower rib to near the crest of the ilium, a hand's breadth to the right of the spinous processes of the vertebræ. The fatty capsule was reached just anterior to the outer border of the quadratus lumborum, and was opened and a large part of it trimmed away. The kidney was pushed into place by a cylindrical pad placed under the abdomen. When the kidney was well exposed, an incision was made through the proper capsule from one process below the upper pole to a point 2 cm. above the lower pole. This incision was placed vertically on the posterior surface near the convex border. The capsule was stripped loose from the kidney substance from a distance of three-fourths inch anteriorly and posteriorly to the incision of the capsule. From the upper and lower extremities of the vertical incision a perpendicular incision three-fourths inch long was made through the capsule, this giving two flaps of capsule three-fourths inch wide by about two and one-half inches long. Next, a strip the thickness of one's little finger of the other border of the quadratus lumborum muscle was split off from the remainder of the muscle, the fibers being separated by the handle of the scalpel. This separation extended from the muscular attachment to the twelfth rib downward for two and one-half inches, or the slit in the muscle was made as long as the length of the capsular flaps before described. Next, an artery forceps was passed through the slit in the muscle, made to grasp the free border of the posterior flap of the kidney capsule and then withdrawn, bringing the flap of the kidney capsule through the slit in the muscle. The two capsular flaps were next brought together over the bundle of muscular fibers, thus isolated from the border of the quadratus lumborum, and stitched together with a running suture of fine chromic catgut, the needle being allowed to penetrate the muscular bundle at two or three places. The lumbar wound was next closed by tier sutures of catgut, the skin wound being closed with horsehair. Aside from a slight infection, the wound did well. Patient was allowed up on the twenty-second day. The kidney thus far was in place, and the patient relieved of her former symptoms, although it was too early to predict anything of the final result. This method was reported because it represented a new principle in treatment.

Intestinal Obstruction from Meckel's Diverticulum, with Recovery.—Dr. A. E. Halstead of Chicago reported a case and presented the following summary of all cases in the literature that were accessible to him. Total number of cases reviewed, seventy-two; males, forty-five; females, seventeen; sex noted in only sixty-two; result noted in sixty-five; deaths, forty-four; recoveries, twenty-one; percentage of mortality, 67.6; percentage of recovery, 32.4; cases operated upon, fifty-five; death in cases operated upon, twenty-seven; no operation in seventeen; percentage of death in cases operated, 49.0+; attachment or non-attachment of diverticulum or diverticular ligament, mentioned in sixty-six; point of attachment noted in forty-four; to mesentery in twenty-one; to umbilicus in fourteen; not determined in three; diverticulum attached, forty-seven; and diverticulum free, nineteen.

Grave Abdominal Injuries Without External Evidences of Traumatism.—Dr. R. Harvey Reed of Rock Springs, Wyoming, read a paper in which he discussed this subject. From reading the literature, together with his own experience, he was led to the conclusion that it was the surgeon's duty to make an exploratory incision in all cases where there was grave doubt as to the real nature of an injury, and particularly so when the constitutional symptoms pointed to a condition more serious than was indicated by either the subjective or objective symptoms, provided the physical condition of the patient was such as to warrant an operative procedure.

Dr. A. W. Abbott of Minneapolis, Minn., detailed a great many experiments on animals with a view to determining the immediate effects of intestinal exposure. From his experimental work, he concluded that in operations, where the intestines were exposed, the loss of water was unimportant, except in so far as it influenced the loss of heat and the drying of the surface; that the loss of heat was very important, as it temporarily placed the temperature of the intestines below the safety line of vital action, and secondarily the heat of the whole body below that which should be continuously maintained; that the drying of the peritoneum was so decided, that it must disturb to some extent the anatomical relations, and the resisting and recuperating power of that membrane; that the loss of heat and the drying process must suspend for an undetermined period some of the physiological functions of the peritoneum, and influence, to a degree as yet unknown, pathological conditions.

These conclusions the modern surgeon had reached clinically, in a general way, as shown by a short incision, protection pads, a minimum exposure of the peritoneum, and short-time operations. The writer believed that the exposure of the peritoneum should be the subject of a more critical study, and that this should be supplemented by extended experiments on the later effects, especially in their relation to peritonitis and adhesions.

Our Hospitals.—Dr. H. D. Niles of Salt Lake City, Utah, spoke on this subject. He said it was very evident to the minds of physicians familiar with the situation that the methods and management that had served hospitals so well when their purpose was limited to the care of the sick within their walls, would not suffice if the hospitals were to meet present needs and fulfill their possibilities as a great system of scientific institutions distributed throughout this country, where not only the favored few, but the whole profession, with all the sick intrusted to their care, might feel the results and participate in the benefits. So long as a hospital measured its own usefulness by the number of patients treated, the standing of each member of the staff would be estimated largely by the size of his personal following; and the commercial spirit would rule both the institution and the individual to the exclusion or great detriment of scientific work. If the profession was ever to secure a voice, it should formulate and adopt a business code that should not only meet the highest requirements of the ethics of the profession, but at the same time command the respect and win the confidence and support of the twentieth-century public. The object of the paper was to arouse, if possible, a more active interest in an institution that promised, with the aid of medical men, to become one of the most influential elements in the medical world—its labors, its literature, its thought, its discoveries, and its advances.

Surgery of Spina Bifida.—In a paper with this title Dr. Van Buren Knott of Sioux City, Iowa, discussed the varieties of spina bifida, the clinical features, diagnosis, prognosis, and treatment. After reporting four cases, he drew the following conclusions: (1) Owing to the distressing nature of the affection, the high mortality should not prevent attempts at surgical relief; (2) Meningoceles, meningomyeloceles, and syringomyeloceles may be considerably benefited by operation; (3) The improvement in function cannot with certainty be estimated before operation, and pronounced evidences of nervous disturbance are not a contraindication to excision; (4) Asepsis is absolutely essential, and although difficult to secure, may be maintained by exercising extreme care; (5) The plan of having the suture lines of the meninges and the overlying tissues on different planes will in the majority of instances prevent leakage of cerebrsopinal fluid; (6) The suggestion of Pearson to prevent the escape of this fluid during a prolonged operation by stuffing the canal with gauze is valuable; (7) Large bony defects may be effectually closed by muscle much easier than by osteoplastic methods; (8) It is not necessary to keep the child off its back during the healing of the wound, as is frequently advised; (9) Children with hydrocephalus accompanying spina bifida should not be subjected to operation.

Other papers were read as follows: "Two Cases of Cysts of the Broad Ligament Complicated with Myxoma," by Dr. Edward Hornibrook of Cherokee, Iowa; "Diffuse Sarcoma of the Uterus," by Dr. D. S. Fairchild of Clinton, Iowa; "New Operation for Wandering Kidney," by Dr. E. Wyllys Andrews of Chicago, Ill.; "The Operative Relief of Impaired Function of the Elbow-Joint Due to Faulty Reattachment of a Separated Internal Humeral Epicondyle," by Dr. G. G. Cottam of Rock Rapids, Iowa.

The following officers were elected for the ensuing year: *President*, Dr. James E. Moore, Minneapolis, Minn.; *First Vice-President*, Dr. J. R. Hollowbush, Rock Island, Ill.; *Second Vice-President*, Dr. W. W. Grant, Denver, Colorado; *Secretary-Treasurer*, Dr. George H. Simmons, Chicago.

St. Joseph, Mo., was selected as the place for holding the next annual meeting; time, December 29 and 30, 1902.

Osteomyelitis Following Measles.—Joel E. Goldthwait reports the case of a girl of six years, who ten days after the onset of measles had severe pain followed by swelling in the left leg. The swelling rapidly became fluctuating, and was opened freely, showing the whole upper half of the tibia denuded of periosteum. The left knee was swollen, and below the tubercle of the tibia there was a granulating wound two or three inches long with exposed bone. A few months later a radiograph showed an extensive osteomyelitic process with the whole upper half of the shaft of the tibia as a sequestrum. An attempt at repair with extensive formation of new bone was clearly shown. Later radiographs show almost complete replacement of the shaft of the tibia with a sequestrum between two and three inches long, lying obliquely in the upper part of the bone. As to prognosis, while the function of the knee bone will be impaired, it will not probably be a very serious limitation, and the strength of the leg, aside from the shortening, should not be much below normal.—*Annals of Gynecology and Pediatry.*

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 19, 1901.

HERMAN KNAPP, M.D., VICE-PRESIDENT, IN THE CHAIR.

Remarks on the British Congress on Tuberculosis and the Prevention of Tuberculosis.—DR. E. G. JANEWAY made some remarks on this subject in response to the invitation of the chairman. The congress, he said, had been a marked success, and owing to the presence of representative men from various countries it had partaken of an international character. Formal addresses had been presented by the representatives of different nations, Dr. Osler speaking for America. Dr. Robert Koch had insisted that all the facts pointed to the sputum of tuberculous individuals as the main source of infection. He spoke also of the proper hygiene of such persons, and on what had been accomplished by treatment in sanatoria. He made the statement that there were 226,000 persons in Germany, over fifteen years of age, so far gone from consumption that hospital treatment was necessary, yet only 20,000 could be accommodated in the sanatoria. Of this number experience showed that about 4,000 would lose the bacilli from their sputa. Koch stated most positively his disbelief in the identity of human and bovine tuberculosis. Among the reasons given for this opinion was that experiments on cattle had shown that bacilli originating from human tuberculosis would not induce tuberculosis when injected into or fed to cattle. Moreover, as milk and butter contained bovine tubercle bacilli to a considerable degree, there should be a much greater amount of primary intestinal tuberculosis if human beings were infected from this source. Koch was of the opinion that the proportion of cases of primary intestinal tuberculosis was hardly greater than would be accounted for by hereditary transmission. Dr. Janeway cited a very suggestive case that he had encountered. A group of three children in one family, two children in the family of a neighbor, and one child in another neighbor's family, all developed tubercular glands of the neck. The cook in the first family said that she had noticed blood in the milk used. Dr. Janeway asked the State Board of Health to investigate, but before this could be done the cow from which the milk had been obtained died. It was significant that all of the children had been fed on the milk from this cow. Careful search had failed to show any other source of infection in these families. Dr. Janeway said that he could not believe that milk from diseased cattle would furnish the best food for either children or adults. A remarkable fact brought out at the congress was that the mortality in Great Britain from tuberculosis had diminished from 1851 to 1901 50 per cent.; in other words, that only about one-half as many died from this disease now as compared with fifty years ago. The opinion seemed to prevail that tuberculi should only be employed in afebrile cases. Dr. Janeway then spoke of the urgent need for greater accommodations in sanatoria for poor consumptives. For the boroughs of Manhattan and The Bronx he estimated that 5,000 succumb to tuberculosis each year, and hence this number, plus the number who recovered, would represent the total number for whom accommodations might be required. It should not be forgotten that even persons of slender means sometimes went into the country and lived on farms away from medical supervision, and so became a source of danger to those around them. The speaker said that the habit of expectorating into the handkerchief was a most unsanitary one; he looked upon the pocket handkerchief almost without an equal as a disseminator of disease. Another point of great practical importance, which should not be overlooked, was that it was not proper or safe to pronounce the sputa of a person harmless simply because one examination had shown an absence of tubercle bacilli.

Tuberculin Treatment.—DR E. L. TRUDEAU, being unable to be present, sent a letter. He said that he had used tuberculin for the past ten years, both as an aid to diagnosis and as a specific method of treatment. As an aid to diagnosis he had applied it mostly in suspected cases of incipient tuberculosis of the lungs, and in most instances it had enabled him to make a positive diagnosis before he could have done so by means of the rational or physical signs. He had never known it to have a bad effect on the tuberculous process. It should not be used when there was much fever, because the results obtained were unsatisfactory, and also because it had seemed to him that it might be dangerous by the hyperæmia which it induced, causing an intensification of the secondary process. The method should not be used indiscriminately, and, indeed, was required only in comparatively few cases. He had also used tuberculin therapeutically in tuberculosis. In an apyretic case in which there was no reason to suspect secondary infection, if given in small doses so as not to produce a rise of temperature, it was free from danger, and the results he had obtained with it had been encouraging. The susceptibility of the patient to tuberculin varied greatly in different individuals. After the patient had become tolerant to quite large doses, the treatment should be discontinued for several months. If then it was found that susceptibility were again present, the use of the tuberculin should be once more begun. Dr. Trudeau said he did not feel able as yet to speak authoritatively regarding the relative value of the different preparations of tuberculin. The production of a marked degree of toxin immunity did not necessarily mean marked bacterial immunity. This treatment was limited to cases which were likely to recover under ordinary climatic and hygienic treatment, and the latter, in his opinion, was the best means at our command for the arrest and cure of tuberculosis. The letter closed with an earnest appeal for more sanatoria, properly endowed, so as to place them within the reach of the poor. Dr. Trudeau hoped that his sanitarium would be endowed so that the good work which he had initiated and had carried on there so successfully might be continued after he had gone.

Difference Between Bovine and Human Tuberculosis.—DR. THEOBALD SMITH read the introductory paper on this subject. That bovine and human tubercle bacilli were not identical, he said, had occurred to him about ten years ago, while watching the effect of these bacilli on guinea-pigs. When in 1894 he had isolated and studied comparatively a bovine culture and one domiciled in a tuberculous man, the great difference in the results obtained had impressed him with the belief that there was a great difference between these bacilli. In 1897 a sufficient number of pure cultures had been isolated to enable him to test bovine and human bacilli on cattle. The outcome of these experiments had justified the claim that there was a distinctly human and a bovine tubercle bacillus. Cases of direct inoculation could not decide the question because the conditions were thereby changed. He raised the question as to what it was that prevented the entrance of germs of tuberculosis through the mucous membranes in animals susceptible to inoculation. At one time he had made notes of eighty-eight autopsies on cases of bovine tuberculosis, and had found in eighty-five of them lesions of the thoracic organs. Of this number, forty-one showed disintegrating foci and had been discharging tubercle bacilli. This fact should be borne in mind by physicians having many dairymen under their care. Dr. Smith declared that bovine tubercle bacilli possessed definite traits or features which served to distinguish them from the great majority of cultures isolated from the human subject. They differed not only morphologically, but in virulence from human tubercle bacilli. If in any case of spontaneous tuberculosis one should find bacilli agreeing morphologically and in virulence with those of the bovine race, one must concede that the case was of bovine origin; but even then one would be confronted with the question as to why there were so few infections from this source in view of the many opportunities for such infection. In children the type of the disease approximated that found in cattle, but this similarity must not be construed as pointing to an identical etiology. He believed that a few bacilli were harmless, but that the flooding of the intestinal tract with numerous bacilli was dangerous. This view he had first announced in 1898. At that time he had also raised the question as to the possibility of the bovine tubercle bacillus entering the digestive tract of the human subject, and in its passage through the system undergoing such a modification that on appearing in the sputum it would present the general characters of the human tubercle bacillus. It was probably that there was an initial resistance of the human body to the bovine tubercle bacillus, and this explained the comparative harmlessness of a few such bacilli. On the whole, the student of comparative etiology was inclined to believe that ordinarily the pathogenic action of a bacterium was confined to a certain large group or race, and only sporadically exerted its special action outside of those limits. The transmission of glanders from the horse to man was an established fact, but when one took into consideration the large number of cases of glanders occurring annually in horses, and the large number of human beings brought in intimate contact with these animals, the number of cases of glanders occurring in the human subject sunk into insignificance. We had no right to assume the indiscriminate transfer of bovine tubercle bacilli to man, and hence we should not except the broad, sweeping statement made by Koch. Undoubtedly, exceptions might occur; it was our duty to ascertain how numerous were these exceptions. The conclusions which might be drawn provisionally from the foregoing considerations were: (1) That there was no evidence that bovine tubercle bacilli might indiscriminately infect the human subject, and (2) That there was some evidence that bovine bacilli had been isolated from human beings, and that the successful transfer was uncommon and depended upon certain conditions requiring further careful research.

Dr. H. M. **Biggs** said that it seemed to him that Koch's position involved two considerations, viz., (1) That bovine and human tuberculosis was distinctly different, and (2) That we might ignore, from the human sanitary point of view, the production of tuberculosis by infection from cattle. There were strong grounds for the belief that the bovine and human tubercle bacilli were of two different types, and that the bovine bacillus infected the human subject with difficulty. He had no doubt that the proportion of cases of tuberculosis in the human subject of bovine origin was considerable. The statistics of the Board of Health of New York City showed that in certain crowded sections of the city from 8 to 10 per cent. of the population was infected with tuberculosis, while in other and more sanitary districts only one-fourth to one-half of 1 per cent. was so afflicted. It was reasonable to believe that in the poorest districts one would find the most marked effect from the use of poor and unwholesome milk. The statistics of Great Britain and of this country regarding intestinal tuberculosis differed very widely. All authorities in this country agreed that cases of primary intestinal tuberculosis were of rare occurrence here; they represented about 1 per cent. in this city as contrasted with about 10 per cent. in Great Britain. Cases of abdominal tuberculosis were likewise rare in Germany. It was evident, therefore, that the conditions of infection in Great Britain must be peculiar, though as yet just what they were was not known. The speaker said that for the last few years he had come to feel that there was little reason for restricting tuberculosis in animals, so far as regards the effect upon human beings. Undoubtedly, the restriction of bovine tuberculosis was an important agricultural problem; but from the point of view of the public health it did not seem to him of special importance except perhaps as regards disease of the udder. At one time, Rokitansky had injected subcutaneously a number of bovine bacilli into eight or ten persons suffering from cancer. Some months later, these persons having died, examination failed to show any tuberculous lesions either at the site of the injection or in the neighboring lymphatics, or in the internal organs. Of course, such experiments were only suggestive, for we did not know but the same result would follow the subcutaneous injection of human tubercle bacilli.

Dr. W. H. Park said that he had understood Dr. Biggs to say that he did not believe bovine tuberculosis was a source of danger to human beings. If this were so, he did not quite understand Dr. Biggs' allusion to disease of the udder. Possibly this statement had reference only to the undesirability of adding filth to the milk. The speaker referred to certain racial characteristics of bacteria, and reported some experiments that he had recently made, going to show that human bacilli did not infect calves under ordinary circumstances. He had taken four calves and fed them for two weeks with from one to two ounces daily of sputum rich in tubercle bacilli obtained from many consumptives. The animals had been tested first with tuberculin. The experiments had been carried on for five months, and the animals recently killed failed to show the presence of tuberculosis.

Origination of Tuberculosis from Cow's Milk.—Dr. A. **Jacobi** opened the discussion on this topic. After quoting freely from the literature, he said that it seemed to be clear that the milk of cows reacting to tuberculin, but presenting no lesion of this disease, contained no tubercle bacilli. Apparently the cases of infection with tuberculosis from the milk were not very numerous, but a number of well-authenticated ones had nevertheless been reported. He was of the opinion that the absorption of tubercle bacilli might take place even though the intestinal mucous membrane of the child was normal. One reason for this belief was the frequency of primary tuberculosis of the peritoneum in children. It was almost always localized, and usually preceded and did not follow pulmonary or general tuberculosis. Tuberculosis of the peritoneum could originate only in one of two ways, *i. e.* either through the blood, in which case there would be a more disseminated type of the disease, or else through the intestine. The restriction of bovine tuberculosis seemed to him of vital moment—a question which was a great deal more than an agricultural or economic problem.

Dr. W. P. **Northrup** said that in a large experience he had never seen clinically a case which seemed to him to give evidence that the earliest infection with tuberculosis had been in the mesentery. He had noted carefully the autopsy findings in 125 cases of tuberculosis in children. In thirteen of these cases the only tubercular process in the entire body was in the lymph nodes around the trachea, and in three only was the oldest process apparently in the mesenteric lymph nodes. There were many experiments on record to show that bacilli could pass through the intestinal mucous membrane without any lesion of this membrane discoverable by the microscope. According to his experience, tuberculous infection in children usually began in the lymph nodes about the neck and trachea, then involved the lungs, then the liver and spleen, then the peritoneum, then the kidneys, and lastly the brain. He could not, therefore, accept what had been said by Dr. Jacobi about peritoneal tuberculosis as bearing upon the question of primary intestinal tuberculosis.

Dr. **David Bovaird, Jr.**, said that in a later series of 125 cases of tuberculosis coming to autopsy at the New York Foundling Hospital there had been just two in which the infection had appeared to be primary in the intestine. Adding the 125 cases at that institution just quoted by Dr. Northrup, there were 250 cases with only five in which the primary infection had apparently been in the intestine. Almost all the reported cases of death from tabes mesenterica came from England, and although two eminent pathologists in London hospitals maintained that tabes mesenterica was unknown to them, the statistics of London made it appear that there were upward of one thousand deaths a year from this disease. These discrepancies made these statistics of questionable value. It seemed to him that the ground taken by Dr. Biggs was perfectly sound.

Owing to the lateness of the hour, the discussion of "The Need of Sanatoria for Tuberculosis" was postponed to the next meeting.

Annual Election.—The annual election resulted as follows: *Vice-President*, Dr. V. P. Gibney; *Member of Committee on Admissions*, Dr. W. L. Carr; *Member of Committee on Library*, Dr. W. B. James.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, December 17, 1901.

E. Franklin Smith, M.P., Chairman.

Antistreptococcus Serum in Pernicious Anæmia.—Dr. James J. Walsh read this paper. He said that half a century ago pernicious anæmia had been called idiopathic anæmia because no one knew what it was, and that even to this day not very much was known about it. It simulated cancer and the severe secondary anæmias, such as resulted from hemorrhage or from the infection of the anchylostoma duodenale. The etiology of pernicious anæmia had been shrouded in mystery, but it was thought by most observers to be more common now than formerly. Three years ago Dr. William Hunter of London had propounded the theory that all patients suffering from pernicious anæmia had carious teeth, and that the latter caused a septic gastritis with atrophy of the hydrochloric acid cells. He thought that it was caused by a gangrenous bacillus of the teeth as well as by other septic or pus-producing organisms. In treating such cases Dr. Hunter had used antistreptococcus serum together with antiseptic mouth washes. Undoubtedly arsenic did good in these cases, for formally cases of pernicious anæmia ended fatally in about six months, whereas at the present day they lived from one to two years. Osler stated that upon examination of cases of pernicious anæmia at his clinic no specific germs had been found in the teeth. Dr. Walsh said that he had had a case of pernicious anæmia last summer, with no carious teeth. The anæmia had begun after severe vomiting, lasting for several months. This fact suggested that possibly the affection was of the nature of a septic gastritis, as Dr. Hunter had suggested. Arsenic was given, together with nux vomica, with slight improvement, but the patient had occasional attacks of vomiting. Then six injections of the antistreptococcus serum, obtained from the board of health, had been made in about as many days, 5 c.c. being used at each injection. Four injections were followed by a local reaction, and two injections gave a general urticaria, but they did not affect the progress of the disease. The history of cases in which the antistreptococcus serum had been used was decidedly disappointing, and evidently Dr. Hunter's conclusions were not borne out by clinical experience.

Dr. James N. West said that while he had had no experience with antistreptococcus serum in pernicious anæmia, he had used it in surgical cases, and failure had resulted. He thought that its use, even in this field, would have to be given up.

The Genesis of Epilepsy Clinically Considered.—Dr. Louise G. Robinovitch read this paper in part. She said that epilepsy was ultimately connected with alcoholism, and while one generation might not show it, it could be traced as far back as the grandparents. The acute infectious diseases occurring in the mother during pregnancy might cause epilepsy in the child. The excessive use of absinth had been known to cause epilepsy in the children. Out of 140 cases of epilepsy treated in a Paris clinic, ninety had alcoholic parents.

Dr. W. C. Hollopeter of Philadelphia said that he agreed with the writer of the paper in that alcoholism was a cause of epilepsy. In one of his own cases, an alcoholic subject had had five children. One of these children would have a convulsion after some slight gastrointestinal disturbance, while another child would have one after a fright.

Dr. J. Finley Bell of Englewood, N. J., mentioned the case of a family of seven children, every one of them of dull intellect. He had accounted for this by the fact that the father was an inebriate. Dr. Bell suggested that malarial poison was possibly a cause of epilepsy, and cited the case of a young girl who had had malaria with the rest of the family when but four years old; she had developed epilepsy later, and as her family history was absolutely negative in other respects, he had attributed the epilepsy to the malaria.

Dr. H. W. Berg considered epilepsy as a chronic eclampsia. He gave the history of a college youth of twenty, who had had an attack of epilepsy after eating some veal late at night. He had not suffered from an attack since two years of age. Dr. Berg said that he thought three pints of wine a day not sufficient to cause ill effects.

Dr. Robinovitch closed the discussion. She was of the opinion that three pints of wine per day was too large a quantity, at least for a Frenchman. Both clinical observation and microscopical study showed that the changes and degenerations in the nerves were similar in alcoholism and epilepsy.

The Etiology and Pathology of Cirrhosis of the Liver.—Dr. James K. Crook presented this paper. He classified cirrhosis under three forms, viz., the venous, hypertrophic, and biliary. The newly formed tissue might never lead to contraction of the organ, but there might remain only an increased proliferation of the connective-tissue cells. The causes of cirrhosis were divided into predisposing and exciting. Age and sex were very important as predisposing causes. Out of 4,000 cases of deaths taken from the records of the Board of Health during the ten years between 1889-1899, nine occurred under one year of age, and all were males; eleven occurred at five years of age or under; eleven at ten years of age; nine at fifteen years of age; five hundred at twenty-five years of age, and one thousand odd between twenty-five and thirty-five. Nationality was also important, the Irish leading, and the Germans being a close second. Among the exciting causes, alcohol took the lead in the form of whiskey, gin, and brandy; but beer would also produce it, as was seen in Germany. Active exercise tended to oxidize the alcohol and thus retard its development. Taking alcohol with meals did not lead to cirrhosis. Syphilis was also an exciting cause, as was also the malarial poison, though Osler said he had not seen a case of cirrhosis caused by malaria in the last nine years. Typhoid fever, as well as some of the acute infectious diseases, might produce cirrhosis. Eating highly seasoned foods, spices, etc., as seen in India, predisposed to cirrhosis of the liver. Dr. Crook spoke of the important part played by the mineral poisons, such as mercury, lead, and arsenic, in causing cirrhosis. Tuberculosis, cardiac disease, diabetes, and fright sometimes gave rise to a secondary cirrhosis.

Cirrhosis of the Liver in Children.—Dr. W. C. Hollopeter of Philadelphia read this paper, which treated of the etiology and diagnosis of cirrhosis. This disease was analogous in some respects to arteriosclerosis, and was generally the result of some secondary trouble. Oftentimes adult age was reached before the affection was recognized. Septic jaundice was usually due to the enlargement of the bile duct, and this condition was often accompanied by some elevation of temperature. If the condition persisted it would lead to an acute fibrosis of the liver.

Cirrhosis in children was not a rare disease as was formerly supposed. Even as late as ten years ago, it had been considered one of the rarest diseases in children. Dr. Hatfield had collected sixty-three cases of cirrhosis in children. The so-called interstitial hepatiti was usually the result of syphilis, but alcohol was the most frequent single cause. The fact was shown in the histories of one-sixth of all the cases reported. Irregular feeding, bad hygiene and the use of aromatic wines, such as the essence of peppermint, gin, etc., were frequent causes of this disease in children. The acute infectious diseases also played an important part. One case, that of a boy, was cited in which coffee had been the exciting cause. Dr. Hollopeter said that the atrophic and hypertrophic forms could not be clearly differentiated in children. Dilation of some of the superficial veins afforded some aid. The veins of the nose, face and ear were often enlarged, as well as those of the abdomen, showing that venous embarrassment was present. The spleen was almost always enlarged in these cases, and this was associated with other diseases of the liver. Gastro intestinal disturbances were very common in cirrhosis of the liver in children.

The Treatment of Cirrhosis of the Liver.—Dr. GEORGE M. CONVERSE presented this paper. He said that much could be done by preventing the formation of cirrhotic tissue. He spoke of the formation and exudation of the toxines in this disease, and their effect upon the liver cells and on the gastro-intestinal mucous membrane. Alcohol seemed to be the chief causative agent. Milk was the ideal food in cirrhosis of the liver, as it caused the least irritation to the cells lining the gastro-intestinal tract. It should be continued until all signs of gastric irritation had subsided. This might be in a few weeks, but he had kept cases on a milk diet for from two to four months. Washing the mouth out with vichy would often prevent the disagreeable effect of the milk. It was important to consider the individual case and not treat all alike. Hepatic extracts had been suggested and tried with some degree of success. Diuresis and catharsis were necessary at times.

Dr. BERG said that he did not remember to have seen a case of the atrophic form of cirrhosis in a child, but that hypertrophic cirrhosis was quite common after scarlatina and other acute infectious diseases. He would not classify atrophic and hypertrophic forms of cirrhosis, together, any more than he would classify the large, white kidney with the small contracted kidney. Atrophic cirrhosis should never be diagnosed until paracentesis had been performed. He recalled a case that had simulated the atrophic form, but after paracentesis had been done, a cancer of the stomach was found to be the cause of the ascites.

Dr. MEYER said about fourteen years ago it had been the custom to remove the ascitic fluid very slowly by means of a fine needle and trocar, so slowly that it would take three or four days to remove the fluid. This method was not generally followed by reappearance of the fluid. The disadvantages were the loss of sleep and the local irritation of skin.

Dr. JAMES J. WALSH said that he thought the fluid should be evacuated as soon as possible, and when any systemic disturbance presented itself. He called the attention of the section to Professor Vaughan's statement that mineral poisons were the cause of cirrhosis, and that aluminum would cause it.

Dr. JAMES K. CROOK said that the name cirrhosis was a misnomer; it did not describe the true condition of the organ. He did not agree with Dr. Berg that cirrhosis was either atrophic or hypertrophic; all forms of cirrhosis at the very beginning were hypertrophic. The name "chronic interstitial hepatitis" was a better term, for it described the exact condition of the liver.

Dr. HOLLOPETER remarked that his attention had been called to the frequency of cirrhosis of the liver in children some ten years ago, while attending a clinic in London.

Dr. GEORGE M. CONVERSE closed the discussion by directing attention to what he described as alcoholic hypertrophic cirrhosis, which differed from the common hypertrophic and atrophic cirrhosis in the chemical reactions of the liver cells.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, December 16, 1901.

PARKER SYMS, M.D., PRESIDENT.

Double Fibroid of the Uterus.—Dr. FREDERICK HOLME WIGGIN presented this interesting specimen, together with the history of the case. Another specimen of especial interest was one with carcinoma of the cervix uteri with a large fibroid of the body of the uterus.

Decidua Maligna.—Dr. WIGGIN also presented this specimen with the following history: The patient had missed three menstrual periods, and had then been taken with a severe hemorrhage, passing clots and other substances resembling hydatidiform moles. She complained of severe pains in the thighs and legs, increased on extension of the lower extremities. Bimanual examination showed the uterus to be as large as an orange. The patient was put on the table for a curettage. During the curetting, such severe hemorrhage occurred that the ordinary methods of controlling it had no effect. As the patient was in danger of bleeding to death, it was decided to perform a laparotomy and remove the uterus. After the uterine arteries were clamped the hemorrhage was controlled. The uterus was removed, and the diagnosis of decidua malignum was made. In such cases, death generally takes place from metastasis in the lungs. Dr. Chas. E. Quimby had been called in and had made a thorough examination of the lungs, but found that they were not involved.

Dr. F. M. JEFFERIES exhibited slides taken from the specimen, and said that he was not able to make a positive diagnosis, but he felt reasonably sure that it was an early stage of decidua malignum. He had had a similar specimen within the last month in which he had been able to make a positive diagnosis. The cincilate (deciduous) elements seen in the uterine wall were hardly deep enough in the uterine tissues to be positive.

Dr. C. H. SCHULTZE had seen the specimen and agreed as to the diagnosis.

Symposium on Tuberculosis.—This comprised the following papers:

The Present Status of the Use of Tuberculin and of the Products Obtained Directly or Indirectly from the Tubercular Bacillus in Pulmonary Tuberculosis.—Dr. E. A. DE SCHWEINITZ, Chief of the Biochemic Laboratory at Washington, D. C., was the author of this paper, but being unavoidably absent, it was read by Dr. Chas. E. Denison. The writer said that in preparing tuberculin it was important to have a standard, and the one adopted was a sterilized glycerin solution of a culture of the tubercle bacillus. The culture not only contained the germs, but their products. In preparing the older forms of tuberculin such a high temperature had been used that certain chemical changes had taken place in the toxins. In quoting from Otis, that out of 1,000 cases a comparatively small percentage reacted, Dr. de Schweinitz said that it certainly shook one's confidence in tuberculin. The tuberculin used in the United States experimentally upon swine, dogs, and horses had failed to give reactions. Recent publications, endeavoring to show the relationship between bovine and human tuberculoses were very interesting. Of course, it was impracticable to inoculate man, so man's first cousins, the monkeys, had been inoculated with human and bovine tuberculoses. A ring-tailed monkey and a baboon had been inoculated with a culture of human tubercle bacilli. The baboon died in six weeks, and upon necropsy all the organs were the seat of tubercular infiltrations. The ring-tailed monkey had also been inoculated with the same culture as the baboon, and had died two weeks later, or in the eighth week, showing that the smaller animal had greater resisting powers than the baboon. The animals had been kept in separate cages, and the object of the experiment had been to produce an artificial immunity along the line followed at the present time in the manufacture of diphtheria serums. In general, conservative experimenters were of the opinion that tuberculin should be used most carefully for diagnostic purposes, because certain toxic products of the bacilli might cause deleterious results.

The Early Diagnosis of Pulmonary Tuberculosis with Exhibition of X-ray Pictures of Diseased Lungs.—Dr. J. Edward Stubbert of Liberty, N. Y., read this paper. By an early diagnosis was meant one made in what might be called the pre-bacillary stage, but it was not always possible to do this. Physical signs were very indefinite and every known method would often be required before the diagnosis could be positively known. When the patient went to the physician for a diagnosis he should not be deceived as to his condition. Out of a number of cases of incipient phthisis at Liberty, N. Y., 15 per cent. had apparently been cured, and 63 per cent. had been enabled to return to their homes as useful citizens. Race, traumatism, catarrh of the upper air passages and with gradual loss of weight were important factors in the early stages. Slight hacking cough, with or without expectoration, slight rise of temperature and deranged digestion were also important symptoms. Dr. Stubbert said that he had seen many cases that had had a small hemorrhage—one to two ounces—and had given no physical signs whatever until weeks afterward. Some of the early important physical signs were a flattening of the clavicles; loss of expansion on the affected side, more easily seen posteriorly than anteriorly, and restriction of the motion of the diaphragm on the affected side. Very early cases, as a rule, did not give rapid respiration, but in most instances a high-pitched note and prolonged expiration were present and were exceedingly suspicious. Râles at this stage were seldom heard. The absence of tubercle bacilli in the sputum was not a final diagnostic point. In using the tuberculin test, Dr. Stubbert said that experience had shown that there was a reaction in syphilitic cases. It had been said that anæmia was present in the early stage of tuberculosis, but of forty-two cases at Liberty no such change in the blood had been noted at this stage. It was the disease that caused the anæmia, not anæmia that caused the disease. In advanced cases with cavities, some leukocytosis was present. As the cavity dried up the leukocytosis disappeared. The *x*-ray was of assistance in making the early diagnosis. It was better to use the fluoroscope, without a screen, and to apply it to the bare chest, beginning at the apex and working down toward the base of the lung. In about 50 per cent. of normal chests the right apex appeared less clear than the left. A slight haze was often seen whenever the pleura was affected. If the patient took a long breath the normal side became clearer, while the diseased side remained the same. A practised eye could detect an incipient focus. One of the pathognomonic signs in incipient cases was the more or less restricted motion of the diaphragm on the affected side. "Spotted Lung" was a term that had come into use since the *x*-rays had been employed for diagnosis. They gave a mottled appearance to the diseased area. Dr. Stubbert's paper was illustrated by lantern slides. These included pictures of the normal and of the diseased chest, "spotted lung," lungs with cavities and with areas of consolidation, pleurisy with effusion and hyperæmia of the other lung.

Demonstration on the Cadaver of the Surgical Anatomy of the Lung.—Dr. Irving S. Haynes showed a case of long-standing empyæmia, and drew attention to the space between the lower border of the lung and the lower angle of the reflected pleura. This space he called the costophrenic sinus. The depth of this space in the specimen exhibited was about 2 to 2½ inches. In health, this space did not exist because normally the two surfaces of the pleura were in contact. Pathological conditions, such as pleurisy with effusion, would change this normal relation. Dr. Haynes also pointed out the relation of the spleen to the left pleura, speaking of the anatomy of the apex of the lung; he said that the pleura rose up into the neck and to a higher level than the clavicle forming the "pleural cone." It was one-half to three-quarters of an inch above the first rib or clavicle. Textbooks on physical diagnosis states that the pleura rose much higher than this. This was to be explained by the fact that the resonance was transmitted to a higher point than the pleura. This region of the lung not being able to expand so much as other portions was very badly ventilated, while it was anatomically possible to reach the right bronchus posteriorly, and no surgeon was likely to undertake such a rash procedure. After separating the pleura from the spinal column, the right bronchus and azygos vein would be exposed at a depth of about four inches, and when that point had been reached, the operation had practically just begun, for the bronchus had to be opened.

Surgical Procedures for Pulmonary Tuberculosis.—Dr. William G. Le Boutillier read a paper with this title. He said that the bright hopes once entertained by some that surgery might offer a speedy and sure operative cure for tuberculosis of the lungs, and might perhaps revolutionize their treatment, had thus far utterly failed. But surgery had something to offer of value at least in the way of palliation for such cases as empyæma, pleurisy, osteitis of the ribs, pyopneumothorax, and pneumothorax. The great obstacles to be surmounted in surgery of the lungs were operative and diagnostic. Surgical procedure had been resorted to for the removal of the diseased area, while local treatment by drugs, such as iodine, had long ago been abandoned. Nitrogen gas had been introduced into the pleural cavity with the idea of partly holding the diseased lung at rest. This method had practically no dangers connected with it, but it was still on trial. Other methods, which allowed cicatrization to take place, were unsatisfactory. Aspirations of cavities were not altogether satisfactory, being often inefficient. Satisfactory results had been obtained in the removal of the cavity when a large area had been removed. The operation should not be undertaken unless adhesion were present. Where there were cavities, nitrogen gas was useless, unless adhesion, were numerous. In empyæma an early incision should be tried. When pneumothorax occurred, the chest should be opened and the lung sewed up. When suppuration developed in the thorax, an operation should always be done.

The Treatment of Pulmonary Tuberculosis.—Dr. Charles E. Quimby read this paper. He said that for those patients who were willing to sacrifice everything, the climatic treatment was the most desirable. The systemic nutrition was a matter of great importance, as it was a natural defense, so to speak, yet it received altogether too little attention in the early stages. The diet should be made as attractive as possible; the patient should live high, and, above all, the use of alcohol should be insisted upon. Stimulation was of the utmost importance. Aromatic bitters, such as gentian, together with alteratives, were valuable. Mercury and arsenic had a very powerful influence on metabolism. Another important point was to influence the pulmonary circulation by means of hydrotherapy or by dry vigorous rubbing of the skin. Even in pleurisy with effusion it aided the absorption of the fluid. It was perfectly possible to remove the exudate by mechanical means, while it could not be effected by climatic treatment alone. No treatment was complete that ignored this mechanical method. Inhalations seemed to have a direct effect upon the exudate. Antiseptics would not arrest it, but they tended to diminish it. Cloths wet with formalin, and placed near the patient's bed at night, did some good. As intestinal toxæmia was due to a sluggish state of the colon, such cases should be flushed out.

Dr. William G. Schauffler of Lakewood, N. J., opened the discussion. He said that the papers had been both interesting and scientific. The great problem confronting us was what could we do as physicians with the everyday cases. The rich we could send away, but the poor we always had with us. If the patient were sent away for the climatic treatment, a speedy recovery should not be promised. One could not rely upon medicine and climate alone, but must adapt the treatment to the individual case.

Dr. H. P. Loomis said that he did not entirely agree with Dr. Stubbert as to the diagnostic value of the *x*-rays. Early cases of incipient tuberculosis at the apex were very hard to make out because the shadows were numerous. As to the tuberculin test, he had injected ten or fifteen cases in Bellevue Hospital that were advanced in the disease, and they had given no reaction. He thought that one of the early signs was the presence of localized râles behind and under the scapula, the arm being drawn forward. As an examiner for the Adirondack Sanitarium, the question of prognosis became to him very important. He was of the opinion that when the digestion was bad, the case was bad. A rapid heart action —110–120 beats per minute—was a bad sign. Loss of flesh was also unfavorable. Heredity had very little effect upon the prognosis. The personal element was very important.

Dr. S. A. Knopf thought that diminished blood pressure was an early diagnostic point. He had had a very sad experience many years ago in using tuberculin, and had not cared to employ it since. He favored what he called the sanatorium treatment at home.

Healing of Gall-Bladder Wounds and Treatment of Defects in the Same by Transplantation of the Mesentery.—Enderlen and Justi have undertaken experimental research with respect to the healing of wounds of the gall-bladder, and the possibility of remedying defects in the same due to traumatism, by transplantation of the mesentery. For the observation of the natural healing of gall-bladder wounds, rabbits were used. In the transplantation experiments, dogs were employed, because in rabbits and cats the mesentery is too delicate in structure to be of service for this purpose. Wounds of the gall-bladder heal with complete regeneration of the mucous membrane. Abundant necrosis and insufficient drainage retard the healing process. The newly formed epithelium is at first of the lower varieties of epithelial cells. Later such are changed into cylindrical epithelium. The regeneration of the muscular coat is of small extent. The epithelium is rarely regenerated in the sulci. The transplanted mesentery is entirely able to repair the defects in the wall of the gall-bladder. In the transplanted mesentery the connective tissue proliferates. Subsequently such undergoes contraction. The epithelial layer, which very soon forms upon the internal surface of the transplanted mesentery, is raised into folds or reduplications, covered internally by the newly formed mucous membrane. The original defect is remedied in consequence of the shriveling of the mesentery and the contraction of the muscular coat of the gall-bladder. Practically, transplantation of the mesentery is seldom required.—*Deutsche Zeitschrift für Chirurgie.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending December 28, 1901.

	Cases.	Deaths.
Measles	601	34
Diphtheria and croup	205	61
Scarlet fever	229	16
Smallpox	19	4
Chickenpox	34	..
Tuberculosis	209	146
Typhoid fever	29	14
Cerebrospinal meningitis	..	2

Functional Kidney Examinations in the Diagnosis of Surgical Kidney and Abdominal Lesions.—Leopold Casper reports successful results obtained in the differentiation of various surgical kidney and abdominal lesions by estimations of the functional activity of either kidney. This method consists in the employment of ureteral catheterization and the determination of the nitrogen and sugar (produced by phloridzin inoculation), and the freezing point of the urine thus obtained. In this manner it is possible to determine the amount of work that each kidney is performing. By this method the author examined nine cases. The first case showed symptoms of renal colic on the right side. Subsequently several stones were passed and the symptoms disappeared. Shortly after, signs of renal colic on the left side appeared, and it was thought that this side was also affected; but examination of the urine from the left kidney proved that it was normal. Operation showed that the right kidney only was affected. In another case the diagnosis lay between a tumor of the right kidney and appendicitis. The examination of the urine from the right kidney showed that its functional activity was normal, and the operation confirmed the diagnosis of appendicitis thus made. In the last case reported, it was impossible to tell whether the patient was suffering from biliary or renal colic, but by the employment of this method a diagnosis of biliary colic was made, and subsequent events proved this diagnosis to be correct. These cases show the value of this method of diagnosis. It is not recommended that it should be used to the exclusion of other methods, but simply employed in obscure cases where these other methods fail.

A Case of Primary Tuberculosis of the Parotid Gland.—W. Mintz reports an interesting case of primary tuberculosis of the parotid gland. The patient, a child three years of age, gave a maternal tuberculous history. In the left parotid region there developed a pea-sized painless tumor which gradually increased until it considerably encroached upon the neighboring tissues. The skin over the tumor was unchanged in appearance and freely movable. Inspection of the mucous membrane of the mouth and pharynx showed nothing abnormal. The tonsils were not diseased. No evidence of tuberculosis in any other region of the body was obtainable. There was no increase in the body temperature. Ordinary methods of treatment were tried without avail, and operation was resorted to. After removal, the tumor was submitted to bacteriological and pathological examination. Tissue sections stained by the Ziehl-Neelsen method showed the presence of numerous tubercle bacilli. The pathological examination showed characteristic tuberculous changes, and the presence of "giant" cells in great numbers. Very few cases of primary tuberculous infection of the parotid gland have hitherto been reported. The portal of entry of the microorganisms is obscure, but it seems fairly probable that in this instance the bacilli gained entrance to the gland through its excretory duct. —*Deutsche Zeitschrift für Chirurgie.*

Hydrocyanic-Acid Gas in Public Health Work.—John S. Fulton and William R. Stokes conclude from their experimentation that we have in the vapor of this gas an exceedingly rapid and powerful agent for the destruction of all animal and insect pests within fairly tight enclosures. Ships, houses, and railway coaches admit of successful hydrocyanic-acid fumigation without special attention to openings, and with no other preparation of their contents than is required to give the gas free access. The gas is extremely dangerous to man, but is not unmanageable. After each experiment the authors entered the room immediately, taking no other precaution than that of suspending respiration while in the room. The particularly speedy effect of this gas on mosquitos seems to bespeak its usefulness in the prophylaxis of yellow fever, malaria, and filariasis. —*Maryland Medical Journal.*

The Treatment of Wounds in War.—W. Watson Cheyne holds that the treatment of the injuries sustained in certain parts of the body on the field of battle is not up to the requirements of modern surgery and cannot be brought up to those requirements owing to the circumstances under which the injuries occur. If there were better arrangements to prevent sepsis in the first place, proper supplies of lotions and boiled water, proper illumination, diminished necessity for transporting the wounded to a distance, and increase in the personnel, we could then look forward to a more efficient attempt being made to carry the advances of modern surgery into military practice. Then especially more efficient efforts could be made to disinfect and treat bad compound fractures, to see that all cases of wounds of the skull were trephined as early as possible, to open the abdomen in cases where the wound was over a fixed portion of the intestine, and when, therefore, injury of the tissue was probable, and so on.—*The Birmingham Medical Review.*

A Case of Adiposis.—Augustus A. Eshner reports the case of a woman fifty-nine years old, who complained of dyspnœa, pain in the shoulders and knees, and general obesity. Two years previously there had been shooting pains in the bones, especially in the lower extremities. Shortly afterward the legs began to swell, the swelling at times disappearing to return subsequently. Swelling of the knees persisted and was attended with pain which was aggravated by movement and manipulation. The patient had been increasing in size for several years, and complained of pain in the muscles. She was found to be extremely obese, particularly about the shoulders and thighs, and the breasts and abdomen were pendulous. She was of large stature and face, weighed 251 pounds, and was unable to walk unaided. She suffered from gastric distress, with nausea and vomiting. The author raises the question whether abnormal fat deposit or accumulation may not be dependent on faulty function of the thyroid gland.—*Medicine.*

The Locomotive and the Bull.—It is related of Dr. M. P. Ravenel of the Veterinary Department of the University of Pennsylvania that when, at the International Congress for Tuberculosis recently held at London, he arose in his section to read a carefully prepared paper in support of the inter-communicability of human and bovine tuberculosis, after Koch had issued his pronouncement to the contrary, the diffident American related the story of a bull that got on the railroad track in front of an oncoming express train, and chose to await developments rather than yield his ground. At the conclusion of the able and convincing paper of Dr. Ravenel, he was asked by one of the participants which was locomotive and which bull.

Patients with Chronic Interstitial Nephritis are particularly liable to bleed from various parts of the body. The mere hemorrhage is of itself rarely dangerous; indeed, it often is beneficial in so far as it lowers blood pressure; therefore, as a rule, when hæmaturia, epistaxis, melæna, and hæmoptysis occur in Bright's disease, all that is necessary is to keep the patient quiet. With cerebral hemorrhage, particular care is necessary. The bowels should be promptly got open, with some quickly acting purgative, as jalap, and the patient should have nothing to drink or eat, or, at most, a little milk. The head of the bed should be raised. Ergot, in particular, should be avoided.—Dr. William Hale White, *London Practitioner.*

Relation Between Insanity and Renal Inadequacy.—The question of the relation between insanity and renal inadequacy is one of great importance, not only from the point of view of treatment; but also from the fact that cases of mania arising in connection with renal disease may often be treated successfully without being removed to an asylum. That the disease of the kidney is the primary lesion in certain cases is proved by many instances; but it is probable that mania and melancholia do not usually make their appearance without some other factor such as arteriosclerosis, or hereditary tendency to insanity being present.—Dr. Batten, in *Practitioner.*

Keeping the Sea Fresh.—One of the most recent discoveries of Professor Hensen, the German State marine biologist, is of bacteria which keep the sea fresh by attacking the surplus organic matter in it. Other researches in Plankton show that in some places the sea is a mass of liquid food, which fish and birds inhale, as it were. Even round the Arctic and Antarctic poles, this minute life exists in such a quantity as to permeate and color the sea. —*The Nineteenth Century and After.*

The Tea-Kettle for Soldiers.—The London *Hospital* says: "Recent advocacy of what we have termed the policy of the tea-kettle has raised again the old bogie of the unhealthfulness of boiled water. Curiously enough, certain officers of the R. A. M. C. are stated to be adherents of this faith. Now we know why tea causes dyspepsia. It is all the boiling of the water."

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

The Practical Medicine Series of Year Books. By Gustavus P. Head, M.D. 12mo, Vol. I. Illustrated. The Year Book Publishers, Chicago, Ill. Price, $1.50; price of series, $7.50.

Progressive Medicine. By Hobart A. Hare, M.D. 8vo, 409 pages. Vol. IV. Lea Brothers & Co., Philadelphia, Pa.

Venereal Diseases. By James R. Hayden, M.D. 8vo, 301 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa. Third edition. Price, cloth, $1.75 net; flexible leather, $2.25 net.

Manual of Physical Diagnosis. By James Tyson, M.D. 12mo, 293 pages. Illustrated. Fourth edition. P. Blakiston's Son & Co., Philadelphia, Pa. Price, cloth, $1.50 net.

Transactions of the State Medical Society of Wisconsin. 8vo, Vol. XXV, 516 pages, 1901. State Journal Printing Co., Madison, Wis.

Handbuch der physikalischen Therapie. By A. Goldscheider und Paul Jacob. Royal octavo, No. 2, Vol. I. 477 pages. Illustrated. George Thieme, Leipzig, Germany.

The Composition of Dutch Butter. By Dr. Van Ryn. 8vo, 48 pages. Bailliere, Tindall & Cox, London, England.

Thirty-second Annual Report of the State Board of Health of Massachusetts. 8vo, 891 pages. Wright & Potter Printing Co., Boston, Mass.

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Original Articles.

ON THE PROGRESS OF PUBLIC HEALTH ORGANIZATIONS IN THE UNITED STATES.*

BY STEPHEN SMITH, M.D., LL.D.,
FIRST PRESIDENT OF THE ASSOCIATION.

MR. PRESIDENT AND MEMBERS OF THE ASSOCIATION: I esteem it a great privilege to be permitted to attend the first meeting of the American Public Health Association in the twentieth century. Since its inception a period of about thirty years has elapsed, which, in the ancient mortuary statistics, indicates that a generation of the human family has passed across the stage of life. When your honored President, my long-time friend, intimated to me that it would be appropriate on this occasion to have some words of greeting, counsel, and encouragement from those who were active in the organization of the association, I examined the list of first members to determine who could most acceptably perform that duty. It was painful to notice the havoc which death had made in our ranks in a generation. Elisha Harris, Edwin M. Snow, John H. Rauch, Ezra M. Hunt, Charles B. White, James E. Reeves, Henry I. Bowditch, James L. Cabell, Joseph M. Toner, are historic names in the annals of sanitary reform in this country. On this review I am constrained to announce, in the language of the messengers who came to the patriarch Job in his afflictions and said, "I only am escaped alone to tell thee."

The chief or immediate object which the first promoters of the association had in view was by organized effort to unify the work of those actively engaged in the administration of public health laws and to nationalize sanitary authority in municipal, State, and national governments. At that period the foundations of our national system of sanitation of cities and villages had but recently been perfected in the establishment of the Metropolitan Board of Health of New York, created by a sanitary law largely English in its origin. For this law the country is indebted to the late Hon. Dorman B. Eaton, an early and active member of this association. It formed the basis of the subsequent health legislation of the different States, and may justly be considered the most perfect code of sanitary law that has yet been placed on the statute books. Competent health organizations then existed only in a few cities, notably in Chicago, Washington, Boston, and New Orleans. But even these health boards, with the exception of the Metropolitan of New York, were feeble compared with those now filling their places. The agitation, however, in favor of stringent health laws and their efficient enforcement was becoming more and more intense in all parts of the country, and it was apparent that there should be combined action on the part of all the workers in this new field of reform. To secure the co-operation of all the forces and influences tending to enforce sanitary legislation throughout the country this association was projected. It required scarcely more than the suggestion that such an organization was essential to the reform movement to bring into active sympathy and cordial co-operation the constituent members of the association, and at once the organization was perfected.

The growth of public health administration in this country under the fostering care of the association has even exceeded the most sanguine anticipations of its founders. Thirty years ago there were not more than three or four well-organized municipal boards of health in this country, but to-day there is scarcely a community having a civil organization that has not, as an integral part of its government, a public health department. State boards of health were almost unknown at that period, but now they exist in nearly every State, and by their good work commend themselves to the confidence and support of the people.

At the first meeting of the association the initial step was taken to create a central sanitary authority in connection with the general government, but it was nearly ten years later and only in the immediate presence of a wide-spread and fatal epidemic of yellow fever that a National Board of Health was organized. Thus, within a single decade, this association had been largely instrumental in the development of a complete system of public health administration in this country, viz., municipal, State, and national. Unfortunately the law which gave the National Board of Health its powers and financial support continued in force but four years, and at the end of that period Congress refused to re-enact it. The result was that the board practically ceased to exist at the end of that period. It is now upward of twenty years since the National Board of Health was deprived of its powers, and during that period our national system, as originally devised by the members of this association, has remained incomplete.

The advice which I think the constituent members of the association would give you at this first meeting of the century would be to remedy this defect in our national sanitary system at the earliest practicable period. Our government, whose jurisdiction now extends over peoples of every grade of civilization, living under every variety of climatic conditions, requires a central sanitary authority competent to answer wisely, and in conformity with the latest teachings of science, the multiform questions relating to the public health of this heterogeneous population which must from time to time be determined in its councils. The failure hitherto to secure from Congress such legislation as would give the country a proper public health organization at Washington is largely due to the want of harmony of opinions of those who have sought such legislation, and the opposition of the Marine Hospital Service, which very naturally desires to retain its position. The want of harmony arises from the fact that comparatively few of those who approach Congress on this subject are competent to form a correct opinion as to the nature and character of the public health service which the government requires. This association alone is qualified to pass judgment upon a bill to organize that service, and should assume the duty and aggressively persevere until it accomplishes its object.

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*An address before the American Public Health Association at Buffalo, New York.

It is a fact not generally known that some of the first members of the association regarded the Marine Hospital Service as well adapted to become the future public health department, and endeavored to promote its advancement to that position. It may interest the present members if I refer to that early history, and possibly these facts may be useful in your deliberations.

At the close of the Civil War, the Marine Hospital Service had practically ceased to have any useful duties to perform, and one Secretary of the Treasury had urged Congress to abolish it. Originally created at the close of the eighteenth century, in imitation of the English system of caring for her sailor, a man before the mast, its functions in a great measure ceased when the steamship supplanted the sailing vessel in ocean and river transportation. In the former vessel the sailor's home was on the sea and his government cared for him when sick or disabled; in the latter vessel he had his own home at the port and cared for himself.

At this critical period in the history of the Marine Hospital Service, when, technically, there were but few sailors requiring government care, and a Secretary of the Treasury had advised the abolition of the bureau, Dr. John M. Woodworth, late a surgeon of volunteers, was appointed its chief officer or Supervising Surgeon-General. Dr. Woodworth was a man of culture, of polished manners, a good organizer, and an enthusiastic student of sanitary science, as then understood. He was an early and active member of this association.

In discussing with him the future of the Marine Hospital Service, I urged the importance of "first assuming, as far as possible, all the duties connected with the quarantines of the United States, which grow out of the powers exercised by the Secretary of the Treasury over the customs. If he should succeed in demonstrating the value of medical authority in determining incidental health questions arising in the management of quarantines under local administration, the tendency of the department would be to give the Marine Hospital Service jurisdiction over all similar questions. Meantime additional legislation might enlarge its powers and duties in the management of quarantines, until it might attain, first, to a supervisory, and, finally, to an absolute administration of their affairs. Advancing along these lines, without any other rival in the field, the Marine Hospital Service would naturally assume more and more the position of a central authority on all questions relating to the public health which come under the cognizance of the general government. Thus, the bureau might in time become, if not a health department, at least the permanent branch of the government service devoted to public hygiene."

Dr. Woodworth acted on the suggestion, and, until his death in 1879, steadily pursued the policy of making the Marine Hospital Service the central authority in the control of the quarantines of the United States. His first act was an official examination as to the condition and efficiency of all the quarantines, under the direction of the Secretary of the Treasury. This investigation extended to ports where either no quarantines existed, or only some unexecuted municipal regulations governed the entrance and exit of vessels. The result of this inquiry was an act empowering the Secretary to make additional rules and regulations for quarantines which were defective and require their enforcement. In case of failure in compliance by the local authorities, the Secretary was authorized to proceed to put the new rules into operation. In addition to these extraordinary powers conferred by Congress on the Treassury Department, the law provided that the Secretary should establish and maintain, under his exclusive control and management, quarantines at ports where none existed, but where, in the opinion of the Secretary, the public health required the enforcement of quarantine regulations. The execution of this law naturally devolved upon the Marine Hospital Service, and aggressive action was immediately taken to secure its benefits. Lax and inefficient quarantines were rendered effective, and new quarantines were established at many unprotected ports. This was a decisive step in the direction of placing the quarantines of the country under the exclusive control of the Federal Government. The result of this legislation was of the first importance to the sanitary interests of the country, and gave a permanent position to the Marine Hospital Service.

In 1878 there was much alarm over the matter of the admission of rags from foreign ports, and the President, by virtue of the power given him by the previous quarantine law, authorized the Secretary of the Treasury to make rules governing the quarantines in their reception of this article. Dr. Woodworth gave me the original order, prepared and signed by President Hayes, remarking, "This is a historical document which begins a new era in the history of the Marine Hospital Service."

Later in the same year occurred the great yellow-fever epidemic, and circumstances greatly favored the Marine Hospital Service, for it became not only the center of information in regard to the daily progress of the pestilence, but also the medium of distribution of the charitable funds and supplies to the stricken Southern communities.

Another event of much importance was the appointment of a Commission to investigate the facts in regard to the outbreak of yellow fever by visiting the localities where it had prevailed. This was due to the suggestion of Mrs. Elizabeth Thompson, a wealthy philanthropic lady of New York, who proposed to me to give liberally to a fund for the employment of a competent body of experts. I immediately communicated with Surgeon-General Woodworth, and urged him to accept the offer, appoint the commission, and be responsible for its work. He replied favorably, the money was contributed by Mrs. Thompson and others, the commission was appointed by Dr. Woodworth and was composed of Southern physicians of large experience in the treatment of yellow fever. The investigation proceeded during the autumn months.

The epidemic of that year proved to be a national calamity and aroused a popular interest in methods of prevention hitherto unknown. Sanitary authorities in all parts of the country were appealed to for advice and assistance, especially with reference to the proper measures to prevent the return of the pestilence in the following year. The only body competent to answer that question was the American Public Health Association. Its officers decided to call the annual meeting in Richmond, Virginia, and devote the session especially to the late epidemic. Surgeon-General Woodworth consented to present the results of the commission's work as a basis of discussion.

It became evident long before the meeting of the association that whatever might be the special views in regard to preventive measures, the question which would dominate the association would be: "What form of health organization shall be created in the general government to meet the exigency of a recurrence of the epidemic in the following year?" All great advances in health legislation result from the devastations of epidemic pestilences. It is only under the stress and strain of an epidemic that has destroyed thousands of lives, wasted millions of dollars, and created universal terror, that adequate public health laws can be enacted and effective administrative organizations can be established. The yellow-fever epidemic of 1878-79 had this effect, and it became the earnest effort of the members of this association to improve the opportunity to the best advantage.

The excellent work performed by the Marine Hospital Service naturally placed it in a most favorable position before the public, and its friends endeavored to formulate a bill which would commend itself to Congress and would make that service the future national sanitary authority. In conference with Dr. Woodworth, we determined that a bill creating a Department of Public Health, on the same basis as the Department of Agriculture, would be in accordance with previous legislation, and thereby meet with less opposition. Such a bill was to provide for a bureau devoted to the duties of the Marine Hospital Service and other bureaus having the quarantine and public health services in charge. I drafted such a bill, and it was introduced in the Senate at the opening of the session by Senator Lamar of Mississippi. Like many other bills before Congress, designed to create a public health service, it met with opposition from other departments at Washington, jealous of the growing power and popularity of the Marine Hospital Service. Though this opposition had been apparent for years at the annual meetings of the association, it did not take active form until the meeting occurred at Richmond. There it became so obstructive that no practical results were reached by the association. At the ensuing session of Congress the same opposition was an organized force that resisted every form of legislation which might, in any manner, favor the advancement of the Marine Hospital Service. The result was the passage of a bill on the last day of the session, creating a mere skeleton of a board of health, with no power whatever, for either good or evil. When the people of the affected districts of the South learned that Congress adjourned without providing any safeguards against the return of the epidemic, the greatest indignation was manifested. In some districts it was reported the members of Congress were threatened with violence, if they returned without affording adequate relief to their threatened danger. Fortunately, an extra session of Congress was called, and the Southern members were only too happy to have the opportunity to pass a supplementary bill clothing the Board with suitable powers. This act, however, was limited in its operations to four years. During this period the board faithfully performed all the duties imposed by law and sought to organize a system of national quarantine administration and interstate sanitary supervision of commerce and travel in harmony with the most advanced views of authorities. But with the lapse of the supplementary law, and in the absence of any impending epidemic, the Secretary of the Treasury conferred upon the Marine Hospital Service the power to expend the funds formerly appropriated to the National Board, thus bringing that bureau prominently forward to the position it formerly occupied, but with the added powers exercised by the latter body. From time to time Congress has increased its quarantine and public health duties, and added to its equipment. It now has its own building, like a department of government, with laboratories where the most accurate studies are made into the causes of contagious and infectious diseases, into the value of different disinfectants and vaccines, and where antitoxic sera are manufactured and distributed. It has a large and highly qualified staff of medical officers, appointed by the President, after competitive examination; it maintains in foreign ports where epidemic diseases prevail medical officers who give constant information to home quarantines and issue bills of health to vessels bound to the United States; it has under its own supervision a large number of insular and interstate quarantines; and, finally, it is ready at any moment to aid State and municipal sanitary organizations in their efforts to suppress epidemic diseases.

It appears from this review that for a period of upward of thirty years the Marine Hospital Service has steadily advanced in the direction of becoming the Department of Public Health in the General Government until it requires little more than an adjustment of its organization to the new career upon which it would enter to fulfil every requirement of that position. As the original promoters of this association gave the first impulse to the Marine Hospital Service along the lines of development which would place it at the head of our national sanitary system, and as it has advanced along those lines until it is prepared to assume the rank and title and perform the duties of our central sanitary authority, I may be permitted to suggest that this association should recognize these historical facts and the present situation of our public health service and, unless there are conditions not apparent to the public, begin the new century by inaugurating the Marine Hospital Service as such authority. The efforts that have been made in the past to secure from Congress legislation creating some other form of health organization, have proved futile, and the future promises much less success, owing to the constant advance of the Marine Hospital Service in public and Congressional favor. If I understand the objections to that service on the part of those seeking a better form of organization, it is chiefly that the public health authorities of the country have no part in its councils. It would not be difficult, in my opinion, to remedy these and other defects, if this association exercised its friendly offices with the chief officer of that service in securing necessary legislation. These suggestions are submitted with much diffidence to the better judgment of the association.

MR. PRESIDENT: It would ill become me to attempt to detail to the members of this association the contributions of sanitary knowledge and experience by the last half of the nineteenth to the first half of the twentieth century. It is sufficient to state that through the labors of its Pasteur, the mysterious realm of the causation of epidemic diseases has been thoroughly explored and the nature of their causes has been made known; through the labors of its Koch, the life history of these causes has been accurately determined; through the experiments of its Lister, the agencies which destroy these causes and arrest their destructive processes have been placed in the hands of every human being. The century closed with the warfare of man against the multiform and manifold causes of disease which beset him on every hand in the flood-tide of success. If that warfare is pressed as vigorously during the twentieth century as it has been in the last decade of the nineteenth century, it will require no great stretch of the imagination to anticipate that long before this century closes, the whole brood of pestilential or communicable diseases will be exterminated from the earth, and man will reach his normal period of life—*one hundred years.*

Mortality Among Soldiers.—Under favorable conditions of peace, says an English weekly, the mortality among soldiers is practically the least known, with a death rate of only 5 in every 1,000. Compared with a soldier's life, the placid days even of a clergyman are full of danger, for his death rate is 11 in 1,000, or more than twice as great as that of his militant brother.

OFFICIAL AND PRIVATE PHTHISIOPHOBIA.

THE MEDICAL, SOCIAL, INTERNATIONAL, AND HUMANITARIAN ASPECTS OF THE GOVERNMENT POLICY TO EXCLUDE NON-PAUPER TUBERCULOUS IMMIGRANTS OR CONSUMPTIVE VISITORS TO THIS COUNTRY.

A Plea for a Superior Board of Health or Commission on Tuberculosis and a National Sanatorium Association.*

By S. A. KNOPF, M.D.,
NEW YORK.

To my deep regret I learned recently from an authentic source that new difficulties have arisen concerning the site of our future New York State Sanatorium. Phthisiophobia, or exaggerated fear of the vicinity of consumptives, is the cause. The neighbors object and will make heroic efforts to prevent the sanatorium from being loated in that place. Our symposium on sanatoria to-night will do us little good if we do not also consider means to treat this new and rapidly spreading disease. Worst of all, we have now not only individuals and some local governments, but even our Treasury Department, representing the head of the United States Marine Hospital Service, afflicted with phthisiophobia.

Some weeks ago I was invited to give expert testimony before Judge Thomas of the United States Circuit Court in Brooklyn in the case of Thomas P. Boden, the Irish immigrant who was detained by the immigration authorities because he was suffering from consumption. My testimony to the effect that pulmonary tuberculosis was not a dangerously contagious, but only a communicable, malady, that the contact *per se* could not transmit the disease, and that ordinary precautions with the patient's sputum and other secretions would suffice to do away with all danger of infection was overruled by the judge upon motion of the counsel for the Government. Exception was taken by Mr. Francis Tracy Tobin of Philadelphia, the counsel for Mr. Boden, and if the former should succeed in bringing this case before the Supreme Court of the United States, this, the highest tribunal of our country, will have to decide a most momentous question. The issue involved not only affects the few consumptive immigrants who may arrive at our ports, but it also affects the several thousand American citizens suffering from pulmonary tuberculosis.

On the strength of a declaration of the Surgeon-General of the Marine Hospital Service that pulmonary tuberculosis is a dangerous contagious disease, the Superintendent of Immigration issued last June an order that in future immigrants with tuberculosis of the lungs must be debarred from all ports of the United States regardless of boards of special inquiry, which heretofore had used their discretion in the matter. Formerly the Board of Special Inquiry at this port, after receiving the report of a case of tuberculosis from the Chief of the Medical Division of the Immigration Service of New York, could exercise discretion as to the admission of the person, and there have been instances in which a child ill of the disease has been permitted to land with its parents; but henceforth no one with consumption will be admitted to the country. This rule applies to alien passengers in the first and second cabins, as well as to those in the steerage.

Is this declaration, issued by the Surgeon-General of the Marine Hospital Service, and strengthened by the authority of the Treasury Department, based on scientific observation? Is this opinion shared by the great authorities on the question of tuberculosis and the medical profession of the United States in general?

Ever since the discovery of the tubercle bacillus it has been demonstrated by clinical and bacteriological experiments all over the civilized world that the germ alone is the direct cause of the disease, and without its presence tuberculosis cannot be conveyed. The bacilli are usually contained in the expectoration, more rarely in other secretions, very rarely in the muscular or osseous or cutaneous tissue. Thus, as stated above, the contact *per se* of a consumptive individual does not transmit the disease, and pulmonary tuberculosis is not a contagious, but only a communicable, malady. The destruction of tuberculous expectoration and other secretions, also of tuberculous food substances, suffices to do away with all danger of infection and transmission. Therefore there is no scientific basis on which to classify pulmonary tuberculosis among the dangerously contagious diseases, and it is contrary to the results of the experience and the experiments of all who have studied the question thoroughly.

Now, what have the great European and American medical authorities to say on this subject? Koch, the discoverer of the tubercle bacillus, says in this connection in his recent London address, which I quote verbally, since it was delivered in English: "A consumptive who coughs out tubercle bacilli is not necessarily a source of infection on that account, so long as he takes care that his sputum is properly removed and rendered innocuous." Professor Hermann M. Biggs, whose splendid work in the prevention of tuberculosis was most highly commented on by Koch in the same address, declares in the circular issued by him through the New York Health Department: "If the matter coughed up be properly destroyed, a person suffering from consumption may frequently not only do his usual work without giving the disease to others, but may also thus improve his own condition and his chances of getting well." This circular has served as a model to many health boards in this country and abroad. Concerning the action of the Treasury Department in regard to tuberculous immigrants—not paupers—Dr. Biggs pronounced it unscientific, unwise, unnecessary, and inhumane. Dr. T. Mitchell Prudden, professor of pathology and bacteriology at the College of Physicians and Surgeons, declares distinctly that pulmonary tuberculosis is a communicable and not a contagious disease.

For the United States Government to declare pulmonary tuberculosis to be a dangerously contagious disease, in spite of the opinions of these great authorities, stamps several millions of American citizens suffering from consumption with a stigma wholly undeserved. That the general profession is in thorough accord with the opinions expressed by Professors Prudden and Biggs may be gleaned from editorials which appeared in four of the leading American medical journals. Dr. Frank P. Foster of the *New York Medical Journal* says in an editorial of June 22d: "It is our conviction that the United States Bureau of Immigration, if it has really determined upon the course of indiscriminately excluding consumptive immigrants from the country, as has been announced, has been ill-advised. . . . What the people need to be taught—and they have already partly learned the lesson—is, not that pulmonary tuberculosis is a monster to be fled from, but that it is a danger that can be effectively overcome. Even if this were not true, it remains a fact that the policy of selfishness and inhumanity, pursued to the end, rarely, if ever, proves to be for the general welfare of those who follow it." Dr. George M. Gould, in *American Medicine* of November 30, says in the leading editorial entitled "The Deportation of Consumptive Immigrants": "We think professional and lay opinion will not justify the exclusion of tuberculous immigrants on the simple ground that the disease is 'contagious' or 'communicable.' It is only so in such a low degree that the severe measure of exclusion for this reason alone seems unjustifiable." Dr. George H. Simmons, editor of *The Journal American Medical Association*, in criticising the indiscriminate exclusion, says: "Even hopeless consumptives may sometimes bring some good," and cites Robert Louis Stevenson as an example.

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*Read before the New York Academy of Medicine at its meeting of January 2, 1902.

The Government decision to classify pulmonary tuberculosis as a dangerously contagious disease has only been in operation for a few months, but it has already had its consequences by increasing the fear of people to associate with consumptives. Healthy employees have been discharged because some one of their near relatives with whom they were living were reported to their employers to be suffering from consumption. I have learned of numerous similar cases and very recently two came under my personal observation. A sewing woman who had been employed frequently by a wealthy family mentioned incidentally that her sister was being treated for tuberculosis of the lungs, but was getting along very nicely. The result was that the poor woman was discharged and never employed again by the same family. A similar thing happened within this week to a poor washerwoman. Professor A. Jacobi, of this city, spoke to me of a number of cases in which persons lost their positions for no other reason than that they suffered from a cough. One case he mentioned seemed to me particularly pathetic. A man with a large family to support, but strong, vigorous, and of excellent physique, was discharged from employment because of a cough which did not get well fast enough to suit his employer. How much suffering and hardship may thus be daily created, only those who come in contact with poor consumptives can appreciate.

According to the Medical Record of December 28, the Health Board of Liberty, N. Y., has ordered that no hospital or sanatorium for the reception of consumptives shall be maintained within the village limits, and that tuberculosis shall be classed as an infectious disease, like smallpox and diphtheria, and sufferers from it be reported and quarantined if thought necessary. The editor of the Medical Record, Dr. George F. Shrady, very justly adds: "This is one of the logical results of the intemperate outcry regarding the infectiousness of tuberculosis, another being the ridiculous and cruel attempt of the immigration authorities to prevent the entrance into this country of any tuberculous subject."

Whether or not the Liberty Board of Health is justified to inaugurate such extreme measures, I am not prepared to say. If this agitation is directed against the numerous boarding houses which receive tuberculous patients who are under no medical supervision whatsoever, there may be justification for rigorous measures. To direct such a movement against well-conducted sanatoria seems to me folly, for there is nothing to fear in regard to infection from such institutions; and, according to my experience, one is safer in such places from tuberculous infection than anywhere else. Whatever the future attitude of the Liberty Board of Health may be, I would like to recall to them the story which I related in my article, "Are Sanatoria for Consumptives a Danger to the Neighborhood?" which appeared some five years ago in the Medical Record, October 3, 1896: "Near Vienna there existed a place which had been known for years as a health resort for consumptives and persons suffering from similar troubles. Thanks to the efforts of a distinguished professor and specialist in phthisio-therapeutics and the funds given by a wealthy philanthropist, it had been decided to found a sanatorium for poor consumptives, under the direction of this professor, in the resort mentioned. But the authorities of the community raised such an outcry at the prospect of having this institution in their midst, fearing it would drive away the class of wealthy patients who had come there for so long, that the professor, not wishing to go where his sanatorium would not be welcome, chose another locality. They thought they had done a wise thing; but soon the wealthy patients, thinking that the new place must possess superior advantages to have been chosen by so celebrated a specialist for his institution, began to flock thither. The old resort, so favored for years, found itself quite deserted.

To our friends in Liberty, as well as in the Adirondacks, who fear contagion from sanatoria, I will simply say that if they desire I am able to furnish them with official statistics for over fifty years, whereby it is conclusively proven that, since the establishment of sanatoria for consumptives, the mortality from tuberculosis among the villagers of Goerbersdorf and Falkenstein—the two places where five of the most flourishing German sanatoria are now existing—has actually been decreased by one-third of that which it was before the establishment of the institutions. The explanation for this remarkable decrease of consumption in the villages of Goerbersdorf and Falkenstein is simply to be sought in the fact that the villagers imitated voluntarily the clean habits which were obligatory for the sanatorium inmates. The fallacy of exaggerated fear of tuberculous patients has been shown again and again. Some two years ago when a few overzealous California statesmen tried to exclude consumptives from the Golden State, their attempt was ridiculed by the medical profession and laymen of their own State.

All physicians approve of earnest and intelligent measures to prevent the spread of tuberculosis; but to exaggerate the danger by declaring consumption, which is a chronic, preventable, curable, and only communicable affliction, to be a dangerously contagious malady, we only create another disease in the minds of the people which may justly be called phthisiophobia. We should not encourage this new malady, privately nor officially. Neither official nor private phthisiophobia will help us in the antituberculosis crusade. Education of the masses through societies for the prevention of tuberculosis, instruction in schools and colleges, and a co-operation of the family practitioner with the health authorities, without inflicting burdens and hardships on either physician or the patient or his family, will be to my mind a more judicious procedure and prove more effectuous than any draconian measure.

By excluding pauper immigrants, whether tuberculous or not, the immigration authorities do their duty, and every loyal American citizen must approve of it; but by excluding consumptive aliens of means, or at least such as can give evidence that they will not become a burden to the community, we may subject ourselves to retaliatory measures on the part of other governments, and wealthy American pulmonary invalids may no longer be allowed to enjoy the hospitality of foreign health resorts. Thus the case has an international as well as a national aspect.

Concerning the humanitarian view of the case, I have to add but little to the expression of Professor Biggs and Drs. Foster, Simmons, and Shrady. Since the ruling of the Secretary of the Treasury that pulmonary tuberculosis is a dangerous contagious disease within the meaning of the statute, all certified cases of tuberculosis are returned without discrimination. Parents may thus be separated from their children, husband from wife, brother from brother, sister from sister, friend from friend, because of a law founded on an unscientific basis, contrary to all social interests of our own country, derogatory to our interests in our relation to other countries, contrary to the American spirit of justice and humanity.

Have those who by this decision stamped every American consumptive as one afflicted with a dangerous contagious disease ever thought how really few families there are who have not at least one, more or less near, relative or friend who is a consumptive? Tuberculosis is the most frequent of all diseases and it is most prevalent in the pulmonary form. It is a disease of the young and the old, the poor and the rich, the East and the West, the North and the South.

May the wise judges of the Supreme Court, who it is to be hoped will soon be called on to consider the matter, view it in all its aspects and decide it in the light of our present knowledge which makes the consumptive not a hopelessly ill individual, afflicted with a dangerously contagious disease, whose contact we have to fear, but which declares him only suffering from a communicable and at the same time easily preventable, and in many instances very curable, disease.

Unfortunately, we have not yet in this country the often pleaded for "Superior Board of Health," with its seat in Washington, the equivalent of the "Reichs Gesundheitsamt" of Germany, or the "Conseil Supérieur de Santé Publique" of France, where such important questions appertaining to the health and welfare of the nation can be decided for all the States of the Union. Emperors and kings and the governments of European countries have for the past years been making tuberculosis an issue to be dealt with, not by extreme sanitary measures, but by the creation of national, provincial, and private sanatoria for the treatment of the consumptive poor and those of moderate means. In some States and in some cities of the United States there is now a praiseworthy activity to create similar institutions, and also to remove some of the causes of the spread of tuberculosis, such as bad tenement houses, overcrowded institutions, etc. A very important statement in relation to this subject was made a few months ago by Edward T. Devine, Ph.D., the distinguished charity worker and editor of the weekly review called *Charities*. Refuting the assertion that the prevalence of tuberculosis in some parts of New York City is directly due to the tide of aliens flowing to our shores, he maintains the contrary by emphasising the relative rarity of this disease among immigrants. Dr. Devine says: "The freedom of immigrants from pulmonary tuberculosis is due to the fact that almost without exception they come from rural districts, but when subjected to the privation of light and air in the worst of New York's tenement-houses, they become ready victims of the disease. This is only another instance of the truth that the evils existing in our slums are in great part due to our own neglect rather than to the influence of the foreigner who is obliged to live there." (*Charities*, October 26, 1901.)

I trust that our enlightened President, Theodore Roosevelt, will soon follow the example of his colleague, the President of the French republic, and the other rulers of European countries, such as King Edward of Great Britain, the Emperor of Germany, the Czar of Russia, the King of Norway and Sweden, the Queen of Holland, etc., by creating a governmental tuberculosis commission. This commission should have for its aim the study of the best and most humane means to combat tuberculosis as a disease of the masses, and to suggest to the United States Government the best prophylactic and curative measures to arrest the disease which costs so many valuable lives every year.

In Europe, particularly in England, Germany, and Austria, the example of noble-minded princes and rulers, in erecting and maintaining private sanatoria for the consumptive poor, has been emulated by the aristocracy of birth and finance of those countries. There are now, as a result of this agitation, hundreds of inland sanatoria throughout Europe devoted exclusively to the treatment of consumptive adults, and numerous seaside sanatoria for tuberculous children. Our Canadian neighbors are also ahead of us in the antituberculosis crusade. There exists in Canada a National Sanatorium Association, the objects of which are, first, to establish institutions for the isolation, treatment, and cure of persons affected with pulmonary tuberculosis; second, to check the spread of this dread disease in Canada through educational and legislative measures.

This association, which was incorporated by special act of the Dominion Parliament of 1896, has for its President Lord Strathcona and Mount Royal, for Vice-President Sir William Ralph Meredith, and for one of the Trustees the Premier of Ontario, the Hon. G. W. Ross, LL.D.

A similar movement under the auspices of our governmental heads would doubtlessly result in the creation of multiple sanatoria in the United States. There is enough wealth and good will among our philanthropists to assure the very best results, if, for example, a national sanatorium association, of which the President of the United States should be the honorary president, would be formed.

I believe I can speak for the majority of the American profession by saying that they would welcome such a movement most cordially, and give it their hearty co-operation. The profession and health boards should unite in the educational work. There should be a mutual understanding between these two factors for the common good. When the education of the masses concerning tuberculosis will be directed by a United States superior board, or commission of health, consisting of trained sanitarians and medical practitioners, the policy pursued will discriminate justly between frightening and educating people into obedience of sanitary regulations.

With the creation of such a health department, or commission, in Washington, with a successful sanatorium movement throughout the country, the co-operation of physicians, local health boards, philanthropists, and an intelligent people, there is no reason why the United States should not be the first country in the world to conquer this great foe of mankind, so justly called by our immortal Oliver Wendell Holmes, "the great white plague."

16 WEST NINETY-FIFTH STREET.

Alien Insane.—There are 24,000 inmates in New York hospitals for the insane, 50 per cent. of whom are foreign-born, although only 25 per cent. of the State's population is alien. In 1890 the native-born population of this country constituted 84 per cent. of the total, while the native-born insane constituted only 65 per cent. of the total.

A CONTRIBUTION TO THE PATHOGENESIS OF NARCOLEPSY AND OTHER FORMS OF MORBID SLEEPINESS.*

By HEINRICH STERN, Ph.D., M.D.,
NEW YORK.

Pathological somnolence in general, and narcolepsy in particular, have not found that universal consideration and discussion which their import and their by no means infrequent occurrence demand.

Almost every communication upon these subjects comes from the pen of a neurologist, and it seems plausible that to this fact may be ascribed the supposition of the profession in general that the study and treatment of these morbid states belonged to the domain of the nerve specialist exclusively.

However, the primary factor in the causation of pathological sleep, like the prime inducer of normal sleep, with few hypothetical exceptions, does not arise in the brain, and therefore does not concern the neurologist alone. Moreover, the pertaining neurological literature at my disposal is almost entirely limited to the relation of cases, their classification, and the discussion of their clinical features. No decided attempt seems to have been made to arrive at a proper understanding of the underlying causes.

To designate a given instance of narcolepsy or other form of abnormal somnolence as epileptic, epileptoid, or hysterical in character, or as of toxæmic origin, may be invaluable for clinical purposes, but to the pathologist it signifies little or nothing.

The term narcolepsy implies a sudden, uncontrollable inclination to sleep, occurring repeatedly and after varying intervals. Gélineau,[1] in 1880, was the first to describe the narcoleptic attack. Valuable contributions to the subject were furnished by Dana (Putzel),[2] Cremen,[3] Berkhan,[4] Dehio,[5] Jacoby,[6] McCarthy[7], Nammack,[8] and some others. The latest writers upon the subject, Furet[9] and Sainton,[10] look upon narcolepsy as a manifestation of autointoxication. Furet again draws attention to the fact that seizures of pathological somnolence may occur in the course of nutritive disorders, as diabetes mellitus and polysarcia; during the acute infectious diseases, as influenza, enteric and typhus fevers; as a consequence of alcoholism or other intoxications, and as the result of drug narcotization. He further believes that epileptic attacks, which he considers another manifestation of intoxication, are frequently synchronous with narcolepsy.

The last assumption of Furet—that epilepsy and narcolepsy are often associated symptoms of one intoxication—is certainly worth our attention, as the close relation of most instances of pathological sleep to the epileptic phenomenon would thus be easier of apprehension.

To the subject of autointoxication with reference to the production of morbid somnolence I have devoted some attention in a casual way. However, since studying the following classical case, I have been induced to give the matter more thorough consideration:

William S., aged thirty-five, unmarried, native of Ireland, four years in United States, car conductor, was referred to me for a supposed gastric disorder on April 30, 1901.

The family history does not evince any neuropathic traits. Patient is free from lues, is sexually disinclined, is a total abstainer from intoxicants and tobacco, and, with the exception of frequent attacks of gastric indigestion, that he now attributes to his former diet in which farinaceous material greatly preponderated, enjoyed good health until about six years ago. Since that time he is afflicted with daily recurrences of hyperæsthetic sensations on the forehead and eyebrows, and with sleeping seizures. The daily attacks of somnolence for the last two years have become more intense and of longer duration. In April and May of this year, his sleepiness became so great that he was compelled to discontinue his work. Since then, under an exclusive milk regimen, and with the assistance of various therapeutic measures, he is enabled to attend to his occupation, although the intensity-degree of the diurnally recurring somnolence has been hardly diminished.

The sleeping seizures occur independently of the ingestion of food, as I have convinced myself by actual experiment, and inevitably set in between ten and eleven o'clock in the morning. The spells last till three or four in the afternoon; often the trance-like condition continues for the rest of the day. The patient will fall and sleep if disengaged, and only by the utmost sheer brutal will-power is he able to resist an attack of sleepiness occurring during his working hours. That is, he tries to withstand the irresistible desire to lie down and to sleep, by holding on to the railing or the straps of the car and making pitiful efforts to keep his eyelids apart, but notwithstanding his resistance he feels that he is virtually asleep; he knows that he is but semiconscious, and that he performs his duties in an automatic way.

The patient's extreme morbid somnolence is best characterized by his own words: "Were I to fall into a pool during one of these attacks," he says, "I would be too tired to raise myself up, although I would be conscious enough to know that I may be drowned."

The patient possesses an active mind and is quick of conception. He is not a hysterical person in the sense that he is afflicted with minor phenomena of that affection. He is free from vertigo at all times. He never suffers from cephalalgia, but his head feels frequently full and heavy. He perspires profusely, especially on the hands, feet, and forehead at all times and irrespective of the prevailing temperature, but particularly before the lethargic or narcoleptic condition sets in.

While the pathologic somnolence apparently does not influence the physical condition of the patient, his physiological sleep during the night does not seem to refresh him. For when he rises after eight or nine hours of sleep, at 6 A.M., he really feels more fatigued than he did on retiring the previous night. This languor is gradually subsiding toward eight o'clock, one and a half hours after breakfast.

The physical examination of thorax and abdomen revealed nothing unusual besides the fact of a weak, slightly hypertrophied heart and a tender, dilated stomach, extending to two centimeters from the umbilicus.

An analysis of the stomach contents, after a test breakfast consisting of 500 cc. of weak tea and one dry roll, showed the following:

Gastric contents withdrawn one hour after ingestion of test breakfast: Amount withdrawn, 240 cc.; reaction, acid; hydrochloric acid, 0.36 per cent.; lactic, acetic, and butyric acids, absent; pepsin, present; activity normal (fibrin dissolution); starch, unconverted in the unfiltered contents; erythrodextrin in filtered portion.

The microscopic examination revealed: Starch granules in various modifications, fat globules, epithelium, mucous corpuscles, yeast fungi, sarcinæ ventriculi, and various non-pathogenic bacteria and micrococci. The stomach affection was accordingly diagnosed and treated as hyperchlorhydria, dilatation, and faulty amylolysis.

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* Read at the semi-annual meeting of the Medical Society of the State of New York, October 15, 1901.

Ophthalmological Examination.—Patient has a vision of 10/10 in each eye. Retinoscopy revealed a quarter diopter of myopic astigmatism; axis, horizontal. Phorometer showed one degree of exophoria. Prisms give the strength of movements upward and downward about three degrees. The right eye has an outward strength of six degrees and an inward of the same amount. The left eye has an outward and inward strength equal to eight degrees. The fundus is apparently normal except that the veins are larger than usual.

Urinalysis on May 2 revealed the following: Quantity passed in twenty-four hours, 1,620 c.c.; color, Vogel's scale, No. 3; transparency, perfect; odor and consistency. normal; reaction, 0.56° acidity: specific gravity, 1,029 at 15.5° C.; total solids, 109.46 grams; salts of HCl, greatly in excess; of H_2So_4, in excess; of H_3Po_4, increased; of Co_2, normal; free NH_3, traces; carbamid, 3.4 per cent. = 55.08 grams; uric acid, 1.77 grams; ratio of uric acid to carbamid = 1: 31.1; xanthin, hypoxanthin, present; creatinine, in excess; hippuric acid, present; urobilinurin-indican, slightly increased; albumin, absent; biliary acids, glucose, glycosuric-acid compounds, absent; microscopically distinguished, considerable amounts of crystals of uric acid, urates and calcium oxalate; mucous corpuscles; some polynuclear leucocytes; epithelium of prostate in moderate amount, of bladder and urethra in large quantities.

Blood Examination, May 2, 1901. (Microscopical.) (*a*) Fresh blood.—Blood count, erythrocytes, 3,600,000 in 1 c.mm. blood; leucocytes, 7,000 in 1 c.mm. blood; proportion of leucocytes to erythrocytes in 1 c.mm. of blood, 1: 514.

(*b*) Dried specimens of blood.—Erythrocytes, small lymphocytes, mono- and polynuclear leucocytes, eosinophiles, neutrophiles.

Blood Examination, May 9, 1901.—Alkalescence, 266.5 mgr.; NaHO in 100 c.c. blood; specific gravity, 1,057; hæmoglobin, 78 per cent; blood count, erythrocytes, 5,100,000 in 1 c.mm. blood; leucocytes, 8,000 in 1 c.mm. blood; proportion of leucocytes to erythrocytes, 1: 637.

Microscopically distinguished.—Normal erythrocytes, blood plates, small and large lymphocytes, polynuclear leucocytes, eosinophiles.

A great number of urinary and blood examinations were performed between May 9 and October 7, 1901. The urine on no occasion exhibited any abnormal constituents; its daily amount averaged 1,550 c.c., its specific gravity, 1,029.5; its degree of acidity, 0.53, and its contents of carbamid never exceeded 3.5 per cent.

The only urinary elements permanently in great excess, those to which to a greater part the high density seemed to be due, were the chlorides. In the twenty-four hours' urine of May 28–29, for instance, 12.09 grams of Cl were excreted. The patient's weight being at that time 65.5 kilograms, 0.1818 gr. Cl were excreted for each kilogram of body weight. This is certainly in excess of the average which amounts to 0.126 gr. Cl per kilogram of body weight.

As the patient was during that period on a milk régime to the exclusion of all other food stuffs, the amount of chlorine which he ingested with the nutriment is readily calculated. The quantity of milk daily partaken of was 7,000 c.c. In 1,000 c.c. of milk, 1.7 grams of chlorine are contained on the average. The patient ingested, therefore, 11.90 grams of chlorine every day, which corresponds about to its output by the urine in that time.

Determination of the Relative Urinary Toxicity.—June 22, 1901. Narcoleptic condition between 11 A.M. and 4 P.M. (1) Night urine, 360 cc.; acidity, 0.62°; density, 1,033. (2) Urine voided between 6 A.M. and 10.30 A.M., 310 cc. (prior to attack); acidity, 0.48°; density, 1,028. (3) Urine voided between 4.30 P.M. and 7 P.M., 190 cc. (after attack); acidity, 0.3°; density, 1,031.

June 23, 1901. (1) Night urine, neutralized by $HNaCO_3$, filtered, possessing a temperature of 30° C., was injected into a vein of the ear of a rabbit weighing 2,050 grams.

Prior to injection, rectal temperature, 38.4° C.

After injection of 30 cc., pupil unchanged; defecation.

After injection of 38 cc., myosis, respiration very rapid.

After injection of 50 cc., rectal temperature, 38.8° C., slight rigidity.

After injection of 65 cc., respiration, 50; pulse, 140; defecation.

After injection of 75 cc., emission of urine.

After injection of 83 cc., convulsions, opisthotonos, death.

Time, eight minutes. Consequently, $\frac{83 \times 100}{2{,}050} = 40.48$ c.cm. of night urine were necessary to kill one kilogram of animal.

(2) Urine voided prior to attack, treated as the night urine, of a temperature of 30.5° C. injected into an aural vein of a rabbit weighing 1,960 grams.

Prior to injection, rectal temperature, 39.2° C.

After injection of 18 cc., myosis perceptible.

After injection of 30 cc., rectal temperature, 39.3° C.

After injection of 35 cc., myosis complete.

After injection of 43 cc., defecation; pronounced, tremor.

After injection of 50 cc., emission of urine.

After injection of 55 cc., respiration, 46; pulse, 152.

After injection of 65 cc., strong convulsions.

After injection of 68 cc., death.

Time, six minutes. Consequently, $\frac{68 \times 1{,}000}{1{,}960} = 34.69$ c.cm. of ante-narcoleptic urine were necessary to kill one kilogram of animal.

(3) Urine voided after the attack of somnolence, treated as the night urine, of a temperature of 30.4° C., was injected into an aural vein of a rabbit weighing 1,885 grams.

Prior to injection, rectal temperature, 40° C.

After injection of 40 cc., beginning of myosis.

After injection of 45 cc., rectal temperature, 40° C.

After injection of 50 cc., myosis more pronounced; respiration, 38.

After injection of 52 cc., rigor.

After injection of 57 cc., respiratory intermission.

After injection of 60 cc., death without convulsions.

Time, six minutes. Consequently, $\frac{60 \times 1{,}000}{1{,}885} = 31.83$ c.cm. of post-narcoleptic urine were necessary to kill one kilo of animal.

October 6, 1901. Narcoleptic condition between 10.50 A.M. and 5.30 P.M. (1) Urine voided at 10.30 A.M., 125 cc.; acidity, 0.54°; density, 1,025.5. (2) Urine voided at 6 P.M., 150 cc.; acidity, 0.45°; density, 1,033.

(1) Urine of 10.30 A.M., prior to attack, neutralized by $HNaCO_3$, filtered, possessing a temperature of 20.5° C., was injected into a vein of the ear of a rabbit weighing 1,620 grams.

Prior to injection, rectal temperature, 37.4° C.

After injection of 20 cc., respiration accelerated.

After injection of 30 cc., slight myosis.

After injection of 35 cc., tremor, great restlessness

After injection of 38 cc., emission of urine.

After injection of 40 cc., respiration diminished, temperature, 37.5° C.

After injection of 50 cc., paralytic manifestations.

After injection of 55 cc., complete myosis, defecation.

After injection of 65 cc., respiration shallow, very frequent; pulse, 152.

After injection of 75 cc., convulsive phenomena.

After injection of 85 cc., convulsions, opisthotonos, death.

Time, twenty minutes. Consequently, $\frac{85\times 1{,}000}{1{,}620}=$ 52.47 c.cm. of ante-narcoleptic urine were necessary to kill one kilogram of animal.

(2) Urine of 6 P.M., first excretion after attack had abated, treated as the morning urine, of a temperature of 20.5° C., was injected into a vein of the ear of a rabbit weighing 1,675 grams.

Prior to injection, rectal temperature, 38° C.

After injection of 25 cc., slight myosis.

After injection of 30 cc., great restlessness.

After injection of 40 cc., complete myosis, defecation.

After injection of 45 cc., clonismus in extremities.

After injection of 70 cc., respiration 60, temperature 39° C.

After injection of 75 cc., heart pulsation 144.

After injection of 88 cc., convulsions, death.

Time, 11 minutes.

Consequently, $\frac{88\text{x}1{,}000}{1{,}675}=$ 52.53 c.cm. of post-narcoleptic urine were necessary to kill one kilogram of animal.

Summing up the foregoing data, we find:

(*a*) Diurnally recurring morbid somnolence.

(*b*) Free perspiration on hands, feet, and forehead at all times, and particularly so before attacks.

(*c*) Physical condition remains uninfluenced by the attack.

(*d*) Physiologic sleep does not refresh the patient.

(*e*) Weak, slightly hypertrophied heart.

(*f*) Dilated stomach and hyperchlorhydria.

(*g*) High urinary density and acidity.

(*h*) Urinary chlorides greatly in excess.

(*i*) Salts of sulphuric and uric acids, carbamid, creatinin, and calcium oxalate in excess in the twenty-four hours' urine.

(*k*) Diminished blood alkalescence; hæmoglobin somewhat reduced in amount.

(*l*) Low degree of relative urinary toxicity before as well as after the attack of somnolence.

Inasmuch as the attacks of morbid somnolence never occurred until the twenty-ninth year of the patient's life, and as he at no time met with an injury of moment, we have to conclude that a toxicosis of some kind stands at their foundation.

Ectogenesis of a specific toxic material may at once be excluded, as the patient is a total abstainer from alcohol and tobacco, as the seizures occur independently of the administration of drugs, and as the attacks continued unmodified during the last five months in which period he ingested nothing but milk.

There is apparently nothing left but to assume the autochthonous production of a toxic substance causing narcolepsia. To what degree, however, is this assumption justified?

The patient is not, nor was he since childhood, afflicted with an infectious disease; his liver performs its functions in a normal way, cholæmia is not present; renal insufficiency and renal disease of any character as shown by the numerous urinary examinations have to be excluded; the supply of oxygen to the blood is normal, and there is no evidence of retention of carbon dioxid. No sign points to an enterogenic toxicosis. Indoxyl-potassium-sulphate, though slightly increased on some occasions, never occurred in abnormal quantities, and acetone and ethyl-diacteic acid were at no time detected in the urine. None of the data obtained are symptomatic of an histogenic toxicosis. Uric acid, or any of the purin bodies, were not found in such quantities as to support the assumption of an abnormal nucleolysis; and anomalies of specific "internal secretions" could not be demonstrated.

A great number of disorders whose origin we cannot otherwise explain, we are of late very fond of ascribing to an autointoxication.

Like Furet, I interpreted narcolepsy as an autotoxic manifestation until I undertook the study of the present case. However, as not a single symptom pointing to any of the pertaining and known types of autointoxication could be detected, we have to conclude that there stands no autointoxication, at least none in the sense in which we commonly accept the term, at the foundation of this particular case of morbid somnolence.

The conclusion, moreover, is confirmed by the fact that the physical condition of the patient, besides the repeatedly mentioned anomalies, in no respect leaves anything to be desired.

It does by no means follow that the primary cause of this instance of pathological sleep is necessarily also the underlying factor in the production of any or all other cases of morbid somnolence. There is no doubt that many ectogenic as well as endogenic intoxications are inducers of abnormal sleep, and of sleeping seizures. There must, however, exist a class of cases closely related to the one before us which, while we cannot designate them as idiopathic, are certainly not attributable to any of the known intoxications.

While the urine exhibited less toxicity than is generally possessed by normal urine, and while it did not contain any abnormal substance, it served as the excretory means of an unusually large amount of chlorine.

The urinary chlorides represent the greater part of the chlorides derived from food and drink. A portion of the ingested chlorine, however, in the form of sodium chloride, is contained in sweat, tears, saliva, and fæces. The patient in twenty-four hours egested about as much chlorine in his urine as he had ingested with his seven liters of milk. In calculating the milk-chlorine I have made use of Bunge's (11) figures, but most naturally the composition of the best of milk varies within certain limits. If we now consider that the individual is afflicted with hyperchlorhydria—a condition in which, analogous to the normal state, the chlorine virtually occurs ectoorganically, and that he perspires more or less all the time, but very profusely prior to a narcoleptic seizure—we are forced to accept that for certain periods during the twenty-four hours the output of chlorides exceeds the supply, and that there exists a temporary deficit of chlorides in the blood.

In a certain respect this is a condition contrary to the one prevalent in acute febrile states and in many chronic disorders. This fact is readily understood when we recall that fever itself is nothing but an indication of accelerated or more intense vital processes, and that many chronic diseases are nothing else but the result of accelerated or otherwise perverted functions. The acceleration or greater intensity of any vital process, however, is dependent upon a corresponding increase of the osmotic tension. The moment the latter begins to decline, the reactive stage of the fever sets in. Large amounts of chlorides then leave the organism by the kidneys and sweat glands, and catabolism again approaches its normal degree.

Arising from the deficiency of chlorides in the blood, there exists a relatively low osmotic pressure; as a consequence of the decreased osmotic tension we find, for the time being, diminished nutrition or stimulation of the nerve substance, and therefore interference with its electrical conductivity. The sudden seizures of somnolence are explainable by the lowered nerve impulses conducted through the cells of the central system.

Diminution of osmotic tension, as it apparently prevails during the narcoleptic state, is by no means identical with an anæmic condition of the central nervous system during that period; the contrary seems the case, that is, we have a hyperæmia of the brain, as we very likely find it during the physiological sleep, and coincident therewith we meet with a lowered degree of osmotic pressure.

Neither undersupply nor oversupply of blood, as such, appears to exert any influence upon the production of sleep seizures. These seem to be due, in the first instance, to diminished ionization of the chlorides in the blood—at least so in the case before us. Other instances of pathologic sleep may primarily depend upon the non-dissociation of other salts. The chlorides, however, appear to play the most important rôle in the osmotic tension of the body fluids, and their diminution or non-ionization calls forth various abnormal conditions, among which the affection just described is not by far the least interesting.

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56 East Seventy-sixth Street.

Fire Department Surgeons.—The Fire Chief of this borough has issued an order that the Fire Department surgeons shall go to all big fires so as to attend to injured firemen. The order was issued, it is stated, because on several occasions there was a conflict of authority between the ambulance surgeons and the firemen, in which the ambulance surgeons refused to carry out some of the orders given by the firemen. There are three surgeons in the Fire Department, one of whom must respond to every second-alarm fire and take with him the necessary dressings to treat the injuries the firemen may sustain. It is the surgeon's duty to order the injured man either to quarters or back on duty at the fire. When a fireman or a citizen is so severely injured at a fire that he requires hospital treatment an ambulance will be sent for.

ARE THE TONSILS TO BE REGARDED AS NORMAL PHYSIOLOGICAL ORGANS OF THE BODY?*

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It is an ancient teaching, and one, I think, almost universally accepted both by the laity and by the profession, that the faucial tonsil constitutes one of the normal organs of the body in much the same sense that the liver and the kidneys do, and that it is endowed with certain important functions in the economy; it follows, therefore, that having important functions to perform, its absence or extirpation robs the system of those functions, with a resulting deleterious influence.

As to whether this teaching be a true one or not, I do not intend to make a too positive statement; and yet it seems to me that there is ample ground for questioning this view, in that it oftentimes seriously hampers us in carrying out what seem to me to be clear clinical indications.

The anatomists tell us that the tonsil is an almond-shaped organ, situated between the two pillars of the fauces, and that its inner face is marked by from seven to twelve openings, which openings constitute the orifices of a similar number of lacunæ or blind ducts; the organ itself being covered by normal mucous membrane which extends down into the lacunæ. And yet the anatomists tell us that even this is not a constant condition, and that in a large proportion of infants nothing is found more than a small aggregation of lymphoid bodies containing no lacunæ, and lying beneath the mucous membrane. When we consider the extreme liability in child life to the involvement of the lymphatic bodies in hypertrophic changes, it seems fair to suggest that really the healthy tonsil may be the one above described, viz., one which consists of nothing more than a small aggregation of lymphoid bodies underlying healthy mucous membrane, and containing no lacunæ or blind ducts; and that the almond-shaped body usually described by anatomists is really a morbid growth.

The physiology of the tonsil has long been a subject of painstaking and laborious investigation, the problem being no nearer solution to-day than before. The same may, perhaps, be said of the whole lymphatic system, which, as we know, is found distributed extensively throughout the whole economy. Curiously enough, these lymphatics are found grouped rather extensively at that point of the human system, where in the development of fetal life the hypoblast and the epiblast meet, viz., in the fauces, forming what is oftentimes called the lymphatic ring, and establishing four points where these bodies are aggregated in notable masses, viz., between the two pillars of the fauces, one on either side, forming what are called the faucial tonsils; in the vault of the pharynx, forming what is called Luschka's tonsil; and in the glosso-epiglottic fossæ at the root of the tongue, forming what is called the lingual tonsil.

Now, as we know, those masses between the faucial pillars have always figured in anatomy as forming normal anatomical and physiological organs of the body. Since the establishment of our specialty of laryngology, we occasionally meet somewhat vague descriptions of that mass of lymphatics in the vault of the pharynx, as constituting a normal anatomical and physiological organ of the body, under the name of Luschka's tonsil. These descriptions are very rare, very indefinite, and by no means constant in literature. I know of no anatomy or physiology which describes the masses at the root of the tongue in the same sense. Why this should be, it is difficult to say, for it seems to me it is a fair conclusion that the masses at the vault of the pharynx and root of the tongue possess claim to a position as normal organs equal to those masses between the faucial pillars. The only reason, perhaps, that can be given for the physiological dignity to which the faucial masses have attained, is that they are so much more prone to become the seat of diseased action, and were open to direct ocular inspection in this diseased condition, centuries before the others were recognized.

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* Read before the New York State Medical Society 1901.

What the function of the lymphatics in the economy may be, I do not propose to discuss. It has always seemed to me, however, from a clinical point of view, that, considering the universality of their distribution, they were situated throughout the system for the purpose of arresting or retarding the encroachment of disease germs, thus acting, as it were, as a sort of police force; and considering, in the light of modern bacteriology, what enormous duties are imposed upon these little bodies, it seems easy to understand how much they are liable to suffer in the encounter; and especially is this true of those bodies between the faucial pillars, lying as they do in the sort of eddy which is established by these two muscular folds.

Whether this is the immediate cause of lymphatic hypertrophy I will not discuss, but the almost universality of a certain amount of lymphatic hypertrophy in some part of the body at every age is recognized by us all. That it should so frequently take the special form that it does in the faucial tonsil, viz., in forming deep lacunæ, I should regard to a certain degree as adventitious; but these crypts are by no means constant, as you know, even in hypertrophy of the tonsils. When they exist, we have an organ which lends itself admirably to what constitutes one of its principal activities, that is, as a trap for disease germs. It is difficult to understand why nature should place these sponge-like bodies in a normal throat. I think a far better and clearer understanding of clinical indications would be to regard this mass with its lacunar traps as a diseased body, for in support of this view it is not necessary to recount the very large number of infectious diseases which result from the mechanical entrapping of the disease germ in this sponge-like body. I think this teaching is notably emphasized by the numberless observations published in the last few years of the different germs found lodged in these filthy lacunæ.

Some twenty years ago, at a meeting in London, I made the observation in debate that practically there are no tonsils in a healthy throat. This observation was received with contemptuous jeers. After twenty years of additional clinical observation, I am disposed to repeat the same remark before the members of this society with a certain amount of curiosity as to how it may be received here. I do not wish to make the observation with absolute positiveness, and yet I repeat that it seems to me that if this view were more generally accepted it would make clearer the clinical indications in the treatment of many cases of throat disease. It would remove many supposed objections to operating upon the tonsils; and moreover, if such a thing were impressed upon the laity, we would meet with fewer objection to operations for extirpation of tonsils which are absolutely indicated by every clinical symptom. We so often meet with objections on the part of our patients: "The Lord put them there, and why should we remove them." I usually respond as the only answer to this: "The Lord never put them there, he had nothing to do with the matter; it is a diseased process which practically constitutes a morbid growth or tumor, and should be removed, and thoroughly removed, in the same manner as any other tumor, whether it be fibroid or malignant, or any other." We often hear as an objection to operating instances quoted of tonsils having been removed, and the throat left in a worse condition than before. I have met with many cases of this sort, and in all of them the subsequent symptoms were either due to some other cause, or the morbid tissue had been only partially removed. This question of thorough extirpation, I might say here (somewhat parenthetically), is one on which much emphasis should be laid, for I think it is a matter within the observation of all of us that a partial extirpation of a tonsil occasionally leaves the throat in as bad, if not in a worse, condition than before operation. Moreover, I am disposed to think that there is no other diseased condition met with in the fauces which gives rise to morbid symptoms in so large a proportion of cases as hypertrophy of these lymphatic bodies, between the faucial pillars.

I think, we have therefore some justice for advocating the view that the almond-shaped organ in the fauces, which the old anatomists called the tonsil, has not justified its claim to be considered one of the normal organs of the body, either on anatomical, physiological, or clinical grounds. I think that we may go still further, and say that it constitutes a distinct menace to the health and welfare of the body in the filthy lacunæ which make up its main bulk.

If it is a natural growth, rather than the result of a diseased process, then it seems to me that nature had been guilty of a crudeness of design which shows no analogy in the human economy, unless it be possibly in the vermiform appendix.

One word with reference to operative procedures. There has been considerable discussion of late as to the wisdom of selecting and using an anæsthetic. During the past thirty years I have invariably, in young children, insisted upon the use of a general anæsthetic, and my preference has always been for chloroform; the mode of procedure being briefly as follows:

The child being held in the lap of an assistant, the anæsthetic is administered until complete insensibility to pain is secured, the stage immediately before profound anæsthesia. One tonsil being removed, the child is thrown over on its stomach until bleeding ceases, when, after the administration of a few more whiffs of chloroform, the other mass is removed; the same process being gone through for the adenoid, which in so large a percentage of cases requires to be removed at the same time. The advantage of operating without profound anæsthesia, of course, is to retain a sufficient amount of reflex sensibility, whereby the supposed dangers of chloroform may be counteracted to a certain extent by the operative procedures in the throat. I desire to make here the broad and absolute statement that in several hundreds of operations which I have done in the last twenty-five years I have never in any instance observed the slightest symptom which would indicate any dangerous tendency or symptom from the use of chloroform anæsthesia.

As to the instrument to be used, I will say that for the last ten years I have ceased entirely to cut tonsils with a tonsillotome. No tonsillotome has ever been devised which will fit itself so completely over the growth as to thoroughly extirpate it in every instance. The cold wire snare adapts itself so admirably in every way to the operation that it seems to me it leaves nothing to be desired. The loop can be arranged in such shape and size as to fit perfectly over the mass, and can be slipped between it and the faucial pillars in such manner as to secure the thorough removal of the growth much more effectually than is possible with the use of the tonsillotome. Furthermore, if the whole mass is not extirpated at the first manipulation, it is a very simple matter to repeat until the faucial pillars drop into their normal position. The danger of hemorrhage, as I have always claimed, does not present, especially in operating on children; but in operating on adults a very considerable hemorrhage, which may even reach the dangerous stage, is always to be anticipated when the knife is used. With the snare this danger is practically eliminated, and to one who has met with severe hemorrhage after tonsillotomy this is no slight consideration.

41 Park Avenue.

A Case of Dermatitis Gangrænosa.—The case is reported by J. M. Finny, his patient being a boy two years and nine months old, suffering from a number of punched-out circular sores on the face and hairy scalp, and a few similar though larger ulcers on the back of the wrists and nates, and some smaller ones on the genitals. The sores were covered when first seen with a greenish-yellow pus, and in one or two only was the pus raised above the edge of the ulcer. After the application of a creolin poultice, the floor of the sores was quite clean and of a deep red color, with the edges sharply cut, of a similar red color, which was strictly limited to its immediate neighborhood. No bullæ were present at any time. The size of the sores varied from the size of a threepenny piece to half a crown, the greatest number being about the size of a shilling. Two on the back of the right hand—one over the wrist, and the other over the metacarpo-phalangeal joint of the index finger—were each about the size of a two-shilling piece, while a solitary ulcer over the right trochanter was still larger. Most of the ulcers were discrete, although a very narrow strip of healthy skin intervened; but on the forehead, above the right eye, on the right cheek, and on the left eyelid two adjoining ulcers coalesced, forming an irregular gyrate outline made of two circles meeting. The eyelids were enormously swollen and adherent from the discharge which exuded from between them, and could not be opened so as to examine the eyes. The lips and margin of the alæ nasi were also sore and ulcerated, with considerable tumefaction. The ulcers did not seem to be very painful or very irritable, as, with the exception of those about the mouth, they were not scratched or rubbed by the little patient. The lower limbs were covered with an ill-defined rash, not unlike the staining of measles. The limbs were greatly emaciated, and the skin was rough and loose. The child, when admitted, was very weak and prostrate—not able to turn from side to side. He was greatly emaciated and had a cough; no physical signs of lung disease were, however, discoverable. The treatment consisted in giving as much nourishment as could be taken, and of washing with creolin, applying boric-acid poultices, dusting the sores with iodoform, and applying a weak ichthyol and lanoline ointment to the eyes. No improvement followed, for although no more spots appeared, and no pus was discharged, there was no evidence of healing, while the skin surrounding the sores on the wrist and hip became of a deeper and more purplish color. Death occurred five days after admission to the hospital. —*Dublin Journal of Medical Science.*

Certain Factors Influencing the Death Rate from Consumption.—John Marshall French gives an exhaustive review of the subject. Infection, whether by hereditary transmission, inoculation, or ingestion, is one most important factor. As to age the greatest liability to the disease lies between twenty and thirty years, the least between two and fifteen. There is a slight excess of female deaths, due probably to indoor life or lack of exercise. No race or nation is immune; Indians and Negroes in America are especially subject to consumption. In America, the Irish furnish more than their normal proportion of deaths from this disease. As to climatic conditions, a moderately high altitude with dry air and soil tends to lessen the death rate from consumption, while the opposite conditions tend to increase it. Statistics show that the mortality from consumption increases as the density of the population increases. In regard to heredity the influence of acquired predisposition outweighs that of hereditary predisposition, and a combination of both still further increases the liability. The physique, or build, is a more important factor in the death rate than either family history or previous disease. Occupations furnishing outdoor employment, fresh air, and exercise lessen the death rate, while those involving indoor life, impure air, irritating dust, and noxious vapors, restricted and one-sided muscular movements, the over-use of certain muscles, and alcoholism increase it. Statistics show that the death rate from consumption is steadily decreasing throughout the civilized world, a decrease co-incident with better circumstances on the part of the people, increased intelligence of the masses, and the general progress of civilization.—*The Medical Examiner and Practitioner.*

The Relation of Interstitial Nephritis to the Heart.—H. N. Leavell says that the cardio-vascular changes occurring in this form of Bright's disease may be summed up in two words: Sclerosis of the arteries and hypertrophy of the heart. As a result of the renal lesion and consequent imperfect depuration of the blood, or conditions which coexist although not necessarily the outcome of the renal changes, an abnormally high vascular tension becomes established. Sooner or later the walls of the arterioles become thickened and inelastic, resisting the onward passage of blood, thus imposing an additional burden on the left ventricle, which undergoes hypertrophy successfully to cope with the high peripheral resistance. Up to a certain point the inevitable hypertrophy of the heart is compensatory, or an "accommodation enlargement," and is fortuitous; so long as it compensates the renal lesion its purposes are good. The arterial changes are progressive and the increased blood-pressure permanent. The hypertrophied muscular tissue is prone to degenerative changes, shows a greater tendency to exhaustion and weakness than the normal heart tissues, and it is but a question of time until increasing impairment of nutrition of the myocardium, with constantly growing peripheral resistance, results in failure of compensation and dilatation of the hypertrophied ventricles. This adjustment of the cardio-vascular system to the renal lesion tends to obviate the main danger —the retention of uræmic toxins. The debt which the kidneys owe the heart is amply demonstrated when cardiac compensation fails, and the greatly diminished quantity of urine, increasing albuminuria, and rapidly developing uræmia leave no doubt as to what organ has conserved the patient's life. Kidneys which may do well under increased blood-pressure prove miserably inadequate when such support is removed. Therefore, it may be stated that the condition of the heart is the best gauge of the disease.—*American Practitioner and News.*

A New Process of Nephropexy.—Niccola Giannettasie describes his process of nephropexy for the relief of floating kidney, which consists of three steps. (1) Detachment of the kidney, and formation of a rectangular flap from its capsule. (2) The making of a buttonhole in the quadratus lumborum by the separation of a small bunch of its marginal fibers, and the drawing of the flap through this opening. The muscular band will be between the flap and the denuded renal parenchyma. (3) Fixation by suture of the three free edges of the flap to the corresponding edges of the capsule, including in the suture some of the parenchyma of the gland.—*La Riforma Medica.*

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NATIONAL PUBLIC HEALTH LEGISLATION.

WITH the assembling of Congress, the agitation in favor of legislation creating a permanent public health department in the general government has been renewed, and the result will, in some measure, be influenced by medical opinion. It is desirable, therefore, that the present state of the questions at issue should be understood in order that these members of the profession who are interested in the subject may act wisely. It too frequently happens in efforts to secure legislation that the parties personally engaged become such strong partisans that in their zeal they fail to recognize opportunities when conciliation would be in the interest of the public welfare. It is a question worthy of the serious consideration of all interested in creating a competent public health department at Washington, whether the agitation has not reached a stage when an agreement might be arrived at upon a single measure which would comprise all that is essential in the organization of this public health service. We are impressed with this view on reading the address of Dr. Stephen Smith before the American Public Health Association, in which he gives the history of the efforts to secure the creation of a department of health. Taking these facts with the later and present attempts to accomplish this purpose, it is not difficult to understand the present situation.

The ultimate purpose of all interested in this legislation is and has been the same, and they have differed only in their methods of accomplishing it. That purpose is the creation of the department of health, the chief officer of which should finally become a member of the Cabinet. One party has proposed to approach this final result by progressive steps, while the other has been more radical, and has attempted to reach the same end by one decisive step. The former party adopted the Marine Hospital Service as the initial organization, and has steadily sought to increase its health powers and duties; the other has introduced various bills into Congress, one creating a board of health, a second making a secretary of health, a third a commission of health, a fourth a commissioner of health, etc. The result of all these efforts, as summarized in the address referred to, shows that the Marine Hospital Service has steadily advanced along the lines laid down by its promoters, until it has become in fact, though not in name and in the proper adjustment of its service, the central health authority of the country. On the other hand, the efforts to create outright, by a single measure, the desired department of health or any organization approaching it, has proved a failure, except during the great yellow-fever epidemic when the National Board of Health was created, which had a short-lived existence, only to be succeeded by the Marine Hospital Service. The bills now before Congress are drawn on the old lines, one class being for advancing the Marine Hospital Service nearer to the position of our National health authority, and the other to create a new and fully equipped health organization. The question which interests the profession is, How long shall this fruitless contest be continued? For our own part we believe the time has come when wiser councils should prevail and harmony should be sought by an effort to reconcile differences of opinion which relate only to the method of procedure to accomplish a given result. Actuated by a desire to unite the profession and all persons interested in sanitary reform on a single practicable plan, we urge those who are engaged in promoting the passage of bills before the present Congress to confer together at this early day in a spirit of conciliation, and unite on a common measure.

To this end we suggest that special consideration be given to a bill recently introduced into the Senate, entitled "A Bill to Increase the Efficiency and Change the Name of the Marine Hospital Service." The important features of this bill are as follows: The name proposed is "The United States Health Service;" the officers are to be the present officers of the Marine Hospital Service, the chief officer being called the Surgeon-General; an advisory board is provided for the hygienic laboratory consisting of the surgeons-general of the army and navy, the chief of the bureau of animal industry, the director of said laboratory, and five experts in laboratory work selected by the surgeon-general of the service, and appointed by the Secretary of the Treasury; a chemist, a medical zoologist, and a pharmacologist are to be appointed by the President to have charge of the divisions, respectively, of chemistry, zoology, and pharmacology of the hygienic laboratory.

Provision is made for a conference with the State and Territorial boards of health or health authorities, including the District of Columbia; finally, a scheme for uniformity in the registration of mortality, morbidity, and vital statistics is proposed. In a word, if this bill were passed without any change, we should have a United States health service having for its head a thoroughly qualified medical officer appointed by the President; a large corps of skilled medical sanitary inspectors, now serving in home quarantines, in centers of infection, and in all important foreign ports; a laboratory equipped for exhaustive scientific investigation managed by a board of chosen experts; provision for needful conferences of the health authorities of the States and Territories with the United States Health Service; provision, finally, for uniformity of registration of vital statistics. This would be but one step removed from a department of health, with its secretary.

It is not claimed that this is a perfect bill, but it must be admitted that it contains nearly every provision for which those who are seeking to create a public health service in the general government have contended. For this reason we believe it furnishes an admirable basis for the consideration of a conference of all parties interested in the health bills now before Congress.

IONIZATION AND SOME RECENT VIEWS THEREON.

"LIFE," says Herbert Spencer, "is adjustment to our environment, and as is the degree of life, so is the degree of adjustment."

In the lay press, we read some remarkable reports of discoveries of Professors Loeb and Matthews of Chicago. These observers are said to have solved several of the profoundest physiological problems of life, and would seem, basing opinion upon the reports, to have afforded us a new adjustment of our environment, even to the extent, according to an enthusiastic reporter, of indefinitely postponing death.

Hardly less startling also is the announcement that "electricity is the basis of life."

But at this point let us say at once that we entirely absolve the distinguished professors from holding any such views as we have above presented. Their serious contributions to physiological discovery and research entitle them to a most respectful hearing, and we shall await with interest the actual text of the papers they have recently read, and which have been alluded to only in a fragmentary and evidently distorted manner by the daily press. Yet enough has been put forward to entitle us, perhaps, to a few words of comment. Stated briefly, it would appear that the energy of food stuffs and of certain solutions of inorganic salts, which physicians would term medicines, is due to the electrical charges of free ions which are a constituent part of the solutions used as food or medicines.

A brief quotation will, perhaps, best put a part of the new claims most fairly before our readers. We quote:

> "Professor Mathews' paper was a sequel to the one of Professor Loeb. The latter declared that his experiments had proved that muscular contraction and all the vital processes of life were not due to the mechanical heat generated by food, but by the presence of electric-charged atoms and clusters of atoms contained in the food. Professor Mathews declared that he had pursued the same methods in experimenting on nerves and had reached the same results.
>
> "The experiments revealed the fact that certain salts are alone poisonous, and that these poisonous effects are abolished only when a salt containing the opposite properties is employed to neutralize the poisonous salt. Some salts contain electro-positive charges, and others contain electro-negative charges.
>
> "The proper adjustment of the two charges, when they neutralize each other, gives the electric charge that is the vital thing in all vital properties. Professor Mathews declared in conclusion that the negatively charged molecules are those which stimulate activity, while the positive charged are those which hinder contraction."
>
> "Dr. Loeb has, in fact, continued his experiments looking to determine the true nature of death. He has concluded that it is not a cessation of action, but a morphological process, and in the case of the sea-urchin eggs in recent experiments has indefinitely postponed death by the use of potassium-cyanide solutions. He is now experimenting in connection with Dr. Mathews in the logical continuance of this experiment."

That we may preserve our mental equilibrium while reading the statements as presented, we may for a moment, and most briefly, refer to the "prior state of the art," so to speak, namely, to what was accepted scientific theory and fact antecedent to the revelations from Chicago.

The theory of ions began with Faraday. The free ion, having an electrical charge, was assumed by Clausius as at least having temporary existence, and was, later on, formulated by von Helmholtz to be essential to electrolytic conduction and electrolysis. But the free ion of our present conception was presented to us by Arrhenius, and now constitutes a valid working basis to explain electrolysis. In this modern sense, an electrolytic solution is one in which an electrolytic dissociation or ionization exists.

On the basis of the early conception of the ion end, its electric charge, positive or negative, arises the electro-chemical theory of Davy and of Berzelius, wherein chemical affinity is due to the electrical property of the ion.

The theory of Arrhenius infers for every solution, which is a conductor of electricity, an extensive and inherent dissociation of all or most of its molecules into free ions, each bearing a positive or negative electric charge, and, within limits, the more dilute the solution the greater the number of free ions, and the better the conductivity to electricity. Again, the special properties of a solution are due to the free ions, which it contains.

For instance, chloride of sodium dissociates into free chlorine ions and into free sodium ions; so, also, hydrochloric acid dissociates into free hydrogen ions and into free chlorine ions Both solutions are similar in so far as they contain chlorine ions, but owe their great difference respectively to the hydrogen ion or to the sodium ion. Or, to consider alone chloride of sodium, the physiological properties of common salt are not due to molecules of chloride of sodium, but to free ions of chlorine and free ions of sodium, each charged respectively with negative and positive electricity. To the ion and its electric charge, therefore, we must look for the special quality, medicinal or otherwise, which a given solution possesses. Furthermore, the properties of a given solution are due mainly to one or the other of its free ions. It has been demonstrated, for instance, that the hydrargyrum ion of $HgCl_2$, in antiseptic solutions, is the germicidal ion, and that the sour taste of acid solutions, like hydrochloric acid, is due to the hydrogen ion, and so on. Here we have a comparatively new therapeutic conception of the cause of the activity of certain solutions common to medicine, and used either therapeutically or for physiological experiment.

If we turn from the agency employed to the tissue to be affected, the same conception of ionization holds good. The proteids of the animal economy are found to consist of protoplasm, in combination with inorganic salts, and individual ion proteid compounds exhibit their characteristics just as does the hydrogen ion in acid solutions or the hydrargyrum ion in solutions of bichloride of mercury.

Assuming that some of the phenomena of life depend, among other things, upon the combination of certain free ions like those of sodium, potassium, calcium, and others, with proteids, Professor Loeb has said, employ but one free ion compound to affect muscle fiber, a solution of common salt for instance, and the result will be toxic to the tissue. This proved to be true, and to be equally true that the toxicity could be removed by again supplying solutions of potassium or of calcium. In other words, when the proteid was submited to the sodium solution alone, the latter acted toxically because the sodium ions replaced the potassium and calcium ions and altered deleteriously the physical integrity of the tissue.

It is thus far evident that when ion meets ion a reaction occurs. From this point onward, the present reports from Chicago would appear to indicate that the investigators referred to had taken a great stride. And after reading the statements it would seem that we must formulate the new proposition somewhat after this fashion. Administer to the patient, or apply to the physiological preparation, a solution whose quality depends upon certain free ions electrically charged, and the *electric charges* of these free ions will in turn modify the electric charges of the free ions which are an essential constituent of the patient's or the preparation's proteids. Such, at least, is the interpretation we put upon the reports as they reach us.

Now, some people would be old-fashioned enough to term the above proposition as a chemical rather than an electrical reaction, for the electric charge of the ion has long been predicated under the name of the elektron, and has given rise, as we have mentioned, to the hypothesis that all chemical affinity is electrical in its nature. In short, are not the reactions termed in these reports electrical, reactions which we have hitherto termed chemical? So far as we have been enlightened, we should feel inclined to think that we were greeting an old friend in a new garment.

Meanwhile we await further advices, and are perfectly willing to believe, not alone that old facts have received a new and a perfectly justifiable interpretation in the hands of the skilful and learned professors, but also that physiological phenomena, hitherto obscure, have emerged from their obscurity in the light of their new researches. And, in any event, we welcome the theory of ionization as a conception which in its practical applications to the problems of medicine will undoubtedly clear up many an obscure point as it has already done in physiology and chemistry. Indeed, it is not improbable that this doctrine holds forth the greatest hope yet in our possession for an intelligent and broadened twentieth-century therapeutics.

EFFICIENT VACCINATION.

Smallpox has been peculiarly rife in many parts of the United States during the past three years. With the exception of a comparatively small section of the population, vaccination is esteemed a more or less sure safeguard against contracting the disease, as well as a means of abating its virulence when contracted.

Those who oppose vaccination, although perhaps animated by good motives, do so either through ignorance of its merits, or because they are prejudiced against it, on account of some accidents which have occurred, owing to the use of impure vaccine, and careless methods of performing the operation.

Dr. Monckton Copeman, the originator of glycerinated calf lymph, and a recognized authority on all in connection with vaccination, read before the Medical and Chirurgical Society of Great Britain a paper dealing with the minutiæ of the method.

Dr. Copeman gives some useful hints as to what constitutes efficient vaccination, and describes the measures to be taken to ensure this result. Efficient vaccination, he says, may be summarized as the clinical activity and bacteriological purity of the lymph employed for vaccination; the skilful performance of the operation itself; the making of an adequate number of insertions of lymph over a sufficient area; the observance of precautions needful for ensuring strict asepsis, both at the time of vaccination and subsequently, until the vaccination wounds are soundly healed.

Taking these points in detail, Dr. Copeman says: "Although lymph may retain its potency for weeks or months, yet, through various causes, it may quickly become inert; it is therefore advisable that the lymph should be employed for vaccination as soon as possible after bacteriological examination has demonstrated its freedom from suppurative and other extraneous microorganisms. Respecting the number of insertions, the last British Commission on Vaccination concluded that probably the least extent of vasciculation absorption, which is capable of affording adequate protection against subsequent invasion by smallpox, is an area of half a square inch.

The p ecautions recommended for insuring strict asepsis are many Dr. Copeman thinks that bathing with a warm solution of boric acid before and after the operation is the most generally useful procedure.

Protective measures advised by Dr. Copeman during the maturation of the vesicles are for the first few days a shield over the wound, and during the second week some dressing of an absorbent nature, and free use beneath of a dusting powder of boric acid.

The technique of the operation is thus described: Instrument, the ordinary triangular-headed surgical needle. The manner of operating, which affords the most generally successful results. consists in blowing out the lymph from the capillary tube in which it is stored on to the surface of the skin at different points, the number and situation of which must correspond with those of the vesicles which it is desired to obtain. The skin put slightly on the stretch is then gently scarified, through each droplet of lymph, with the needle first in one direction, and another more or less at right angles to the first, the drawing of blood being avoided as far as possible.

Statistics gathered in Great Britain show that an appreciable advantage to the community has resulted from the adoption of modern methods of vaccination.

A valuable paper concludes with the author's view as to the relationship of vaccinia to smallpox, which is that the former is an attenuated form of the latter. Experiments undertaken by Dr. Copeman have strengthened this belief.

The feature of the paper is undoubtedly Dr. Copeman's remarks as to the probable deterioration of the glycerinated lymph if not used when absolutely fresh. It would appear to be the opinion of some physicians that glycerinated vaccine will retain its virtue for an almost unlimited period. Acting upon this belief has perhaps been the cause of much unsuccessful vaccination.

The area of vasciculation absorption is another point which is worthy of consideration. Many vaccinators are in the habit of making no more than two or at the most three insertions; but if the recommendations of the British Commission are to be considered as founded on correct premises, at least four insertions will be required—the reason given being that experience has shown that less inflammatory reaction and less permanent destruction of skin tissue are likely to ensue than if the attempt be made to secure an area of half a square inch by means of a less number of insertions of lymph.

If modern methods of vaccination be conducted on the lines laid down by Dr. Copeman, it is claimed that, while providing immunity to smallpox, at the same time there will be no fear of the accidental transference of erysipelas or other diseases.

THE DOCTOR AS A SPECULATOR.

The poor business qualifications of the ordinary doctor are proverbial. Hard as his struggle is to provide for himself and family, he usually gets only half what he earns, the remainder being charged on his books as uncollectable fees. His work is honestly and conscientiously done, but when the time for recompense comes he is usually forgotten by his former grateful patients. This condition is explained, in part, by his want of promptness and regularity in reminding his clients of their indebtedness. In this respect the physician is different from any other man who does business on business principles. His patrons conclude that he is the only one of their creditors who does not need money, as all others persist in asking for it when it is due. Hence the longer the account stands the less likelihood there is of its being settled.

From such points of view it is easy to understand why the poor doctor is generally in debt and is ever eager to make money in other ways. Speculators, promoters, stock jobbers, and the like understand this so well that the confiding medical man becomes a willing victim to their swindling schemes. The latter are not exposed for the reason that no complainant wishes to advertise himself as having been duped. Although one lesson is generally enough for each individual, it takes a great while to make such an education widely distributive and permanently effective.

It is strange, but nevertheless true, that there is more stock jobbing among physicians than with any other class of professional men. And it is equally conceded that they can least afford to risk their hard-earned incomes in that way.

During the recent flurry in Wall Street it has been said on reliable authority that the medical profession sunk enough money on margins to endow a hospital or place the Society for the Relief of the Widows and Orphans of Medical Men on the soundest possible footing. In one instance it was said that a medical man who had the so called "nerve to hold on" during a sudden drop in values, not only lost his little fortune, but his home besides.

Now the craze seems to be for mining and oil stocks with impossible dividends. Even some respectable medical journals lend their advertising columns to the exploiting of these and other questionable schemes. The moral of it all is that the medical man who wishes to save his money and provide for his family should have nothing to do with any business he does not thoroughly understand, and least of all should he speculate in any stock for the real value of which he must depend on the mere statement of others. Even stocks in medical journals are not beyond the danger of depreciation while taking the ordinary business chances of earning interest on par values. So also with other plans for becoming rapidly rich, and for obtaining large dividends from small but pretentiously alluring investments. In view of these facts it seems incumbent upon us to guard the doctor against the constant temptations to go out of his beaten track for making his money. In the long run with his slow accumulation of funds the best investment is a life insurance policy, which will at least spare his widow and orphans from seeking charity or possibly bowing to menial labor. The great thing is to be contented with small profits, and have them permanent and sure. This sound business principle appeals to the doctor with special and ofttimes with mournful force.

PHTHISIOPHOBIA.

Phthisiophobia, so aptly named in the paper of Dr. Knopf, is just now liable to assume epidemic proportions. While the senseless scare lasts the consumptive has a poor chance for decent harbor or proper treatment. The sick immigrant is not only prevented from landing on our shore, but the native is forbidden to take his chances in health resorts. He must in many quarters not only be treated as an outcast, but allowed to die like one. All this is the result of the inordinate zeal of some health officials whose duties appear to consist in senselessly alarming the public on the alleged dangerously contagious character of the malady. It is sad to know how great a fire can be started by insignificant sparks. In the interests of humanity and fair play to a large class of helpless sufferers, it is high time that Knopf and others should have opportunity for voicing general professional sentiment on the subject. The Medical Record long ago held similar views to those expressed in the Academy's discussion, but only very lately have they been generally indorsed.

THE PROPOSED EMERGENCY RATION.

The annual report of the Commissary General of the Army contains a report relative to a proposed emergency ration, in the preparation and trial of which a board of officers has for some time been engaged.

Briefly, the board announced that the military emergency ration should be the smallest nutritive equivalent, which would maintain the soldier for one day without serious impairment of vigor, and with the repetition of the same ration for a period not exceeding four days. The main objective in the ration was the maximum food value in the minimum space and weight. The components of the ration were to be selected with reference to wholesomeness and proper nutritive value, and the portability of the ration as a whole. Acceptability as to taste and the keeping qualities of the articles selected were also to be taken into consideration. The ration should also be capable of being made into a hot soup or stew, or of being eaten cold, dry, or mixed with water. Finally, the size, weight, and form of package was to receive consideration.

The board examined and tested various articles of food submitted to it as being suited for use as an emergency ration, but regarded none of them as fulfilling the requirements of the latter. It, therefore compounded a ration of its own, consisting of four ounces of evaporated beef, eight ounces of parched wheat, seasoned with one ounce of salt and a little pepper. The other components of the ration consisted of two ounces of chocolate and two ounces of sugar. The whole ration weighs seventeen ounces, occupies twenty-five cubic inches of space, is said to contain less than 6 per cent. of water, and has a food value of 1,955 calories. The preparation of 2,000 of these rations was authorized, and the board was directed to proceed to army posts in the Indian Territory, for the purpose of practically testing this ration and the several others submitted for trial by outside parties.

In the first test of the board's ration, it was stated that every man was in as good condition at the end of the trial as if ordinary rations were used. The net loss of weight of the thirty-four men subsisting on the ration was seven and one-half pounds. At the conclusion of the trial of the so-called "standard emergency ration," made in New Jersey, the twenty-eight men composing the detachment were found to have lost 144 pounds in weight. Strength was also lost, and the board was of the opinion that five days was the longest period during which this ration could be used without being supplemented by other food. A ration presented by a leading packing firm was next tried, but the report states that nearly every one subsisting on the ration suffered excessively from hunger, and a number of the men became so demoralized as not to observe the order to eat no food other than the ration. Some of the men were reduced to a pitiable state of weakness, and it was necessary to put eight of them on full army rations before the test was concluded. This ration also had the added defect of requiring cooking before use.

A second trial of the board's ration was then made to ascertain what condition for service a cavalry command would be in after subsisting upon it for five days. The route was so laid as to make the daily march about twenty miles in length. Instead of making camp before the midday meal, a halt was made about noon for luncheon, the meal consisting of the ration as it came dry from the can, washed down with water from the canteen. Camp was made some time during the afternoon, all necessary work being completed before the evening meal was served. The actual loss of weight of the fifty-six men composing the detachment subsisting on the ration was six pounds.

The result of this trial was to confirm the members of the board in the favorable opinion previously formed of the ration devised by them. It is stated that at no time during the trip was there the slightest indication in the appearance of any man that he was suffering from hunger or weakness, and no men were treated for illness that could be attributed to the ration. This was a much more severe test than any of the rations had been subjected to during the first set of trials, and the results were stated to be so favorable that the board felt warranted in asserting that any command can go into campaign and subsist exclusively on this ration for ten or more days at a time, with the absolute assurance of being fit for service at all times.

In the opinion of the board, the ration formulated by it fulfils all the requirements of an emergency ration. The practical tests have shown that it is capable of keeping up the full muscular strength and endurance of the soldier for a number of days, with no suffering from hunger, and but a trifling loss of weight. The board, therefore, recommended its ration for adoption and issue as the United States Army emergency ration.

SANATORIA FOR CONSUMPTIVES.

There has been within the past few years, and particularly during the year just gone by, a remarkable spontaneity of giving among the millionaires of this country. The men who are rich beyond the dreams of avarice seem to have awakened somewhat suddenly to a conception of the fact that with the possession of an overflowing supply of this world's goods, they have also come into a corresponding degree of responsibility.

Andrew Carnegie's example has had much influence in arousing the charitable instincts of his fellow millionaires, and the consequence has been that money has flowed like water to improve the physical and mental welfare of the masses, and to advance the cause of science.

Great Britain, up to the present time, has lagged in the race of thus benefiting its sick and poor inhabitants, and of solving important scientific problems.

Prominent exceptions among the many wealthy men of that country have occurred; but, on the whole, the opulent British philanthropists do not compare favorably with those of the United States.

The news, however, has been recently received that a rich Londoner has donated $1,000,000 to be applied to whatever object King Edward might deem most fitting. The King's choice has fallen upon the treatment of consumption, and the greater part of the large sum will be devoted to the erection and equipment of a sanatorium for the use of indigent persons suffering from that disease.

No better decision could have been arrived at and the scheme may be commended as worthy of adoption by our plutocrats and municipal authorities.

In the meantime, equally active interest is taken in such humanitarian schemes in this country. The site for a State sanatorium for New York has been secured, and Governor Odell has recommended the establishment of similar institutions in different districts of the commonwealth. Pennsylvania has followed suit in a projected cottage plant at White Haven. Coincidentally, also, Dr. H. P. Loomis, in the discussion of the subject before the Academy of Medicine, has advocated a special hospital on Ward's Island for the care of the pauper consumptives of the city. All these movements are in the right direction. and deserve every encouragement.

FOR THE RELIEF OF ACTING ASSISTANT SURGEONS.

A bill for the relief of acting assistant surgeons, United States Army (H. R. 7269) has recently been introduced into Congress. After reciting the disabilities imposed on this class of worthy medical men under existing laws, decisions, and regulations, the bill states its purpose of relieving "such unjust discrimination and to give a proper recognition to their patriotism, services, hardships, and exposures, as well as to give the pay and emoluments due them under the provisions of their contracts." The bill provides for the granting to contract surgeons, under proper authority, of leaves of absence, either sick or ordinary, on full pay, and entitles contract surgeons to commutation of quarters and all the other rights, privileges, and emoluments which attach to commissioned officers of the grade of first lieutenant of the army. The bill is also retroactive as regards the payment of just claims for pay withheld by the Treasury for sick or ordinary leaves and for commutation of quarters. It gives the preference to contract surgeons for appointment to the various medical branches of the Government, other things being equal, over such applicants as have not had previous military service; and provides that all acting assistant surgeons, who have served since May, 1898, or who may be given contracts in the future, shall be commissioned as such by the President. The bill grants two months extra pay, as given by Congress to the medical officers of volunteers who served during the war with Spain, to such contract surgeons as have served outside the limits of the United States. Finally, the bill grants the privileges of the various Soldiers' Homes to acting assistant surgeons, the same as officers of the regular and volunteer armies.

This bill asks only for proper recognition of the services of a deserving class of medical men, and a grading equal to that granted to commissioned officers of the grade in which contract surgeons hold a nominal rank. As such, it should receive favorable consideration at the hands of Congress.

INTER-STATE RECIPROCITY.

The most important question now impending in the American medical world is that of reciprocity. Uniform medical legislation is bound up with reciprocity. One is impossible without the other, or rather it should be said that it would be in a high degree injudicious and unjust to give reciprocity, and not first to make an equality of standards for admission to the study and practice of medicine.

The prime movement, therefore, in the direction of reciprocity must be a uniform medical legislation. The committee on organization of the American Medical Association in its preliminary report has fully recognized this fact, and at the annual meeting of the association next summer the subject will be discussed in all its bearings, and a decision will be probably reached.

Dr. B. D. Harrison of Sault Ste. Marie, secretary of the Michigan State Board of Registration in Medicine, speaking recently on medical reciprocity said, "We are working for reciprocity now, and urged that some basis for reciprocity be established." He then proceeded to say, "There will be a meeting some time in January, I think, at Chicago, of the executive officers of the State boards of medical registration from Wisconsin, Illinois, Indiana, Ohio, and Michigan. We are trying to form a nucleus of West Central States first. All the States recognize the necessity for it. The Michigan law, which has been in effect for two years, provides for reciprocity, admitting such physicians from other States as are considered qualified. There will be necessarily a new law or an amendment covering the matter of matriculation.

"At present there is some difficulty between the colleges in the State over matriculation of applicants. Some of the colleges complain that an applicant turned down by one college is allowed to matriculate at another. This can be obviated by having the matriculation lists filed with the State Board to be passed on."

The plan which Dr. Harrison says the State boards of the West Central States are endeavoring to adopt, that of forming a nucleus of a few States at first, was suggested some time ago by Dr. Emil Amberg of Detroit and commented upon in the MEDICAL RECORD.

A beginning must be made, and while changes in medical laws will have to come gradually, it is plain that any scheme would be preferable to the confused and incongruous system now in vogue.

The matriculation of candidates is another stumbling block to those who are eager to raise the standard of medical education. As Dr. William Warren Potter of Buffalo has well said, "There must be an equalization of the preliminary requirements of medical students and a uniformity of applying the tests, a uniform period of collegiate training, including uniformity of methods of teaching, and finally an absolute similarity in the method of conducting State examinations and granting licenses."

In short, there must be uniformity in every step toward his degree that the would-be doctor takes, and the preliminary examinations should be of as relatively high order as are the professional examinations.

Dr. Harrison's suggestion that the matriculation lists be filed with the State Board to be passed upon should have the desired effect of rendering the matriculation examinations of a uniform character.

The MEDICAL RECORD has for some time held and expressed the opinion that no medical degree ought to be conferred unless the candidate for such has undergone a four years' course of study, and that the final examination shall be undertaken by an independent and unbiased board.

The establishment of a high uniform standard of medical education throughout this country would be an incalculable good to the medical profession in every way, and while it is not to be expected that so sweeping a change will come quickly or without a great deal of opposition, yet the signs of the times would seem to point to alterations of a radical kind in medical legislation.

Whatever happens, however, it is left to the medical profession to work out its own salvation.

SMOKE IN LONDON.

While the inhabitants of New York for a few weeks have been contending with the inconveniences and danger to health of dirty streets, its sister city across the Atlantic has for generations suffered from a far worse infliction.

Kipling, when he wrote of the "City of Dreadful Night," might have had in his mind London in the winter season, during one of those dense fogs which appear to be more or less peculiar to that vast center of population.

Patriotic cockneys, jealous of their birthplace's fair fame, deride the idea that these fogs are injurious to health, and some go so far as to declare that they are invigorating and exhilarating, and as a tonic to the system are preferable to a breeze from the sea.

Of course such well-meaning citizens delude themselves, for proof has been forthcoming on many occasions that fogs are followed by an increased death rate.

During the past month, London has been visited with some especially bad fogs, and again scientists and sanitarians are discussing means to prevent, or at least to mitigate, the severity of these visitations.

Sir William Broadbent recently delivered himself of some wise remarks upon the matter, considered from the point of view of health. He pointed out, that the two great gifts of nature which made for long life were air and light, and the coal smoke of London polluted the one and intercepted the other, thus producing a deteriorating influence on the health and vitality of the community. Fortunately there was a mechanism which to a great extent intercepted coal smoke on its way to the lungs, but every one who lived in London must have his lungs speckled by it. Walking in a city of which the air is generally so permeated with smoke and other substances as to be gloomy, if not actually dark, does not exert the beneficial effects of that form of exercise taken in the country.

The lack of the stimulating influence of light and air, said Sir William Broadbent, was steadily injuring the health of the community.

The continued presence of smuts in one's room had an unfavorable effect on the temper, which reacted on the health. There could be no doubt that whatever tended to the purification of the atmosphere of London would tend to preserve not only the health, but the happiness of its inhabitants.

New York suffers from an atmosphere vitiated by foreign substances to a very much less extent than does London, but she has had experience enough of the soft-coal nuisance to be able to sympathize with the latter city in her troubles. The only radical cure for London fogs is not to burn soft coal, which in the present juncture of affairs is said to be a remedy impossible strictly to enforce.

Laws, however, might be enacted compelling persons, and particularly large manufacturers, to adopt measures by which furnaces and stoves would consume their own smoke.

ANTIQUITY OF THE TEMPERANCE REFORM.

The *Sanitarian* for December has an article copied from the *Chicago Israelite* on the above subject.

Any one who is acquainted with the old Testament will know that wine-bibbing is there strongly condemned.

The *Chicago Israelite*, however, states that the Israelites were not the first people to produce illustrious advocates of abstinence from wine. Long before the birth of Solomon, warnings against intemperance were common in the literature and laws of China. In the year 2285 B.C. a man was banished by the emperor because he had invented an alcoholic drink from rice. In 2205 B.C. the Emperor Yu refused to drink wine, for he said, "In after ages there will be those who through wine will lose their kingdoms."

Un Wang the next emperor, punished drunkenness by death. In 206 B.C. the penalty for that offense was a fine instead of death. After many changes in the laws regulating the sale of drink and the punishment of drunkards, in 1279 B.C. all liquor makers were banished from China.

After the Chinese in point of time came the Jews. After them the Hindoos.

The ancient laws of Ceylon, Burmah, and other Buddhist countries forbade the manufacture, sale, or use of liquor.

In A.D. 626 the fourth year after the Hegira, Mohammed, to promote the discipline and efficiency of its army, forbade the use of wine to the soldiers. This rule prevails in full force and effect in the Turkish army to the present day, with the result that the ottoman soldier's capacity for endurance and quick recovery from wounds is famous throughout Europe.

Of course, these views are quite in keeping with the experience of modern commanders, who have found that stimulants for soldiers are usually unnecessary and often harmful. Tea would seem to be the beverage most in favor with generals of the present day for troops on the march.

THE WOUNDED DURING THE CHINESE DISTURBANCES.

Dr. Oliver D. Norton, Surgeon, U. S. N., gives an account of the wounded American marines and soldiers who came under his care after the battle of Tientsin. Some of his observation were as follows:

Bullets of all calibers were used, but principally the Mannlicher; slugs from "two-men" guns; Mauser, '76 model; Winchester, .44 and .45 calibers, and Remington, .50 caliber. It was of interest to note that the high-power, small-caliber bullet shattered the bone; in no case was there a clean-bored or punched hole. The "hydro-dynamic" theory of high powered, small-arm bullets, or that the explosive effect varies directly at the viscosity of the body was found not to be true.

It was quite obvious that the deductions that have been made from experiments on cadavers, or cans of wet and dry sawdust, or sand, are not true when applied to the living body. The bullet acts differently and produces different results.

The laceration of tissue is noticeably absent in the small-caliber bullet wounds. There is a small punctured wound of entrance, and very slight, if any, pouting of the lips of the wound of exit. Wounds of the abdomen did well on rest, opium, and expectant treatment, but one case in five was lost.

Smokeless powder when blown into tissue at close quarters by the blast causesless pain and suppuration than black powder, and the grains are more easily removed.

Careful examination of wounds by the Mauser and Mannlicher at a range that varied from 2,000 yards to 400 yards failed to locate the so-called "explosive zone."

The foregoing observations are, in the main, similar to those made in Cuba, the Philippines, and South Africa. Dr. Norton's conclusions, with respect to the "hydro-dynamic" theory of high-powered, small arm bullets, is exceptionally interesting in view of the definite statements made on the matter by certain German observers.

The experience afforded in China, too, of treatment of wounds of the abdomen is quite in line with that of surgeons in South Africa and elsewhere.

NEGRO DENSITY IN THE FAR SOUTH.

Alarmists are much given to declaring that the negro population of the far South is increasing at a much more rapid rate than that of the white, and that there is always the fear that the blacks may one day swamp the whites in that part of this continent.

A writer in the *American Monthly Review of Reviews* shows that premises based upon such a belief are illusory, and that as a matter of fact the negro element in the far Southern States remains relatively stationary, while the white population is growing rapidly.

South Carolina and Mississippi are the only two States now in which the negroes outnumber the whites. In Louisiana the relative decrease of negroes has been very marked, but in Alabama and Florida the relative proportion of negroes has increased.

The black population appears to be concentrating in the low.and warm regions of South Carolina, Georgia, Florida, Alabama, Mississippi, and Louisiana. Nevertheless, there has been a rapid increase of white population to colored in most States of the South.

Fibroma of the Integument the Cause of Pain Diagnosed as Articular Rheumatism.—Anna M. Lieser describes this case. The patient had been treated for articular rheumatism. The left knee was always painful, with occasional almost unbearable "spells" of pain. The sensation traveled up the thigh, posteriorly to near the hip, down the leg externally, to and into the foot. On examination, a tumor over the head of the fibula was discovered. It was removed under local anæsthesia. The tumor was oval in shape, involving the whole thickness of the epidermis and true skin, dipping into the superficial fascia. It measured 2 by 1⅜ by about ⅞ inches. It was a fibroma of the skin. The patient was entirely relieved of his pain after the removal of the growth. The pain had evidenty been caused by irritation of the external popliteal nerve.—*The Woman's Medical Journal*.

News of the Week.

The Illness of Dr. Paul F. Mundé.—The many friends of Professor Mundé will be glad to learn that he is recovering from his late severe and dangerous illness, and that there is a good prospect of his soon resuming his office work.

Epidemic Measles in New York.—A severe epidemic of measles prevails in this city, confined mostly to the upper east and west districts. Last year at this time scarlet fever showed itself in epidemic form.

Smallpox at Hackettstown, N. J.—Smallpox prevails epidemically in Hackettstown, N. J., and the town is quarantined. The health officers have taken possession of the new town hall as a hospital.

The Gift of a Tuberculosis Sanatorium in England.—It is announced that an anonymous philanthropist, who is, however, said by the *Daily Mail* to be Sir Ernest Cassel, has placed £200,000 ($1,000,000) at the disposal of King Edward for any charitable or utilitarian purposes which his Majesty may select. The money will be devoted to the erection of a sanatorium for tuberculosis patients in England. This institution will accommodate fifty male and fifty female patients. Twelve of the beds will be reserved for wealthy patients, who are able to pay for treatment, while the other eighty-eight will be for poor persons who will be expected to contribute a small amount. King Edward has appointed the following as an advisory committee: Sir William Henry Broadbent, Sir Richard Douglas Powell, Sir Hermann Weber, Sir Francis Henry Laking, and Dr. Charles Theodore Williams. Three prizes of £500, £200, and £100, respectively, have been offered in connection with this scheme for the best essays on and plans for the construction of the sanatorium, and the advisory committee will be guided by the result of this competition in the execution of his Majesty's wishes. The competition will be open to medical men of all nationalities. The institution will be located within easy distance of London, and every arrangement will be made for the convenient carrying out of the open-air treatment after the most modern methods.

Change in the Management of the Public Hospitals of New York.—The control of some of the city hospitals, namely, Bellevue, Gouverneur, Harlem, and Fordham hospitals, and the Emergency Hospital for Women, will pass from the Department of Charities on February 1 into the hands of a board of trustees appointed by the Mayor which, after that date, will have complete control of these hospitals. The board is to be known as the Board of Trustees of Bellevue and Allied Hospitals. It will consist of seven members, and the term of one of them will expire each year. When Mayor Low makes the first appointments, which under the Charter he must do by January 20, he will appoint one man for seven years, one for six, one for five, one for three, one for four, one for two, and one for one year. Thereafter the appointments are to be made for seven-year terms, except when it is necessary to fill vacancies, when the appointment is to be for the unexpired term of the retiring member. Before filling any vacancy, the Mayor must request the executive heads of the United Hebrew Charities of New York, the Particular Council of New York of the Society of St. Vincent de Paul, and the New York Society for Improving the Condition of the Poor to present a list of names of suitable appointees, but the Mayor is not obliged to appoint from the list submitted to him by the three societies named, and he can make his selections regardless of their recommendations, or he can call on any other organization or any citizen for suggestions, if he is inclined to do so. The members of the board are not subject to arbitrary removal, but may be removed by the Mayor on account of any neglect, misconduct, or conduct that tends to discredit their office, or for mental or physical incapacity to perform its duties. This board will have power to appoint and at pleasure to remove, subject to the civil service laws and regulations, superintendents, medical officers, and all such subordinate employees and officers as are necessary to the administration of the work of the hospitals. The Charter further provides that the medical Board of Bellevue and allied hospitals shall be composed of the attending and consulting physicians and surgeons on February 1, and vacancies in this board are to be filled by appointment by the Board of Trustees. The members of the medical board are to hold office as long as they satisfy the members of the Board of Trustees. The medical board shall nominate, and the Board of Trustees, on its nomination, shall appoint medical and surgical house officers of the hospitals.

The State Hospitals.—In his annual message to the Legislature, Governor Odell of New York expresses dissatisfaction with what he calls the duplication of administrative and executive powers, which, he says, is repugnant to sound business judgment. "First is the Board of Managers, with doubtful authority, then the Superintendent, who is the executive officer over all. The State Commission in Lunacy has not the authority to remove or even correct a superintendent, a treasurer, or a steward. The power, therefore, which they should have, is lacking, and the Superintendent, protected by his Board of Managers, becomes an autocrat in the administration of his duties." But one result, he says, can follow such a system, namely, extravagantly managed institutions, with constant demands for improvements not warranted or justified. As a remedy for this condition, he recommends "that for the Boards of Managers there be substituted a visiting board for each district, to be appointed by the Governor annually, and to report to him; that the powers now vested in the present Boards of Managers be lodged in the State Commission of Lunacy, thus centralizing all authority in a commission that has been constitutionally created, which precedent has decreed must be non-partisan, and which is remunerated for the services performed."

Sanitary Condition of Cuba.—The report of Major W. C. Gorgas, Surgeon, U. S. Army, Chief Sanitary officer of Havana, for the month of November, shows a general sanitary improvement over the conditions existing in the same month of the previous year. The present death rate of Havana is 19.58 per thousand; a rate which compares very favorably with those for cities of the same size in the leading civilized countries of the world. Although the months of October and November have heretofore represented the period of maximum prevalence of yellow fever in Havana, and although for the past hundred years there previously had not been a day during these months when many cases of yellow fever did not exist in the city of Havana, during the present year this period has been passed without a death from yellow fever or the occurrence of a new case of this disease. From this fact, Major Gorgas feels justified in making the claim that Havana has at last been completely freed from the infection of yellow fever. This result he believes to be wholly due to the systematic destruction of mosquitos in districts in which yellow fever developed. In the accomplishment of this result, he states that there were 15,144 applications of petroleum made, during the month, to the possible breeding places of these insects within the city. Those in charge of this work of mosquito destruction consider that during November of this year the number of mosquitos observed was only about one-tenth as large as during the same month of 1900. At certain places, for reasons not as yet understood, the number of mosquitos appears to remain about as large as during the previous year; but from many places in the city, where these insects were formerly very troublesome, they have almost entirely disappeared.

Health of the Army in the Philippines.—The health report of the Division of the Philippines for the month ending November 15, recently received by Surgeon-General Sternberg, shows 650 sick in quarters, 1,024 in regimental hospitals, and a total incapacitated of 2,952. The percentage of sick to the command was 6.79 per cent.

The Health of London.—The Registrar's report for 1901, recently issued, shows that the average death rate for the year in London, in a population of over four and a half millions, was 17.4 per 1,000. The aggregate deaths were 79,601, which is 9,874 fewer than the average for the last ten years. During the first half year there were 7,438 fewer deaths than usual. The highest death rate for any one week was 22.3 in November, and the lowest was 13.7 in June.

Hospital Saturday and Sunday Collection.—There was a large increase in the collections for the hospitals this year over the last or any previous one. The exact figures are not yet made up, but it is estimated that the amount collected will be in the neighborhood of $15,000. Last year the church collection amounted to about $12,000.

Dr. George B. Fowler of Brooklyn, who has served as Surgeon on the staff of Gen. James McLeer of the Second Brigade for several years, has been appointed Surgeon on the staff of Major-Gen. Charles F. Roe. His rank will now be Colonel instead of Lieutenant-Colonel. Col. Fowler was Chief Surgeon on the staff of Gen. Fitzhugh Lee during the Spanish-American War.

Opposition to Consumptives.—The town of Rockland, in Sullivan County, N. Y., has just adopted an ordinance imposing a fine of fifty dollars on any one who conducts a sanatorium, hotel, or other place in which consumptives are received, and imposing the same penalty on any one who receives into his house or harbors any consumptive not an immediate relative of the family or dependent upon him for support. A consumptive is not allowed even to visit relatives or friends in the town. In Liberty, a similar ordinance was passed a few weeks ago, and an epidemic of phthisiophobia appears to be sweeping through Sullivan County.

Arrest of an Illegal Practitioner.—A man named Ward, who is said to be a D.D., and therefore entitled to the appellation of doctor, who recently sued a woman in this city for $90 for treating her according to the principles of somatopathy, a system of treatment of which he declared himself to be the originator, was arrested last week on a warrant obtained by the counsel for the County Medical Society. Ward was charged with practising medicine without being legally qualified to do so. The man waived examination, and was held in $100 bail for trial in Special Sessions.

Osteopathy in New York.—A bill has been introduced into the New York State Legislature compelling the Board of Regents to grant a license to practise medicine to any osteopath who passes satisfactorily an examination in all the branches of medicine except materia medica and therapeutics. It is said that during the past year Speaker Nixon has been treated by one of these persons, and the osteopaths are counting upon his support of their measure. Last year a similar bill failed to pass

The Board of Health.—The Health Commissioner holds the record, thus far, among the members of the new city administration for changes in his department. At the first meeting of the new Health Board, composed of President Ernst J. Lederle, Police Commissioner Partridge, and Dr. Doty, Health Officer of the Port, out of a total of 1,009, 157 men were dropped from the payrolls of the department. The men dismissed include inspectors, vaccinators, disinfectors, and others occupying minor positions. They were dismissed, the Commissioner alleged, because they were unnecessary and because the department has no funds available for their salaries. A saving of about $110,000 was effected by the dismissals. The board confirmed Dr. Lederle's selection of the Medical Advisory Board, consisting of twelve physicians. No salary attaches to their office. Those chosen are Drs. Edward G. Janeway, Joseph D. Bryant, T. Mitchell Pruden, William M. Polk, A. Jacobi, John Winters Brannan, Richard H. Derby, L. Emmet Holt, Alexander Smith, Francis P. Kinnicutt, and Henry P. Loomis. Prof. Charles F. Chandler was chosen as consulting sanitarian and Dr. Hermann M. Biggs as medical adviser to the board. Dr. Joseph H. Raymond was appointed Sanitary Superintendent in Brooklyn in place of Dr. Robert Black, resigned. Dr. Raymond served in various capacities in the Health Department of Brooklyn for thirteen years, beginning as vaccinator and rising to be commissioner of health during Mr. Low's two terms as mayor there. Dr. Joseph A. Deghues was promoted from chemist's assistant to fill the place of chemist, made vacant by the elevation of Dr. Lederle. Dr. Edward F. Hurd was named as assistant sanitary superintendent for the borough of The Bronx in place of Dr. Eugene Monaghan, resigned.

The New York State Tuberculosis Hospital.—In his annual message to the Legislature Gov. Odell says that a site for the tuberculosis hospital has been selected and the work of construction will be begun in the spring. Concerning this he says: "Perhaps no work yet undertaken by the Sate presents so many serious aspects as does this. It has been estimated that there are 65,000 persons in the State of New York who are afflicted with tuberculosis. It is our duty, of course, to furnish every protection possible for the health and happiness of our citizens. This departure, however, may lead to the establishment of other institutions, for which the State may be called upon to provide and for which there may be the same claim advanced as by those who are stricken by this terrible scourge. A policy should therefore be defined. Hopeless cases should not be received, and every locality should be interested to the extent of preventing the admission of such incurables to the hospital. This can only be done when each locality is interested through the expense which it may incur in the treatment of these cases. The policy of the State, therefore, should be to provide accommodations and to assess upon each county the actual cost for maintaining each patient from such locality." He recommends that the supervising boards of counties or the common councils of cities should appoint examining physicians, without whose certificate no patient should be received into the hospital.

Reciprocity in Medical Licensure in Michigan.—In the synopsis of requirements for the practice of medicine in the several States and adjoining countries, published in the issue of December 21, it was stated that there was no provision for reciprocity in the Michigan laws. This was an error, and we are informed that in the Chander Medical Act, passed in 1899, there is a clause reading "The applicant shall be registered and given a certificate of registration if he shall present a certified copy or certificate of registration or license which has been issued to said applicant in another State of the Union, when the requirements for registration shall be deemed by said board to be equivalent to those of this act; provided, such State shall accord a like privilege to holders of certificates from this board. The fee for registration from applicants of this class shall be ten dollars."

Meeting of the Ohio Boards of Health.—The twelfth annual meeting of the State and Local Boards of Health in Ohio, will be held in Columbus, Thursday and Friday, January 16 and 17, 1902.

An Army Surgeon Exonerated by Court-Martial, but Reprimanded by His Colonel.—A court-martial recently held in Salt Lake City to try Major Peter R. Egan, post surgeon at Fort Douglas, charged with neglect of duty in failing to give proper treatment to soldiers under his charge, completely exonerated the accused. In spite of this verdict, however, Colonel Sanne, commanding the Department of the Colorado, administered a severe reprimand to Major Egan, asserting that the invalid soldiers in question did not receive the treatment they had a right to expect.

The Woman's College of Medicine in Chicago will, it is said, soon be closed, and buildings and ground sold. The difficulty is said to have been a lack of students, women wishing to study medicine preferring to do so in a co-educational school where their opportunities would be the same as those of male students.

College of Physicians of Philadelphia.—At the stated meeting held January 1, the following officers were elected for the ensuing year: *President*, Dr. Horatio C. Wood; *Vice-President*, Dr. Arthur V. Meigs; *Secretary*, Dr. Thomas R. Neilson; *Treasurer*, Dr. Richard H. Harbe; *Honorary Librarian*, Dr. Frederick P. Henry.

Professor Virchow Injured.—It is reported from Berlin that Professor Rudolph Virchow while alighting from a street-car on Sunday last, slipped and seriously injured his thigh. The cable dispatch does not state what the injury was, but says that it will not be dangerous in a younger man.

The Red Cross Society of Spain has made request to the War Department for information and photographic illustrations of the work of the Medical Department of the Army during the war with Spain, in the Philippines and in China. This society has undertaken the publication of a series of large volumes, elaborately illustrating the resources and operation of the medical departments of the various armies of the world, and it proposes to devote one volume to the humanitarian work performed in the armies of the United States and Spain during the late war. The photographs desired include representations of all arms of the service—cavalry, infantry, artillery, and hospital corps—on the march or in formation. Also photographs of field and base hospitals, hospital ships, ambulances and facilities for transportation of wounded, first-aid work by the hospital corps, etc. It is understood that the War Department is in possession of a considerable number of views of the above character, and will give every assistance to the Spanish authorities in this commendable work on this important subject.

Vital Statistics of Philadelphia.—The last week of the year shows a high mortality for the city of Philadelphia, 476 deaths having been reported for the week ended December 28, as compared with 432 for the preceding week, and with 469 for the corresponding week of the previous year. Among the most conspicuous causes of death were: Pneumonia, 67; pulmonary tuberculosis, 56; heart disease, 39; nephritis, 22; diphtheria, 20; smallpox, 19. There were reported during the week 88 cases of diphtheria, 79 cases of smallpox, 67 cases of scarlet fever, and 45 cases of typhoid fever.

Sanatorium for Tuberculous Patients at White Haven, Pa.—Plans have been completed for a number of cottages to be erected near White Haven, Pa., for the Free Hospital for Consumptives of Philadelphia. Work on two of the cottages is to be begun as soon as the weather permits. One of these will afford accommodation for sixteen patients and the other for twenty-four. It is intended that these shall be used exclusively for women, the men continuing, for the present, to be housed in a large barn on the grounds, which has been fitted up as a temporary sanatorium. The men thus cared for have exhibited most gratifying improvement.

The Alumni Society of Gouverneur Hospital.—A meeting of this society was held on December 21 at the Academy of Medicine. The next regular meeting will be held on the first Tuesday in February.

Obituary Notes.—Dr. JOHN BULL of Benton Harbor, Mich., died on December 29. He was a graduate of the New York University Medical College in the class of 1865, and had practised in Benton City since that time. He was prominent in the public life of Benton Harbor and served one term as Mayor of that city. He was a well-known Knight of Pythias and was the highest ranking member of that order in the world, having been elected Major-General of the uniform rank in 1898.

Dr. JAMES SNYDER MACKIE died at his home in Newark, N. J., on December 30, of apoplexy. He was born in Cincinnati in 1824. He was a graduate of Union College, Schenectady, and was one of the charter members of the Psi Upsilon fraternity of that institution. He received a diploma from the Maryland College of Physicians and Surgeons, and for a time practised medicine in Baltimore, but later retired from practice and was for many years President of the Union Mining Company of Maryland.

Dr. JOHN S. STIGER of Mendham, N. J., died on December 31. He was a graduate in arts of Princeton, and in medicine of the New York University Medical College, in 1849.

Dr. WILLIAM H. WILLIAMS died at his home in Brooklyn on January 4, at the age of eighty years. He was a graduate of the Yale University Medical School in the class of 1847.

Dr. F. EDGAR DOWNEY, a prominent homœopathic physician of Clinton, Ill., died at the Hahnemann Hospital, Chicago, on January 5. He was a graduate of the Pulte Medical College, Cincinnati, in 1879, and at the time of his death was President of the Illinois Homœopathic Medical Association.

Dr. ELIZABETH DARBY committed suicide by shooting herself at Providence, R. I., on January 2. She left a note saying that despair had led her to the act.

Dr. ALLANSO READ, a dentist practising in Copenhagen for forty years, died on December 29. Dr. Read was a native of Pennsylvania, and occupied much the same position in Copenhagen as did the late Dr. Thomas W. Evans of Philadelphia in Paris. He numbered among his clients the royal family of Denmark, the royal family of Sweden, the Dowager Empress of Russia, Queen Alexandra, and many others members of various royal families, diplomats, and other notabilities. He declined to accept a title and other honors and retained his American citizenship.

Dr. GEORGE C. DEVINE died of pneumonia at Philadelphia on December 26 at the age of fifty-three years. He was graduated from Jefferson Medical College in 1872 and entered the United States Navy as an apothecary, serving in this capacity for four years. He had been a police surgeon for the last twelve years.

Correspondence.

FLOATING KIDNEY.

To the Editor of the Medical Record:

Sir: Last Thursday night, December 26, I took part in the discussion of Dr. A. H. Goelet's paper entitled, "Some Points in the Diagnostic Palpation of Prolapsed Kidney," at the section on Obstetrics and Gynecology of the New York Academy of Medicine. But owing to the time limit I did not say all I should have said. Therefore the remarks I have made may convey a wrong idea. I would therefore request you to publish in conjunction with the report of your stenographer the following: My remarks are based upon the experience of 661 cases which I have seen during the last ten months in my department of the Austro-Hungarian Hospital. Four hundred and ninety-eight cases were females, and 163 cases males. Of the females about 80 per cent. were palpated, of the males possibly only 40 or 50 per cent. My records show the following: Of the 498 females there were 137 cases of prolapse of the kidneys, or 27.51 per cent.; of the 163 cases of the males there were twelve cases of prolapsed kidney, or 7.36 per cent. Of the 498 cases in females there were seventy-six in which the right kidney only was prolapsed—15.26 per cent.; four cases in which the left kidney only was prolapsed and fifty-six cases in which both kidneys were prolapsed—11.24 per cent.; in one case only nephroptosis is entered without further defining. Of the 163 males (palpated possibly only 50 per cent.) there were two cases of ptosis of the right kidney only, two cases where the left kidney only was prolapsed; in seven cases both kidneys were in that condition, and in one case only nephroptosis is mentioned. My method of examination is: the patient lies on a couch, half way on the right side for palpation of the left kidney and half way on the left side for palpation of right kidney. In the examination I hold one hand in back and one in front—both hands being opposite one another. We feel for the kidney with the hand which is on the abdomen at the height of the short and deep inspiration, at the same time attempting to press with the hand behind the ribs and the structures in front of them forward, toward the palpating hand. In nephroptosis of the first and second degrees the palpating hand in front will feel the kidney flapping upward at the end of inspiration and our hand will distinctly feel the lower pole of the kidney. In nephroptosis of the third degree, where the entire kidney is felt coming down and both poles are palpable, the two hands feel the kidney; in quite a good many cases the hand on the back of the patient feels the kidney better than the one in front. As nephroptosis of the fourth degree, the usual floating, movable kidney is understood. Outside of this recumbent posture I occasionally palpate while the patient stands, or stands and leans forward, and, if I am not mistaken, I have also used the genupectoral posture. In suspected and difficult cases every known method should be used, so also Dr. Goelet's method. But I fail to see how Dr. Goelet's method could detect a nephroptosis of the first and second degrees, when only the lower pole—as in the first, and a larger part of the lower segment of the kidney, as in the second—is palpable. As to the symptoms attributed to nephroptosis by Dr. Goelet, I would say that all the cases that I have seen came to me consulting about their stomach troubles, which was no imagination, so that the presence of all the gastric symptoms enumerated by Dr. Goelet is correct. But to the question of whether a nephroptosis of the first, second and third degrees produces symptoms I will answer decidedly in the negative, unless the kidney itself is pathologically affected. Only the nephroptosis of the fourth degree, the floating kidney, gives symptoms which I have seen mistaken for uterine trouble, for neuralgia, for hysteria, for rheumatism, etc. The symptoms of the floating kidney can be summed up as those produced by pressure upon the circumlying structures and those produced by traction of the prolapsed kidney. As to the treatment. In my cases a well-fitting abdominal supporter has proved quite successful. An operation for the fixation of a prolapsed kidney might be good, but we are sure to try other methods first. In my cases I advise, besides the well-fitting abdominal supporter, a good corset, that is a corset with plenty of whalebone—not steels, which soon rust and break—which is to be worn right over a snug-fitting, thin undershirt (the snug fit is to prevent wrinkles). The object of the corset is not to produce the "fine figure," but to bear all the lacings of drawers, petticoats, and skirts. The corset must be so laced as to produce no pressure upon the stomach.

Mark I. Knapp, M.D.

136 East Seventy-eighth Street.

THE TECHNIQUE OF VACCINATION AND THE DANGER OF THE SHIELD.

To the Editor of the Medical Record:

Sir: Never have there been so many vaccinations in Boston and suburbs as during the last two months. Shields have been in almost universal use by the physicians, and very much irritation has been caused by them, in some cases septic infection. The simplest way of doing a given thing is the best, provided the result is the same.

For many years I have pursued the following course in vaccination and have yet to see a bad result, although some cases have "taken severely." I use the capillary tubes; drop the virus on the arm in the usual place; sterilize a needle in the flame of a Bunsen burner, and thoroughly scratch in the virus; let it dry for ten minutes, and then wipe dry with sterile cotton.

It is not necessary to wash the arm before vaccinating, unless the dirt is obvious, any more than it is necessary to wash the lobe of the ear before puncturing it for a blood examination. Neither is it best to scarify the arm before dropping on the virus. It saves both patient and physician to drop the virus first and scarify but once. If the arm is wiped dry with sterile cotton after vaccination, the blood serum dries at once, making nature's best shield. The patient is then instructed not to scratch or bathe over the vaccination.

I have seen a number of septic arms from the use of shields, especially where adhesive plaster was used. In one or two cases I have seen them all afloat with pus under the shield. The shield makes a bunch under the clothing, presses on the inflamed area, causing irritation.

As the shields are constructed, it is impossible to sterilize them, therefore they serve only as a source of infection and irritation.

If there is a discharge from the vesicle, I dust on aristol and compound stearate of zinc. In some cases of injury to the arm, where there is too much discharge for the powder to absorb, I cover the vesicle with a sterile sponge made of gauze. I think the shield a mere fad which will soon pass away. Charles A. Dennett, M.D.

Arlington, Mass.

RELATION OF THE DISPENSARY TO THE HOSPITAL.

To the Editor of the Medical Record:

Sir: The honest administration of charitable help for the sick poor is one of the most important of our acknowledged difficulties in the management of human affairs.

The abuse of free medical service by those able to pay for it being primarily a wrong against the medical profession, the remedy must come from the profession itself; that legislation is unable to cope with this question is shown by the daily farce encountered in the various clinics of the city, where abortive charity is administered, accompanied by the threat of fine and imprisonment.

Besides the large number of so-called walking dispensary patients who daily receive fraudulent treatment, there is the equally important, though not so frequently dwelt upon, class who, gaining entrance through the outdoor departments to the hospital wards, there obtain from the house and visiting staffs such medical or surgical treatment as their cases demand.

The medical man does not like the word advertise applied to his endeavors, but what else shall we call his efforts, by his writings, his published statistics, or his sectional medical society work, to bring his name before the world through the medium of his professional friends? I must therefore point out as a great first cause of unworthy occupants to hospital beds this selfish motive on the part of the visiting staff to secure material.

The medical man of ripe experience who secures the coveted appointment to the visiting staff of a hospital goes in with many ideas for the betterment of existing conditions. Weighing this matter too among the rest, he falls and will rather please his masters, the lay managing board of directors, by presenting reports of large numbers of patients handled than finish treatment. He thus leaves many behind with his expired term of yearly service.

What practitioner of medicine or of surgery has not lost pay patients through this maw of some hospital?

To determine where the patient came from, and who had the previous medical care of him, is of as much importance as are the diseases of his ancestry.

By acting only in conjunction with the previous medical attendant in some instances patients will be lost to the hospital, but I would show unto those who, having authority to order investigation of their ward-bed occupants, lack the stamina that in sapping thus the life of the profession they destroy themselves, like Sampson in the fall of the house.

FREDERIC GRIFFITH, M.D.

805 MADISON AVENUE.

THE PAST WORK OF THE PATHOLOGICAL INSTITUTE.

TO THE EDITOR OF THE MEDICAL RECORD:

SIR: In your issue of November 30, 1901, Professor Hyslop of Columbia University entered a protest against the destruction of the work of the Pathological Institute by the present Commission in Lunacy. Dr. M. Allen Starr of this city has seen fit to carry his reply to Professor Hyslop's charges to the daily press—the New York *Times* of December 9, ult. In replying to Dr. Starr, it seems proper to bring back this issue where it belongs—before scientific men in general and the medical profession in particular.

From the positive statements and the tone of authority it is evident that Dr. Starr appears as the mouth-piece of the present Commission on Lunacy.

I think it just to give Dr. Starr an opportunity of stating the evidence whereon he bases his condemnation of the organization and scientific work of this institute.

I challenge him to substantiate and make good his statements, that "the work done by the institute in the past three years had been wholly unsatisfactory to all those who are looking for some scientific efforts at reaching the pathology of insanity." Also, that "no facilities were afforded in it [the institute] for the instruction of the assistant physicians in the asylums;" that "much money was wasted by securing a laboratory in one of the most expensive public buildings of the city, 1 Madison avenue, when far greater facilities could easily have been secured at no expense at the Wards Island Asylum; and that "the character of the work being prosecuted for the past two years" was "experiments in thought transference, in crystal gazing, in hypnotism, in clairvoyance, and in the study of occult phenomena of a certain psychological interest, but of no relation to the pathology of insanity."

Dr. Starr, as a man of recognized authority, and as spokesman for the present Lunacy Commission, is in duty bound to come out, without evasion or shifting of issues, and substantiate his *ipse dixit* statements, his arbitrary charges, against the work of the institute.

IRA VAN GIESEN, M.D.

NEW YORK, January 4, 1902.

SANITARY REGULATIONS IN LIBERTY, N.Y.

TO THE EDITOR OF THE MEDICAL RECORD:

SIR: In your issue of December 28, you take editorial notice of certain reports circulated recently in the New York papers. These reports claim, in substance, that Liberty is waging a crusade against consumptives.

In the interest of truth, and in justice to our community, as well as out of consideration to the unfortunate health seeker, I wish to state briefly the facts in the case. In 1897 our Health Board passed a law prohibiting the maintenance of sanatoria in our village. Within the last four months an attempt was made to operate surreptitiously a sanatorium within the village limits. It was a sort of a branch to an out-of-town hospital. The Health Board promptly served notice on the manager that it must be closed. It was closed at once; no fine being imposed. This is absolutely all there has been to give color to the torrent of malicious and libelous reports so persistently circulated recently in the New York papers. These reports, following so closely on the heels of the closing of this insignificant concern, leave little doubt in the minds of our citizens as to the instigators of the libels. In the history of Liberty only four persons have ever been fined for expectorating. It is unnecessary, the law regarding it being generally observed.

So far from waging a crusade against consumptives, Liberty is offering every possible inducement to attract this class of people. As she has done in the past, so will she do in the future—welcome all health seekers with open arms and with every consideration of humanity.

J. L. C. WHITCOMB, M.D.

LIBERTY, N. Y., January 6, 1902.

Dr. L. E. Northfleet's Article.—By a ludicrous typographical error, Dr. Northfleet, in his interesting article in the issue of December 21, is made to say that he controls the fœtal head by pressure behind the mother's arms, instead of *anus*. His real meaning was obvious, however, by the context.

Progress of Medical Science.

Boston Medical and Surgical Journal, January 2, 1902.

The Treatment of Placenta Prævia.—Frank A. Higgins believes it to be clearly demonstrated, on a study of the conditions, that under modern methods of treatment and reasonable aseptic precautions, the mortality from placenta prævia is not over 10 per cent. in general, and under favorable circumstances, in skilful hands, it is below 5 per cent.; that abdominal section is rarely ever indicated, that it does not, even in favorable cases, hold out promise of better than 10-per-cent. mortality; that its risks are much greater, and in unfavorable cases its mortality is prohibitive. In his opinion, the only cases of placenta prævia in which cæsarian section is ever justified, are those at full term, with central implantation of the placenta, with a rigid os, and when seen before the occurrence of any severe or dangerous hemorrhage, the mother and fœtus being in good condition.

Rendering First Aid in Railroad Wrecks.—Lucien Lofton proposes that every system of railroad should be equipped with a chief surgeon, and local surgeons distributed judiciously along the line most convenient to the road's hospitals. Every member of the train crews should be drilled quarterly, or oftener, if necessary, in the art of rendering first aid to the wounded. The question of hemorrhage should be the cardinal feature of the entire scheme. The location of the vessels, and the method by which they may be controlled in case of laceration, are features on which too much stress cannot be laid. The manner of bandaging, looking toward preventing infection and preservation of the parts which may be mangled, is of vital consideration always. The cry of the railroad surgeon is, "Death was due to shock." True, but hemorrhage from lack of appliances and immediate attention will cause this condition in 90 per cent. of all cases. If bleeding be prevented, shock in this particular will practically become an obsolete term.

Traumatic Apnœa or Asphyxia.—H. L. Burrell reports the case of a man who had been caught between an electric car and a door post and held there for fully three minutes before the car was moved, when he fell unconscious. His chest had been compressed anteroposteriorly. When first seen, he was still unconscious, pulse 100, weak, but regular; respirations 30, shallow, with a groan at the beginning of each expiration. Several ribs were fractured. The most striking feature of the case was the condition of the man's skin. From the level of the third ribs, upward over the neck and face and into the scalp, the skin presented a dusky, bluish, mottled appearance. In the eyes there was considerable conjunctival hemorrhage and minute retinal hemorrhages. This condition was at first thought to be cyanosis, but as the color was not all over the body, as it did not disappear on pressing the skin, and as it persisted, even after the patient's general condition improved, it was evident that cyanosis was not the cause. Treatment for shock was given, consisting of nitroglycerin $\frac{1}{25}$ grain, atropin $\frac{1}{60}$ grain, and strychnine $\frac{1}{15}$ grain, subcutaneously, with ice cap to the head and heaters to the body. At the end of four hours' consciousness returned, after three days the patient was relatively comfortable. Eight days after the accident the blue color began to fade, and was practically gone three days later.

Journal of the American Medical Association, Jan. 4, 1902.

The Nature and Histopathology of the Epipharyngeal Tonsil.—N. H. Pierce presents the following conclusions: (1) The tissue composing adenoids has a wide distribution throughout the body. (2) The epipharyngeal tonsil is an organ normally present in all individuals. (3) Its function is at present unknown. It may be an evolutionary vestige or have to do with metabolic or other processes. (4) Its wide distribution in the animal kingdom, embryological connections, identity with lymphoid structures elsewhere, all suggest that it has a function. (5) Experiments suggest that it has an internal secretion. (6) The relation to it of tuberculosis, syphilis, and scrofula is not etiologic.

Living on Bread.—A. Haig gives several tables of uric-acid-free diet and calls attention to some common dietetic errors. He says: Eat when you are hungry and drink when you are thirsty; and if you go beyond this you are certain to suffer; but to introduce unnecessary uric acid and then try to wash it out with unnecessary water is to pile suffering upon suffering, even to the destruction of life itself.

He calls attention to the physiological necessity for diminishing meat and increasing relatively breadstuffs as one grows older. He notes that breadstuffs form a very convenient diet for those who are moving about the world, for they can be procured most anywhere and can be conveniently carried about. These cereals have been the foods of mankind in the past, and they are still the foods of the great majority, and only in parts of a few countries where flesh eating has been carried to great excess, have they fallen somewhat into the background. But here, as elsewhere, the majority are right, and the minority pay an enormous price for their unnatural but stimulating food. Among the flesh eaters, disease and death are rampant, the natural term of human life is but rarely attained, and even the shortened life is too often rendered both useless and miserable.

The Proper Management of the Tuberculous Lung.—Norman Bridge advises putting the lung at rest by general quiet and the introduction of nitrogen gas into the pleural cavity. Deep breathing is not always beneficial and advice thus to breathe should not be given recklessly. Everything should be done to encourage fibroid inclusion of the focus of disease. Chest gymnastics do tuberculous patients no good. Altitudes do not help by greater expansion of the air vesicles, but because they increase the number of red blood cells. Increase of pressure within the lungs by breathing through tubes of large inlet and small outlet is harmful. Public speaking should be interdicted in all lung cases. Cough should be minified so far as is consistent with free expectoration of accumulated phlegm, and cough should be made with as little pressure as possible. The crippled lung should be kept uppermost when the patient is recumbent. External fixation by means of adhesive plaster or similar device is most strongly to be commended. The movements of the diaphragm may be greatly limited by an abdominal binder. The author thus summarizes the advantages of immobilization: (1) Considerable relief from useless cough; (2) Increased ease in expectorating; (3) Relief from the annoyance of râles and wheezings, which tantalize some patients into desperate insomnia if not into the grave; (4) Relief of pain in the chest walls; (5) Relief from a sense of fatigue in the chest which so many patients have; (6) Lessening of fever, and consequently improvement in general nutrition and tone; (7) Lessening of danger of hemorrhage and assistance in recovery from its effects; (8) Aid in the healing of cavities, especially small ones; (9) Decrease in the amount of fibrosis beyond what is necessary for a conservative force.

New York Medical Journal, January 4, 1902.

Etiology and Treatment of Bright's Disease.—J. W. Brannan would summarize the treatment in the following directions: restrict protein food, prohibit strong alcoholic drinks, use dilutents freely, especially alkaline mineral waters, and promote the action of the skin and bowels. He regards the most frequent causes of acute Bright's as acute infectious disease and exposure to cold. Clinical histories of a case in a child and of one in an adult are given in detail.

Gelatinous Carcinoma of the Peritoneum, with Metastases in Sternum and Lung.—P. K. Brown and G. T. Brady report the case occurring in a man of sixty-four years. He complained of a slow growth in the size of the abdomen, with emaciation in other parts of the body. The case lasted over a period of seven years. Autopsy showed the mesentery to be occupied by a large deep-yellowish mass, which, under the microscope, revealed thick trabeculæ of dense fibrous tissue, containing but a moderate number of blood vessels, in whose immediate surroundings were to be found lymphocytes in variable numbers. Delimited by this stroma were alveoli of polygonal form, filled with finely granular, and in places thready, mucus. Only in the smallest was an epithelial lining demonstrable. Around the periphery in close rows was a distinct transparent membrane of long palisadal cylindrical cells, with a finely granular protoplasm. The nuclei were large, clear, oval, and situated in the lower third of these cells toward the basement membrane, while, toward the free edge, were seen all transitions of mucoid formation. Many of the cells were of typical goblet form.

Round Ligament Ventrosuspension of the Uterus; Improved Technique.—D. Tod Gilliam thus describes his operation: An abdominal incision three or four inches in length is made in the median line at the usual site between the umbilicus and pubes. The adhesions are broken up and the fundus brought forward. With a finger and thumb or a pair of bullet forceps the broad ligament of one side is seized and brought to the opening. By lifting up the anterior surface of the broad ligament on the tip of a finger applied to its posterior surface the round ligament is brought into view and is picked up, either between the thumb and finger, or with a bullet forceps. Selecting a point an inch and a half from the uterus, a thread is passed under the round ligament, and the ends of the thread are brought out of the opening and secured in the bite of a clamp forceps, which is laid upon the surface of the abdomen. The other ligament is sought for and secured in the same manner. At a point about one inch and a half above the pubes, the peritonæum, muscle, and fascia at one edge of the wound are caught up by a volsella and pinned together, being careful that the edges of these layers are in line. Traction is now made, and, with a small retractor, the skin and superficial fat are drawn in the opposite direction, uncovering the fascia. With a narrow-bladed knife, or better, with the perforating forceps devised for the purpose, a stab wound is made from the surface of the fascia into the peritoneal cavity, the instrument entering one half inch from the edge of the abdominal incision, and passing obliquely downward and outward, emerging on the peritonæum one inch from the edge of the abdominal incision. If the perforating forceps is used, the jaws are separated, and, by an outward movement of the handle, brought into plain view at the large opening. The thread which loops the round ligament is now placed in the jaws, the clamp forceps removed, and the perforating forceps withdrawn, bringing with it the thread and the ligament. If a knife has been used to make the perforation, it is withdrawn and a slender forceps introduced, with which the thread is caught up and the ligament drawn into place. Now, while the ligament is held taut, with its loop end a quarter or third of an inch above the surface of the fascia, a catgut suture is passed through it, including the tissues on either side, and back again, where it is tied. This is cut close to the knot, the suspending thread cut on one side close to the ligament and withdrawn, and the volsella and retractor removed. The other side is dealt with in like manner, and the abdominal incision closed.

Medical News, January 4, 1902.

The Requirements of Modern Surgery.—J. H. Carstens sums up the requirements of modern surgery as follows: (1) A patient brought to the highest stage of resistance to microbic infection and made as clean as possible; (2) An operating room, preferably in a hospital, where everything has been made thoroughly sterile; this includes anæsthetizers, assistants, and nurses; (3) A surgeon who has a mechanical hand, and has received a long and thorough training.

On the Absorption of Alexins by Tubercle Bacilli.—P. A. Levene states that if a given serum loses its alexin on treatment with a living germ, it is safe to say that the serum possesses a bactericidal power over the same germ. So, the presence or absence of alexins in a serum treated with living bacteria could serve as an indicator for the presence or absence in it of bactericidal power over the same bacteria. The writer states that in order to apply this method to the study of artificial immunity in tuberculosis the following questions present themselves for solution: (1) Whether normal sera lose their hæmolytic power on digestion with dead tubercle bacilli; (2) What the hæmolytic power of a given serum would be if treated with living bacilli; (3) If an animal should be found whose serum normally does not lose its hæmolytic power on treatment with living bacilli, would the serum of a tuberculous animal act differently? From his experiments, the writer has learned that there exists a certain "minimum" quantity of dead tubercle bacilli, which it is necessary to add to a given serum, in order to deprive it of its hæmolytic power. Living virulent bacilli added in quantities approximately equal to the "minimum" of the dead bacilli have scarcely any effect on the hæmolytic power of a serum; added in a larger quantity, they diminish this power, but in a lesser degree than do dead bacteria. "Attenuated" cultures act in the same way as the dead germs. When the serum of an animal previously treated with the extract of crushed tubercle bacilli is tested with living virulent bacteria, it loses its hæmolytic power far more readily than does a normal serum.

American Medicine, January 4, 1902.

The Fever of Hodgkin's Disease; Recurrent (Rückfall) Fever; Ebstein's Disease.—J. H. Musser concludes that: Hodgkin's disease is in all probability a lymphatic tuberculosis. Fever, recurrent in type, occurs commonly in this affection of the glandular structures. So-called recurrent fever is a symptom, not a disease. In a few rare instances the clinical diagnosis, when such fever prevailed, was malignant lymphoma (Pel), sarcoma (Völckers), myelosarcoma (Hammer), and lymphosarcoma (Remus and Witthower, Seebohn). Ehrlich and Lazarus believe that Hodgkin's disease is a lymphosarcoma, and that the tuberculous process is accidental. Sternberg, on the other hand, has pointed out the differences, and insists strongly upon the tuberculous as *the* process giving rise to the adenitis of Hodgkin's disease. He believes that the symptoms are different from those of other forms of tuberculosis, the anatomy of the gland having much to do with the process. The writer agrees with the conclusions of Sternberg.

A Case of So-called Malignant (Staphylococcus) Carbuncle of the Upper Lip Followed by Pyæmia.—Wm. B.

Wherry reports the case of a barber twenty-three years old, who, about a week before his admission to the hospital, had extracted a "dead hair" from his upper lip. A few hours later, the lip became red and began to swell. The symptoms increased and a few days later paroxysms of pain in various parts of the body occurred. When the man was first seen, there were a few crusts on the lip with pus under them. The patient died on the second day after admission. Smears made from the lip showed cocci in groups. The heart's blood also showed cocci which occurred singly, in pairs, and in clusters. In the pleural exudate were staphylococci, long and short, streptococci, diplococci resembling pneumococci, long and short bacilli, and a branching thread fungus. Cultures showed a pure growth of staphylococcus pyogenes aureus from the lip, heart's blood, pleural exudate, lung, liver, and spleen. Carbuncle is a disease of microbic origin, the most frequent microorganism found being the staphylococcus aureus.

Nature and Treatment of Gout and Rheumatism.—B. E. Hadra believes that both of these diseases are due to the same causes. They have their origin in damages of the body periphery, and so are surface disorders. The injurious forces are both telluric and atmospheric. The latter are both thermometric and barometric in nature. The best known are chilling, freezing, getting wet, exposure to draughts, to high altitudes, etc. The most injurious factor seems to be the combination of cold and wet. After the damage of the different tissues and organs of the skin, the injury frequently extends to the subjacent structures. Following this a toxic condition of the body fluids develops. This perverts the function of some or all of the most important organs. The author believes that the nature of the deposits in these diseases depends more upon the degree and nature of the destructive processes and upon the difference of the affected tissues than upon an excessive amount of uric acid in the body fluids. The treatment will have to be both preventive and curative. A dry and moderately warm climate is the best. The body surface should be exposed as often as possible. Sun baths and walking barefoot may be beneficial. The cases of general malaise so often seen, are due to the injury of a large area or the whole extent of the skin. The writer believes that acute and chronic kidney diseases are often due to local chilling. The best and most effective means to improve the vitality and function of the skin which admits improvement is the judicious use of cold water.

Philadelphia Medical Journal, January 4, 1902.

The Propagation of Yellow Fever by Mosquitos.—W. C. Gorgas reviews the sanitary work accomplished in Havana in the last few years and gives his reasons for believing that yellow fever is propagated by means of the mosquito. He believes that the result of the work done there in the last year is a very strong argument, at least so far as Havana is concerned, that the stegomyia mosquito is the only carrier of yellow fever, and that all cases there are transmitted in this way and in no other. In Havana, this fever never disappeared under any process before the American occupation; and for the past two years there has always been some yellow fever in Havana. As study of this subject went on the writer became more and more convinced that the mosquito theory was the correct one, and so last June the rigid quarantine of the patient was stopped, and the disinfection of fabrics and clothing ceased. It was only required that the patient be reported, his house placarded and screened, and a guard placed to report on general sick-room sanitation and to see that the patient was kept properly screened. By September the last focus was gotten rid of, and since September there has not been a single case. So in October and November, months in which before this time the disease was extremely prevalent, there has not been a death from this cause, nor even a case. The conditions have been as good this year as they ever were for the spread of the fever. And probably there have been more non-immunes in the city than ever before. The writer believes that it has been demonstrated that the disinfection of fabrics can be safely done away with, and many of the inconveniences of personal quarantine abated.

Rheumatic Fever and Its Counterfeits.—Sir Dyce Duckworth declares that all forms of arthritis or joint disease are the result of some infection, the only exception being gout. Arthritis which is independent of injury is always of an infective nature. He then speaks of various forms of arthritis: Postinfluenzal arthritis is very clearly infective. Scarlatinal arthritis is generally of a pyæmic character and illustrates a disease due to a mixed infection. Gonorrhœal arthritis is, of course, due to gonococcus. Dysentery is sometimes followed by arthritis. After cerebrospinal meningitis, arthritis which belongs to the pyæmic class may occur. In days gone by puerperal arthritis was seen. As a result of osteomyelitis or acute necrosis of bone, blood poisoning is produced by the distribution in the blood current of streptococci and staphylococci. All of these agencies may give rise to joint disease resembling rheumatism. Gout has often been confounded with rheumatism. In gout the ordinary treatment for rheumatism does not do much, if any, good. The perspiration in rheumatism is known by its rank, sour smell. In pyæmia and pyæmic arthritis, there is a peculiar mawkish sweet odor to the breath which is characteristic of that condition. In typhoid fever, scurvy-rickets, and relapsing fever, there are sometimes pains which may suggest rheumatism. But the greatest number of mistakes are made in the cases of osteo-arthritis. Four out of every five cases of true rheumatic fever are promptly relieved by salicylate-of-sodium treatment. There are a few exceptions to this rule. Osteomyelitis should be treated surgically. It is only the acute cases of osteo-arthritis which are apt to be confused with true rheumatic fever. As to pyæmia, there are almost always rigors, which in rheumatism are extremely rare. The number of joints which are affected should also be remembered and the fugitive character of the pains which pass from one part to another quickly in rheumatism—this will also aid greatly in making the distinction between rheumatism and pyæmia.

The Lancet, December 21, 1901.

A Case of Epidemic Diarrhœa in an Infant Treated by Irrigation of the Bowel.—W. B. Bennett reports the case, his patient being an infant of seven months. The usual purges, opiates, bismuth, etc., given by the mouth proving of no avail, the bowel was flushed with a solution of permanganate of potassium in hot water, about twelve ounces being used. The result was most beneficial, and the child made a good recovery.

A Case Illustrating the Effects of Pressure on Early Syphilitic Growths.—Basing his opinion on clinical observation, A. Shillitoe believes that (1) Pressure, as seen in the case of a phimosed prepuce, and (2) No pressure at all, as in the posterior third of the dorsum of the tongue, exert an equal influence in determining the formation of ordinary-looking papillomata; whereas, if the pressure be intermittent, as seen in the anterior two-thirds of the tongue, the inner aspect of the thighs, and the sides of the scrotum, or in the natal fold, then these papillary hypertrophies assume a condylomatous form.

Note on a Case of Purpura.—T. E. Sandall reports the case of a girl of fifteen years who complained of severe pains in the calf of the leg and popliteal space on both sides, but had no other symptom. The pain recurred at intervals, was considered rheumatic, and seemed to yield to the salicylates. Again it recurred, this time with greater severity, and was accompanied by a purpuric rash and a moderate fever, with some œdema of the legs and feet. Finally recovery ensued without any special treatment. The author confesses his ignorance as to the cause at the bottom of such attacks. There was no antecedent rheumatism in the history of the patient, and he is somewhat skeptical as to the value of the rheumatic theory of the causation of purpura.

Some Observations on Certain Trophic Hindrances to Bony Growth.—Heather Bigg has analyzed some 600 cases of infantile paralysis with reference to the point named in the title of the paper, and divides them into three groups.: (1) Cases in which the trophic hindrance continues during the whole period of bodily growth up to adult age, and in which the difference in length between the sound and the affected limbs continues progressively to increase during that period; (2) Cases in which the hindrance lasts only for a time, after which both the sound and affected limbs continue to grow at the same rate, and the then existing difference between the two remains stationary; and (3) Cases in which, after the hindrance has lasted for a time and then ceased, the affected limb tends to catch the sound one up in growth, and in some rare instances actually does so, so that the difference between them is either diminished or even extinguished. The first group represents a distinct minority of cases. The amount of loss in length varies and may be anything between three-quarters of an inch up to three inches, and even in rare cases more than this. The rate of hindrance to growth is generally even—that is to say, the heightening that has to be added to the shorter limb in order to keep the iliac crests level is superadded by regular increments during growth. Even with this trophic hindrance considerable motor recuperation may take place; and though from this it is clear that the trophic and motor changes bear no absolute relationship to each other, yet it is likewise a fact that the cases in which the original motor incapacity is the severest are generally those in which the trophic hindrance also becomes most marked, this probably being so because a more insuperable stretch of spinal cord has been (cicatricially?) involved. In the second group, if, for instance, a child is attacked at two years of age, and the heightening necessary to keep the pelvis level is added by increments of an eighth of an inch (that being my usual fraction of measurement), these additions are at first rapid and regular, then less so, and finally, at perhaps the age of ten years, when the difference in the limbs may have reached from five-eighths to seven-eighths of an inch, no further addition is ever needed to be made. In brief, it would seem as if the trophic blocage in the spinal cord became gradually permeable and finally cleared. In the third group, the process seems somewhat analogous to those common examples in girls in whom one breast will develop some time before the other, and yet the latter when it starts will catch up with the other, and both will finally be of the same size. Bigg is inclined to attribute the improved results of later years to the fact that the affected parts are no longer kept in rigid apparatus, and while under such conditions easy walking became, by such means, immediately possible, all muscular movement was precluded, and, as a consequence, no motor stimulus was ever sent through or against the block in the spinal cord. But nowadays the rightful treatment is afforded by giving the paralyzed muscles only the exact amount of elastic assistance which they require, and in the effort of walking and balancing the trophic and motor blockages in the cord tend to clear. The consequence is that not only does the trophic hindrance frequently terminate, but in a large number of instances the motor power is gradually restored from the thigh downward.

British Medical Journal, December 21, 1901.

Angioneurotic Œdema of the Tongue.—Thos. F. Raven saw this case. The patient was a woman of eighty-six years in good health. The right half of the tongue was so œdematous that articulation and deglutition were difficult. No other symptoms were present, and no previous attack had occurred. She was a little weak and indisposed for a few days. Later, there was a more extensive attack.

Pneumococcus Arthritis with Notes of Seven Cases.—Nathan Raw concludes from his extensive observation of pneumonia that the pneumococcus is capable of producing very serious lesions in other parts of the body than the lungs. In 817 cases of pneumonia, arthritis occurred as a complication. This affection in all these cases occurred on the same side as the affected lung. The writer has observed in some cases of pneumonia a slight redness and pain in the shoulder-joint of the side affected, which has subsided with the crisis. The joint affection may either precede the lung symptoms, follow the crisis, or develop intercurrently. In Liverpool, alcohol seems to decide, in great measure, the severity and outcome of the attack. The writer believes in early evacuation of the pus, if it can be reached.

Case of Anthrax in Which the Infection Arose from a Hitherto Undescribed Source.—J. Connal Wilson reports this case of malignant pustule which occurred in a man aged twenty-six years. The patient had worked as a folder of leather in the manufacture of " pickers." A " picker " is that part of a weaving loom which receives into a hole made into its substance, the metal point of a shuttle at the end of its flight across the loom, and from this hole the shuttle is thrown back again to the other side. This "picker," then, must be very strong, tough, and yet resilient. It is, therefore, made of untanned hide. It is a common habit for the workmen to chew small bits of the hide. During the 160 years that this business has been established, there is not one other case of anthrax among the workmen on record. It has been said that " pickers " which are unfit for further use are sent to confectioners, who use them for making throat pastilles, jujubes, etc., for invalids.

On Rubella, Scarlatina, and " Fourth Disease."—P. Watson Williams declares that when it can be shown that an attack of " fourth disease " protects the patient from rubella and yet occurs in those who have previously had scarlatina, the evidence of its being a distinct exanthem will certainly be very convincing, but up to this time such evidence is lacking. The main points which, according to Dr. Dukes, serve to distinguish the " fourth disease " from scarlatina are its prolonged incubation, the usual absence of pre-eruptive vomiting, the low pulse rate, absence of desquamation of the tongue about the fourth day, absence of renal complications, and the shorter period of infectivity. The writer asks if it is not possible that some of the cases formerly recorded as " fourth disease " were not rubella and some scarlatina. He cites certain cases of a recent mild milk epidemic of scarlatina, calling attention to one in particular, that answered in all respects to the description of " fourth disease." Rubella occurs in two types, the morbilliform and the scarlatiniform. And it is a striking fact how one or the other type predominates in any one epidemic. But the same thing is true in regard to other infectious diseases. Scarlatina, also, appears in different types. The writer believes that evidence to prove the existence of " fourth disease " is still to be produced.

Berliner klinische Wochenschrift, December 16, 1901.

Morphology of the Typhoid and Colon Bacilli.—E. Saul brings forward studies which are somewhat new in character in regard to the morphology of these organisms. He considers the individual organisms as integral parts of one body or plant. According to this the organisms, when grown in colony formations under given conditions, produce characteristic colonies, or, as the author calls them, "plants." He therefore speaks of "typhoid plants" and "colon plants." He cultivates these "plants" upon agar and gelatine, and by means of formalin preserves them in limited growth for weeks and months. He produces several photographs to show that various bacteria, especially typhoid and colon bacilli, produce under these conditions "plants" which are characteristic of them. He believes that this method is of great service in differentiating organisms when the usual means are of no avail. Especially is this the case with organisms whose characteristics are closely related, such as typhoid and colon bacilli.

Splashing Sound, Atony, and Gastroptosis.—In discussing the relation of the splashing sound to gastroatony and ptosis, L. Kuttner says that it is essential to differentiate between the splashing sound and the so-called stomach murmurs. The first occurs when fluid and air are shaken together in the stomach. Stomach murmurs, on the other hand, are most often heard when very little or no fluid, but a considerable amount of gas, is present, and the patient by muscular power or the examiner by pressure of the hand depresses the epigastrium. Splashing sounds are most easily produced in the horizontal position, and although stomach murmurs may also be produced by the examiner when the patient is lying down, yet in this position the patient himself by muscular effort cannot produce them, but can only do so in the upright posture. Furthermore, in true splashing sounds, when deep epigastric pressure is made with the finger, the presence of fluid in the stomach is appreciated. Stomach murmurs are of no diagnostic importance. The pathological significance of splashing sounds depends upon the length of time that they are elicited after fluid has been received into the stomach. If they are present only shortly after the reception of fluid they possess no diagnostic value. They are of great value, however, when elicited hours after fluid has been taken. Under these conditions a splashing sound produced by superficial pressure is a pathological phenomenon. The appearance of this sound is dependent upon the tone of the stomach muscle and the condition of the abdominal wall. For the production of the sound the position of the stomach is only of secondary importance. The presence of the sound means atonia ventriculi, if it is produced during the time of gastric digestion. If it persists for a longer time than this, motor insufficiency is present. The amount of fluid which remains in the stomach can only be ascertained by the evacuation of the same. If a true splashing sound is present during fasting, it is necessary to wash out the stomach, in order to determine whether parasecretion or motor insufficiency is the cause. Atony of the stomach signifies a laxity in its muscular structure. The same is often dependent upon constitutional causes, and is often only a single expression of an "asthænia universalis congenita." Atony and motor insufficiency are not to be considered as identical. In simple atony the motor function for the usual test meals may be normal, but generally the motility of the organ is slightly reduced. High-grade motor insufficiency in simple atrophy is of short duration. Gastroptosis is often a sequel of atony. Here the functions of the organ may be normal, but this is not usually the case. In gastroptosis the location of the greater curvature cannot be determined by localizing the splashing sound, but can only be ascertained by deep palpation.

Hæmolysis in Heterogeneous Serum.—P. Baumgarten reiterates his assertion that the hæmolytic action of serum is a diffusion process due to osmotic currents. A similar process takes place when red blood cells are introduced into certain anisotonic salt solutions. That this is not, however, the only factor in the hæmolytic action of serum is shown by the fact that hæmolysis is much more active and rapid in serum than it is in such salt solution. Certain substances, must, therefore, be present in the serum, which favor the osmosis. By analogy we know that such is possible, for the addition of traces of acids to anisotonic solutions increases their osmotic power. These substances, which correspond to the "immune bodies" of Ehrlich, are identical with the agglutinins. Ehrlich denies this because in his experiments the serum of goats that had been inoculated with the blood of sheep dissolved the red blood cells of the latter without producing any agglutination whatsoever. The conclusions, however, thus drawn by Ehrlich are erroneous, for it is certain that in these instances the hæmolytic power of the blood is so strong that it completely overshadows the agglutinating power. This may be easily demonstrated by diluting the active goat's serum to which the red blood cells are to be added. By so diluting from four to ten times, it is seen that in every case agglutination precedes the hæmolysis. That the immune body or agglutinin cannot alone produce hæmolysis is proven by the fact that serum heated to 55° C. retains its agglutinating power, but loses its hæmolytic action. That hæmolysis is due to a physical rather than to a digestive process may be amply proven by experimentation. The digestive action of trypsin solutions upon red blood cells is a slow process. Five or six hours are required before any appreciable result is obtained. On the other hand, hæmolysis in heterogeneous serum is completed, at the latest, in two hours. Serum is a fluid that contains substances which produce osmosis, and it is entirely conceivable that the sera of various animals contain different amounts of these substances, and also that the osmotic pressure in the red blood cells of such animals is not the same. The fact that one-half hour heating of the serum destroys its hæmolytic power but not its agglutinating power shows that osmosis is the principal factor in hæmolysis because it is a well-known fact that the heating of osmotic fluids destroys their activity. Sera or other osmotic fluids made inactive in this manner may have their activity restored by adding to them various quantities of osmotic fluids, and in direct proportion as such added amounts are small or large. The addition of hyperisotonic salt solution to serum thus made inactive is able to restore its hæmolytic power, and it is not at all necessary that neutral serum be added. All of these facts, together with the direct microscopical observation of the hæmolytic process in heterogeneous serum, lead to the conclusion that this process is essentially osmotic in character, although the osmosis is undoubtedly facilitated by the presence of certain substances in the serum.

Münchener medicinische Wochenschrift, December 17, 1901.

The Plastic Surgery of Tendons.—A. Hoffa says that plastic tendon operations are not only of avail in the rectification of certain paralytic deformities, but are followed by good results in numerous spastic contractures and traumatic tendon malformations. In order to ascertain the best mode of procedure, he has undertaken experimental work upon dogs and cats. These animals were killed at various times after operation, and by examination the results ascertained. He employed various procedures which involved the shortening and lengthening of tendons and the transplantations of their insertions. As most suitable for operation he selected the tendo Achillis and the tendons of the paw. In the regeneration which takes place the tendon tissue proper, the peritoneum internum and externum, and the peritendinous connective tissue are all concerned. During the first few weeks the newly formed tissue is principally of the connective type, but gradually this is very largely replaced by tendon tissue proper. If sepsis intervenes, connective tissue predominates. Extensive hemorrhage at the time or subsequent to the operation markedly retards the healing process, and materially reduces the chances for satisfactory results.

Disinfection of Tuberculous Apartments.—D. Ottolenghi contradicts the assertion of F. Steinitz that the disinfection of tuberculous apartments with formaldehyde and a 2-per-cent. sublimate solution is efficient for the destruction of the bacillus. His experiments show that a 5-per-cent. solution of bichloride, to which various proportions of hydrochloric acid or sodium chloride have been added, is necessary to produce anything like satisfactory results. Indeed, Steinitz's own experiments show that the method recommended by him is inadequate. Steinitz has objected to the general rules for the disinfection of tuberculous apartments, laid down by Ottolenghi, because the experiments leading to their recommendation were conducted by the employment of paper contaminated with sputum, because twenty-four hours' contact is necessary for complete bactericidal action, and because the saturation of walls, furniture, etc., with a bichloride solution is impractical. Investigations in which carpets, furniture, walls, etc., have been thoroughly saturated with the bichloride solution recommended have amply demonstrated that an efficient bactericidal action is obtained thereby. The fact that twenty-four hour's contact is necessary is no valid objection, for in cases of necessity the apartments may be immediately occupied after the disinfection. The statement that this method is impractical of application is not borne out by facts. In several cities, notably Turin, it has been in routine use for many years. The author has personally made no comparisons between the value of formaldehyde and that of bichloride disinfection, but the work of others, even of Steinitz himself, shows that the former is inefficient when thick layers of dried sputum are present. Many, however, have demonstrated that 5-per-cent. bichloride solutions give satisfactory results, under all conditions.

A New Symptom for the Diagnosis of Cancer.—Leser says that the presence of certain small cutaneous tumors is an important aid in the diagnosis of malignant growths, particularly carcinoma. He describes these tumors as follows: The changes in the skin consist in the appearance of exceedingly small, bright or bluish red spots, which are raised above the surface of the skin and can be readily appreciated by lightly passing the hand over the cutaneous surface. They are sharply differentiated from the surrounding normal skin. As a rule they are present only upon the trunk. Exceptionally, however, the limbs may be affected. They are never found upon the hands or feet. Very often their location bears no relation to the course of the blood vessels or nerves. As a rule they are principally observed over the region where the carcinoma is located. Macroscopical and microscopical examination shows that these tumors are to be considered as angiomas. Whether a direct connection exists between them and the malignant growth has not as yet been decided. In fifty cases of carcinoma, observed by Leser, these cutaneous tumors were present in all but one. Their number varies greatly, but they are usually extremely numerous. From fifty-eight to seventy-six have been observed in single cases. Generally they are more numerous in men than in women. He has examined 300 persons, in order to ascertain their diagnostic value. Many of these persons were affected with carcinoma, and many were, so far as could be ascertained, absolutely sound. It is without doubt true that many healthy individuals, after they pass fifty years of age, show cutaneous tumors similar to those which have been described; but they are much less numerous than those which are associated with carcinoma. It may be stated without hesitation that their presence in large numbers in persons under fifty years of age is highly significant of carcinoma, and is a valuable diagnostic sign. Further observations along this line are greatly to be desired, especially as to whether these tumors are present before the first symptoms of malignant growth appear, and are directly related in etiology to it. Or, on the other hand, are they merely accompaniments or sequelæ of carcinoma? Furthermore, is their disappearance of prognostic value in cases of operative interference?

Deutsche medicinische Wochenschrift, December 19, 1901.

Experimental Glycosuria.—Pavy says that the presence of sugar in the urine can be accounted for in four ways: (1) The non-assimilation by the body of the carbohydrates introduced therein. The body disposes of the carbohydrates introduced by changing them to fat, proteids, and glycogen. Whenever these processes are not intact, or the amount of carbohydrates introduced is too great to be thus disposed of, sugar becomes present in an excessive amount in the blood, and consequently appears in the urine; (2) The abnormal conversion of glycogen into sugar. Here the carbohydrates which have already been assimilated as glycogen are broken down in an abnormal manner. The carbohydrate molecules of the glycogen are separated from the nitrogen molecules without affecting the latter; (3) From the breaking down of proteids and the consequent liberation of sugar. In this form of the destruction of proteids the carbohydrate molecules and nitrogen molecules are equally affected, so that this glycosuria is constantly accompanied by an increase in the nitrogen compounds in the urine; (4) Glycosuria due to the metamorphosis of fat. Such a breaking down of fat takes place in plants, and by analogy it is to be supposed that the same can occur in the animal body.

Gonococci in the Blood in Gonorrhœal Polyarthritis.—Ernst Unger reports a case of gonorrhœal polyarthritis in which a coccus, responding to all the tests for the gonococcus, was obtained in pure culture from the blood taken from the median vein. These organisms were also present in the urethral discharge. The arthritis was at first limited to the left hip-joint and responded well to treatment; when it began to decline, however, the wrist and ankle-joints became affected. The primary attack was apparently due to traumatism. On account of this, and also because the urethral discharge was slight and at first overlooked, it was originally thought that the patient was suffering from an osteomyelitis, especially as the tissues of the thigh were much swollen and very tender. The subsequent detection of the urethral discharge with gonococci therein, together with the presence of these organisms in the blood, settled the diagnosis. In all endeavors to obtain gonococci from the blood three rules should be followed: (1) The withdrawal from the patient of at least 10 c.c. of blood; (2) Marked dilution of this blood in order that its bactericidal properties may be nullified, and the organisms not killed before they are transplanted into artificial culture media; (3) The selection of a suitable *fluid* culture media for the cultivation of these organisms. This is an important point as organisms obtained from the blood grow much more rapidly upon *fluid* than upon *solid* media. When only a few organisms are present in the blood, the chances of obtaining a satisfactory growth are much increased in this manner.

French Journals.

Encephaloid Endothelioma of the Transverse Mesocolon; Ablation.—Albertin showed a very large tumor which was taken from a patient fifty-eight years old. In spite of the uncertain diagnosis, the progressive gravity of the condition of the patient demanded intervention. After the abdomen was opened the tumor appeared. Before it was punctured, it seemed to fluctuate, but after it was opened there was no liquid to be seen in it. The mass was rapidly enucleated by means of cleavage. The interest of this case consisted in the febrile phenomena during the rapid evolution of the tumor, the difficulty of diagnosis, and finally the facility of enucleation. The patient soon died of progressive cachexia. Histological examination showed the growth to be an endothelioma of the peritoneum of malignant nature.—*Lyon Médical*, December 22, 1901.

Infectious Endocarditis and Embolic Aneurysm of the Abdominal Aorta.—Huchard and Bergouignan report their observation of a man twenty-six years old, who for seventeen months had been subject to attacks of fever of malarial type. It was only during his sojourn at the hospital that endocarditis appeared, of which the first manifestation was an embolism of the left popliteal. A systolic murmur was not detected till a few days later. Embolism of the left brachial, infarct of the kidney and of the spleen followed. On autopsy there was discovered a serious vegetative ulceration of the mitral valve, and multiple infarcts of the right kidney and the spleen. But the most interesting lesion was an aneurysmal pouch of recent formation, at the level of the bifurcation of the aorta, adherent to the vertebral column, and prolonged toward the left common iliac, in the form of a dissecting aneurysm. The left common iliac was considerably contracted. This lesion of rapid evolution followed the endocarditis; it came from an infectious embolism, which caused a limited destruction of the internal and middle coats of the aorta.—*Gazette des Hôpitaux*, December 24, 1901.

Tuberculous Lymphadenoma.—Duret concludes that there exists a form of ganglionic hypertrophy, polyadenopathy, especially frequent in the cervical region, which simulates true ganglionic neoplasms, principally lymphadenoma and lymphosarcoma. Microscopical examination and especially inoculation of animals demonstrate the tuberculous nature of this hypertrophy. These tuberculous ganglionic hypertrophies are relatively of slow growth in comparison with the true neoplasms. As a general rule they do not end in suppuration. They are progressive in their development. Now and then, during the course of the disease, there are periods of especially rapid growth which are often accompanied by elevation of temperature. When these hypertrophies are the seat of a secondary infection, the course is rapid. In some cases they are susceptible to retrogression, but they often open the way for the development of visceral tuberculosis. General treatment has only an uncertain action. The extent and multiplicity of the lesions scarcely permits local, medicinal treatment. Extirpation offers the best course. In most cases cure has resulted. It is probable that the majority of tumors called lymphadenomata have a tuberculous origin.—*Journal des Sciences Médicales de Lille*, December 21, 1901.

Tuberculous Infection of the Female Genital Organs.—Simon Duplay and S. Clado classify these cases as accessible and utero-adnexial. The treatment of the first class consists in antiseptic irrigations, cauterizations—either chemical, or by the thermo-cautery—excision by bistoury, or curettage, or in all these measures combined. In tuberculosis of the uterus and adnexa, with ascites, after evacuation of the liquid by laparotomy, a part of the whole of the body of the uterus, together with the adnexa, is extirpated. The extent of the extirpation will depend upon the extent of the lesions. If the disease has extended considerably into the peritoneal cavity, so that cysts have formed in the region of the umbilicus, the purulent cavities should be cleaned out after an incision has been made. The manipulations should be made with the greatest care, on account of the danger of a fecal fistula, the intestine being so friable. The prognosis is always grave. When fistulæ exist—vesico-intestinal, intestino-cutaneous, or intestino-vaginal—it is most difficult to decide upon the course to pursue. Few of these cases profit from surgical intervention, but on the other hand, all succumb to the cachexia when there is no intervention. Especially must the general condition be looked after. The writers conclude by insisting upon the importance of general treatment, which should be begun without delay.—*Archives Générales de Médecine*, December, 1901.

Book Reviews.

Anatomy in Its Relation to Art. By George McClellan, M.D., Professor of Anatomy at University of Fine Arts. 4to, 133 pp. W. B. Saunders & Co., Philadelphia and London, 1901.

The artist of the human figure, be he sculptor or painter, who has no knowledge of his anatomy, is ever guessing at results, but never sure of his ground. Nor will he ever be, until he has mastered those necessary rudiments of bodily construction which lie at the bottom of all true and intelligible delineations of form, posture, and action, whether in speaking bronze or on glowing canvas. It is the reason why, which is the basis of his necessary knowledge of the construction and pose of the human form in all its various phases of physical expression. As the author truly says, "Anatomy for art purposes should never be obtrusive, but it should be sufficiently inclusive to encompass all the necessary analyses of form and position which appeal to the artistic sense. In other words, the superficial, artistic anatomy should give every possible interpretation of motion, form, posture, and proportion necessary for accuracy of execution, as well as beauty of finish and perfection of outline. Professor McClellan has done his best to such ends, and in many respects his work along different lines is quite unique. Especially is this so with the numerous schematic representations of muscular projections under the different conditions of tension and posture of body and limbs. The male and the female figures which represent the studies of the author are not strictly classical, and would hardly be accepted as models; but they represent proportion, and this is probably enough for mere scientific study. The facial expressions are excellent, although the particular muscles which govern them are not made clear, or are not specially differentiated. The author is at his best in demonstrating the various actions of the limb muscles, although in some of the figures there is a trifle more of detail in skeletonizing his sketches than would seem to be warranted. In one or two instances in which the legs are crossed in a sitting posture, the deeper tracings of bone and muscles are somewhat confusing. The descriptive text has been carefully adapted to the wants of the lay reader, and is conspicuously devoid of technical terms. In fact, this portion of the work is beyond criticism, and cannot fail to meet the varied needs of the earnest art student. It is unnecessary to refer to the many illustrations which are scattered throughout the work. All are excellent of their kind, but particularly is this the case with the full-page plates presenting the nude figure in all the varied positions for studio work.

A Reference Handbook of the Medical Sciences, Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A new edition, completely revised and rewritten. Edited by Albert H. Buck, M.D., New York City. Vol. III. Illustrated by chromolithographs and 676 half-tone and wood engravings. New York: William Wood and Company, 1901.

One hundred and forty contributors have furnished the articles in this volume, carrying the work along from "Chloralamid" to "Equinox Spring." Among the more important subjects treated of are: chloroform, chorion, circulation of the blood, cranial nerves, deaf mutes, dermatitis, dietetics of the sick, diphtheria, dislocations, dysentery, the ear and its diseases, eczema, electricity in all its medical applications and relations, and epilepsy. These are only a few of the most prominent articles noticed in glancing through the volume, but almost every imaginable subject falling alphabetically between the limits above noted can be found in the 860 pages of this book. They vary, of course, in interest and in manner of treatment; but in scarcely one of these, to which we have turned in order to test the value of the book as a work of reference, have we failed to find just the sort of information desired, conveyed for the most part in clear, concise language, aided, where necessary, by helpful illustrations.

Circumstance. By S. Weir Mitchell, M.D., LL.D., Harvard and Edinburgh. New York: The Century Company, 1901.

In this story of an adventuress who has wormed her way into the confidence of the head of an old Philadelphia family, Dr. Mitchell has given us one of the best of his happily lengthening list of novels. The tale has to do with the varying fortunes of this adventuress during a comparatively brief portion of her career, and also with those of an eminently respectable and pedigreed family forced for a time into partial subjection to this woman. The story is well told, and the character painting is strong. The meaning of the title is somewhat obscure. None of the actors seems to have been influenced in his or her career or character by circumstance more than most persons are. This adventuress, of course, recalls the immortal creation of Thackeray, although there is really no comparison possible between the two. Dr. Mitchell is not an imitator, and he resembles the chronicler of Becky Sharp's doings only in his eminently masculine division of women into but two classes—the impossibly good and the unrelievedly bad, the saint and the demon. Both Dr. Mitchell and his readers are to be congratulated upon the fact that with each new book his characters are allowed to explain themselves more and more by action, and are less and less forced to make themselves known by talk, good as that talk sometimes is.

The Diagnosis of Nervous and Mental Diseases. By Dr. Howell T. Pershing, Professor of Nervous and Mental Diseases in the University of Denver. 227 pages. Philadelphia: P. Blakiston's Son & Co.

The author says that the object of this little book is to facilitate the recognition of nervous and mental diseases by physicians who are not specialists in neurology. The larger portion of the book is taken up with diagnostic tables based upon the principle of botanical tables, *i. e.* with a "key." The author has probably found them useful for his students and for himself, otherwise he would not have published this volume, as there is no dearth of manuals devoted to the principles of diagnosis and the mode of examination, with which the first part of the volume is concerned. It remains to be seen whether they will be useful to the general practitioner. Despite our desire not to prejudice him, we are of the opinion that such tables are of little or no service to him, it matters not how thoroughly they have been prepared. Nor do we see clearly how such tables will make the fuller knowledge of the best textbooks more readily accessible to the busy physician. That knowledge is just as accessible as it will ever be to him who does not seek it, and it is entirely intelligible to him who knows, or who wishes earnestly to acquire, the first principles of diagnosis.

The section entitled the "Signs of Hysteria" does not do the author credit. Hysteria may be "a diseased condition in which perverted ideas and emotions cause the bodily symptoms," but to say so is pure assumption on the part of the author. It may or it may not be so. Any enumeration of the stigmata of hysteria that does not lay stress upon the abulias, the amnesias, the fixed ideas, the deliria, the modification of character, to mention no others, is very incomplete. The book is written in plain, concise language, and the practitioner who is not read in neurology may peruse it easily; but as we have intimated above, the author's students will probably find it more useful than any others.

Memoirs and Letters of Sir James Paget. Edited by Stephen Paget. London, New York and Bombay: Longmans, Green & Co., 1901. 8vo., pp. 427.

This biography of a great man is in itself a great book. The story of his early life is partly told by the subject himself in his modest, terse, and interesting way, and the after-history by his son.

Much space is judiciously occupied by correspondence covering different periods, and forming a proper connecting link of narrative with the main portions of the work. As each life, when its history is properly told, carries with it a lesson, this one is especially so in the varied incidents which depict the well-rounded character of a man who was ultimately a success after the most patient and painstaking endeavors. It is the old story of hard work and the legitimate reward in the end.

The picture is an interesting one as presented in the artistic finish of detail and correctness of outline. As a biography it is a model of its kind in satisfying the reader with every estimate of the real character and purposes of the subject of the sketch.

In every part there are touches of nature skilfully presented which give just enough of family life to make one acquainted with the individual peculiarities and personal traits of the man we wish to know. In other words, we almost see him now and hear him tell of his early struggles, his deferred hopes, his patient waiting for results, and his final triumph, and the actual realization of his wildest dreams of fame, influence, and power. The study of such lives is an inspiration which can only be appreciated when such a book is in hand, and the reader follows step by step the gradual advance to greatness.

There is much of the early history of St. Bartholomew's Hospital which was so intimately associated with Paget's work, and also of many of his contemporaries. Incidentally also many interesting facts in the same connection bear upon the development of medical teaching, particularly in the direction of pathological research, all of which are interesting and suggestive in view of the advanced methods of the present. But these are of a general import, which, however, have their real interest in the personality of the individual pivot around which the whole story revolves.

The Medical News Visiting List for 1902. Philadelphia and New York: Lea Brothers & Co., 1901.

This is the first of the physicians' diaries to come to our table. It is for thirty patients per week—ample for the use of most of us. The arrangement is practically the same in all of the visiting lists, and this, like the others, contains a number of useful memoranda on the treatment of emergencies, a dose table, therapeutic reminders, etc. A very useful bit of advice with which the book opens is: "Keep your visiting list in such a way that you can fully explain it."

The Medical Record Visiting List or Physicians' Diary for 1902. New York: William Wood & Co.

This visiting list, so long and favorably known to the profession, has been newly revised. The most important changes are in the list of remedies and their maximum doses in both apothecaries' and decimal systems, and the indication of such as are officinal in the United States. It is arranged for thirty or sixty patients weekly, is handsomely bound, and of convenient pocket size.

On Paralysis Agitans; With an Account of the Clinical Features of Other Forms of Tremor. With ten Illustrations. By R. T. Williamson, M.D., London, F.R.C.P. Manchester: Sherratt & Hughes, 1901.

R. T. Williamson, whose previous work on "The Relation of the Diseases of the Spinal Cord to the Distribution and Lesions of the Spinal Blood Vessels" has left a favorable impression, gives in this book of sixty-eight pages a summary of what is known regarding Parkinson's disease, and adds thereto a short discussion of the various kinds of tremor. The clinical description of paralysis agitans is clear and wholly adequate. The author prefers to speak of "fixation" rather than rigidity, "in order to distinguish this condition from true spastic paralysis." The point, though a small one, is well taken, but really there is not much danger of confounding paralysis agitans with spastic hemiplegia or paraplegia. The writer includes an account of Moczutkowsky's sign. If there ever was reason to protest against names in clinical nomenclature, it applies in this instance. There is danger that any one attempting to remember the name would exhibit the symptom—namely, "the patient is told to wrinkle the forehead, and to keep it wrinkled for one or two minutes. The folds persist for forty or sixty seconds after the patient has ceased the muscular contraction." Let us call it "protracted wrinkling of the forehead," and be done with it.

The section on diagnosis is altogether too brief. It is astonishing that an author who is capable of good histological work should not have awaited the opportunity for a post-mortem examination before publishing this summary. As it is, the section on pathological anatomy and pathogenesis merely enumerates the various conflicting theories, and the author is not able to throw additional light on the anatomical basis of the disease, though he seems inclined to favor the theory of its purely cerebral origin.

In the matter of treatment he recommends hyoscine and duboisine. He seems to us to be unduly alarmed regarding the effects of the former drug, for the present reviewer, in common with others, has noticed the relative inertness of the hydrobromate of hyoscine unless given by hypodermatic injection.

The concluding pages on the various forms of tremor constitute a valuable contribution to the differential diagnosis of tremor, and the entire booklet will be found useful by every one who is specially interested in shaking palsy and allied diseases.

The Accessory Sinuses of the Nose, Their Surgical Anatomy and Their Diagnosis and Treatment of Their Inflammatory Affections. By A. Logal Turner, M.D., etc., Surgeon for Diseases of the Ear and Throat, Deaconess Hospital, Edinburgh. With forty plates and eighty-one figures. 8vo, 211 pp. Edinburgh: William Green & Sons, 1901.

This volume is built up on a series of lectures given by the author before the College at Edinburgh, and on an essay on the "Racial Characteristics of the Frontal Sinuses." The various sinuses are first described from the anatomical point of view. Then follow chapters on the openings of communication between the accessory sinuses and the nasal chambers, the comparative anatomy of the frontal sinuses, transillumination, etiology, and pathology of suppuration in the accessory sinuses, diagnosis, and treatment. The chapter on comparative anatomy is most interesting, and has already become authoritative in this field of literature. In the other chapters only familiar ground is traversed, and not much said that is essentially new. Yet the presentation of familiar topics by careful clinicians always advances the sum total of our knowledge. From this standpoint the work of Turner is to be highly commended. The illustrations are unusually clear and the whole setting of the book most attractive. Concerning the much-discussed question of the relation of ozæna to sinus disease, the author states that the relation of cause and effect is still debated. Where sinus disease is associated with polyps, the latter are, in the majority of cases, of secondary origin, and result from the constant irritation to which the mucosa is subjected from the flow of pus over it.

Matthews' Physicians Blue Book. A complete Medical and Surgical Register of the State of Missouri. 12mo, pp. 184. St. Louis, Mo.: Lewis S. Matthews & Co., 1901.

A convenient handbook containing a list of the addresses of the legally qualified physicians and surgeons in the State of Missouri, classified by towns; a list of specialists, hospitals, sanitariums, colleges, and other institutions; State board of health; societies, medical journals, and an abstract of the medical and pharmacy laws of the State of Missouri.

Handbook on Sanitation. By George M. Price, M.D., New York: John Wiley & Sons, 1901.

This little book of three hundred pages relates particularly in its subject matter to municipal sanitation, and contains within a small compass much information which the municipal sanitary inspector is called upon to know. In its particular field it stands practically alone, and hence the reviewer is unable to estimate its merits by comparison with other works treating of the same subjects. About one-third of the book is devoted to a summary of the sanitary principles upon which house ventilation, heating, and the disposal of sewage are carried out, together with a brief consideration of the installation and inspection of plumbing. This part of the book is of such an elementary character as to be of little value for reference by the trained medical man in his work of sanitary inspection, as he should be thoroughly conversant not only with the principles and facts given in Dr. Price's book, but should also possess a much larger fund of information on matters having to do with hygiene and sanitation. The last two-thirds of the book discuss the various phases of sanitary practice as seen in large cities, the qualifications and duties of the sanitary inspector, and the several requirements of the sanitary laws of New York and elsewhere.

The chief defect of Dr. Price's otherwise excellent little work is its too elementary handling of a most important and widely ramifying subject, which cannot be fully treated in the few pages of such a book as the one in question. The author, who is well qualified to produce such a work, should now set himself to the task of preparing a much-needed reference book for municipal sanitary inspectors which shall be so comprehensive in its review of the subject of municipal sanitation, and so complete in its detail, that collateral reading may be largely unnecessary. The book is clearly written and is printed in large type. The quality of the paper used in the book, together with its binding, might be improved upon.

First Aid to the Injured and Sick. An Ambulance Handbook. By F. J. Warwick, B.A., M.B., M.R.C.S., L.S.A., Associate of King's College, London, etc., and A. C. Tunstall, M.D., F.R.C.S., Ed., Surgeon Captain, East London Volunteer Brigade, Bearer Company, etc. Philadelphia and London: W. B. Saunders & Co., 1901.

This little volume is intended to form a handbook for those whose duty brings them in contact with the injured and the sick, often before skilled professional aid is at hand. It contains enough anatomy and physiology to suffice those for whom the work is intended, and its chapters on bandages, slings, and splints are complete and well illustrated, sufficiently so for use by the student of medicine. The control of hemorrhage naturally receives full attention, and all the ordinary methods of treatment are discussed. There is a fairly complete chapter on poisons and the immediate treatment of those who have taken them. The best part of the book is that devoted to the transport of patients, and it will repay perusal. On the whole the work is satisfactory, and of convenient size—an important feature in works on such subjects.

Textbook of Pharmacology, and Some Allied Sciences (Therapeutics, Materia Medica, Pharmacy, Prescription Writing, Toxicology, etc.). By Torald Sollmann, M.D., Assistant Professor of Pharmacology and Materia Medica in the Medical Department of the Western Reserve University, Cleveland, Ohio. Illustrated. Philadelphia and London: W. B. Saunders & Co., 1901.

In the first part of this work the author treats of the preparation and prescribing of medicines, the former being a matter of concern to the pharmacist only, the latter to the physician as well. The second part is entitled "Pharmacology, Therapeutics, and Materia Medica," and is the one of chief interest to the medical reader. The author departs from the usual practice of grouping drugs according to their origin, their therapeutic or their clinical action, and follows the system of Buchheim, in which similar drugs are classed together somewhat on the same principle as that followed in the natural classification of plants. No single action nor the chemical composition determined a group, but those which have the most characteristics in common are classed together. In fact, three directions are given for practical exercise in chemical work and animal experimentation. The appendix contains a number of tables and a description of the methods of analyzing the causes of pharmacological actions. A combined analytical index and dose table completes the volume. For the ordinary student this book is somewhat too advanced, but for the older student and the young practitioner who has the laudable ambition and the leisure to ground himself thoroughly in the science of drugs and drug action, we know of no better work.

A Textbook of Physiological Chemistry, for Students of Medicine and Physicians. By Charles E. Simon, M.D., of Baltimore, Md. Philadelphia and New York: Lea Brothers & Co., 1901.

This is not a book that lends itself readily to review, for the subject of physiological chemistry is one that has been too little studied in the past by students of medicine, and in the older generation of physicians there are, we fear, few who have more than the most elementary notions of the chemical processes upon which their life and health depend. Dr. Simon's book is intended to serve as a textbook and laboratory guide, and is for that reason one that the ordinary physician can study understandingly and with profit, although most treatises on this subject will be unintelligible and profitless to him. In the first part of the work, the author gives a general survey of the origin and chemical nature of the albumins, the carbohydrates, and the fats, and of their decomposition products; in the second part, he treats of digestion, absorption, and excretion; in the third section, he discusses the chemistry of the tissues and organs of the body and of the secretions. We know of no book in which one who would inform himself in any branch of this interesting study can do so more readily than in this, and it is, moreover, admirably adapted for the purpose of a textbook for which it was written.

A Textbook on Diseases of the Ear, Nose, and Throat. By Charles H. Burnett, M.D., E. Fletcher Ingals, M.D.; and James E. Newcomb, M.D. With Numerous Illustrations. Philadelphia and London: J. B. Lippincott Company, 1901.

This volume, which is one of 716 pages, represents the work of three men, whose ability and qualifications for writing on the subjects which they have presented, are well known by the profession to be of the highest order. All are experienced writers as well as practitioners in their special branches of medicine. The book is well printed in uniform type and is fully illustrated. There are 282 illustrations in the text and 14 plates, half-tone and in color, scattered throughout the body of the book. Few of the illustrations are original, but they are well selected and serve their purpose admirably. The work is divided into three parts, namely, Diseases of the Ear, by Charles H. Burnett; Diseases of the Nose and Nasopharynx, by E. Fletcher Ingals, assisted by Otto T. Freer; and Diseases of the Pharynx and Larynx, by James E. Newcomb. Each division of the work is prefaced by a chapter on the anatomy and physiology of the part considered that is quite complete. The text is concise, but sufficiently full to render the consideration of each topic complete. The views expressed regarding etiology and treatment, whether medicinal or surgical, conform with the most approved modern ideas. The measures advised are conservative and can be safely followed. Students will find the work very helpful. It is equally well adapted to the needs of the general and those of the special practitioner of medicine.

Physicians in Germany.—The number of physicians in Germany has increased from 15,764, in 1885, to 27,374, in 1900.

Therapeutic Hints.

Headache of Ovarian Disease.—

℞	Ammon. bromidi	ʒvj.
	Ext. hydrastis fluidi	℥ss.
	Tinct. gentianæ comp	℥jss.
	Aquæ	℥iv.

M. S. Dessertspoonful three times each day.
—SINKLER.

Mercurial Angina may be warded off by washing the mouth and throat before and after each dose. Ulcerations may be healed with a glycerin emulsion of iodoform.
—LIANTS.

Asthma.—

℞	Hyoscinæ hydrobromatis	gr. $\frac{1}{8}$
	Strychninæ sulphatis	gr. $\frac{1}{4}$
	Morphinæ sulphatis	gr. vj.
	Sodii bromidi	ʒvj.
	Liq. potassii arsenitis	ʒij.
	Tinct. digitalis	ʒiv.
	Infus. gentianæ comp.	ad ℥vj.

M. S. Dessertspoonful (ʒij) in water every three hours.
—ESHNER.

The fundamental needs of the patient are threefold: Fresh air; good food; rest. The first two are needed first, last, and all the time; the third, in the beginning all the time, and then coupled with exercise under the direction and orders of the physician.
—J. H. HANCE, *New York Medical Journal*, August 10.

Chlorosis.—

℞	Ferri sulphatis	gr. xxiv.
	Magnes. sulphatis	ʒvj.
	Acid. sulph. aromat	ʒj.
	Tinct. zingib	ʒij.
	Infus. gentianæ comp. vel quassiæ	℥viij.

M. S. One-sixth part twice daily, about 11 and 6 o'clock.
—SIR ANDREW CLARK.

Diuretic.—

℞	Ext. convallariæ	
	Pulv. convallariæ	āā gr. j.

For one pill, to be given morning and night.
—MARTZ.

Acute Colic.—

℞	Chloroformi	ʒjss.
	Tinct. opii deodorat.	ʒj.
	Camphoræ	gr. iv.
	Ol. cajuputi	ʒj.
	Aquæ	℥ij.

M. S. Teaspoonful every hour or two.
—*Practitioner*.

Anti-rheumatic Salve.—

℞	Acidi salicylici	
	Olei terebinth.	
	Lanolini	āā ℥ss.
	Adipis	℥ij.

M. S. Apply in a thick layer, cover with wadding and gutta-percha tissue and retain with bandage. After the superficial epidermis is destroyed, omit the turpentine.
—S. STERLING.

Or,

℞	Ichthyol	ʒijss.
	Water	ʒijss.
	Lard	℥j.

M. S. Apply in articular rheumatism —ARENDT.

In Seasick Vomiting.—

℞	Menthol	gr. ij.
	Cocain. hydrochl.	gr. iij.
	Syr. simplicis	℥j.
	Spir. vini rect.	℥ij.

M. S. Teaspoonful every hour.

Gout.—

℞	Lithii benzoatis	ʒijss.
	Sodii phosphatis	ʒv.
	Tr. colchici sem	ʒijss.
	Aq. cinnamomi	ad ℥iv.

M. S. Dessertspoonful (10 c.c.) two or three times daily.
—BUTLER.

Neurasthenia.—

℞	Iron lactate	ʒij.
	Iron arsenate	gr. iij.
	Extract of nux vomica	gr. vij.
	Extract of gentian	gr. xlv.

S. Divide into 100 pills. Two pills to be taken three times a day.

Dipsomaniac Thirst.—

℞	Tinct. nucis vomicæ	
	Tinct. capsici	āā ♏x.
	Acidi nitrici diluti	♏xx.
	Aquæ	ad ℥j.

M. S. At draught in water three times a day.
—FARQUHARSON.

A Splenic Specific is found in quinine. —LAROCHE.

Home Treatment of Consumption.—As soon as the acute symptoms have subsided, or when they are absent, as in cases that have an insidious or subacute beginning, creosote is prescribed according to this formula:

℞	Beechwood creosote	
	Alcohol	āā ℥j.

M. S. Ten drops in half a tumblerful of milk or water three times daily, an hour and a half after eating. Double the dose every week until the patient comes up to sixty drops pro dosis.
—LEONARD WEBER.

Castor Oil will relieve the irritation caused by sand in the eye.

Muscular Pain is relieved by equal parts of guaiacol and glycerin.
—W. F. CAMPBELL.

Intestinal Antiseptic.—

℞	Sodii sulphocarbolatis	gr. v.
	Potassii permanganatis	gr. j.

At dose after each meal.

Scalp Wash useful in tinea tonsurans and allied conditions:

℞	Sodii borat	ʒj.
	Spir. camphoræ	ʒj.
	Glycerini	ʒij.
	Aq. aurantii flor.	ad ℥iv.

M. ft. lot. S. Apply twice daily.

Furunculosis.—

℞	Sodii boratis	
	Acidi borici	
	Acidi salicylici	
	Acidi tannici	āā ʒj.

M. S. Sprinkle upon the surface of a yeast poultice and apply.

Scleritis.—Avoid irritant applications; bathe the eye with hot water and instil atropin solution; touching the affected area with the actual cautery, or gentle massage through the closed lids, is sometimes beneficial. Syphilis, gout, rheumatism should be carefully attended to. Diet and habits of living must be regulated; and it might be worth while to try change of climate and the use of mineral waters.—EDWARD JACKSON, "Essentials of Diseases of the Eye."

Treatment of Summer Diarrhœa.—W. H. Robey (*Journal of Medicine and Science*, August, 1901) says that the treatment is obviously: (*a*) To cleanse the bowel of the bacteria and their toxic products. (*b*) To give the remaining bacteria as unfavorable conditions as possible for further production. (*c*) To soothe the irritated intestine where the continuance of the condition makes this necessary. (*d*) To support the patient against constitutional symptoms, as fever, nervous irritability, etc., as in other acute diseases of childhood. (*e*) To guard against infection of others by isolation when possible, and by carefully washing the hands after handling the stools, in order not to infect other food and common household articles. Naturally, the small intestine must be cleansed by a purge, and for this purpose calomel 1 gr. was given in $\frac{1}{10}$ gr. doses at half-hour intervals. It has been asked why castor oil was not given, since it has such soothing properties. In treating infantile diarrhœa, especially in dispensary practice, one must try to accomplish as much as possible at the first visit for obvious reasons. The gastro-intestinal tract of the infant being in an irritable state, the oil is more apt to be vomited; whereas, I have never known this result with calomel; in fact, it will allay vomiting should that dangerous symptom be present. Furthermore, castor oil is such a common household remedy that it may have been tried already, while calomel in divided doses keeps the mother busy and aids her patience in carrying out the second important step in the treatment: starvation.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Annual Meeting, January 2, 1902.

CHARLES L. DANA, M.D., VICE-PRESIDENT, IN THE CHAIR.

THE scientific programme was a continuation of the symposium on tuberculosis begun at the last stated meeting.

The Need of Sanatoria for Tuberculosis.—Dr. G. L. PEABODY was the author of the first paper, and, in his absence, it was read by the secretary. Dr. Peabody said that Europe was far in advance of the United States in its recognition of the importance of sanatorium treatment for this disease. It had been estimated that 20,000 tuberculous patients had improved under public sanatorium treatment. All the large cities of Germany had established polikliniks. After remaining in these a short time, the patients were sent to country sanatoria. It was estimated that 75 per cent. of these cases had been restored to health by means of the sanatoria treatment. In regard to the amount of exercise that the tuberculous patient should take there was the widest difference of opinion. Some writers said that exercise was the proper thing, while others advocated rest. All were agreed that life in the open air was essential, together with a climate that did not give rise to sudden changes of temperature. Exercise was contraindicated when the patient had fever. Alcohol and changeable weather were among the most important of the predisposing causes. In Germany the general hospitals were open for the tuberculous patients. Paris had special sanatoria for consumptives, and these patients who showed a slight improvement were sent to the country and given out-door work. The best results were obtained between the years of three and seven. Most of the other large cities of France were taking up this idea, as were also Canada, Sweden, Austria, Germany, and Italy. The percentage of tuberculosis to the total population had been variously estimated in different countries at one-sixth, one-fifth, and one-fourth. Dr. Peabody said that apart from the humanitarian point of view, he thought it would be better to take care of these cases in the early stages, and give them the advantages of sanatorium treatment than to let them become a public burden and care. Those who had seen the monument erected at Liberty to Trudeau knew full well what results he had obtained, and his example should be a stimulus to us all.

Dr. S. A. KNOPF presented the next paper. (See page 44.) At the conclusion of his paper, he introduced the following resolution, action on which was postponed until the next meeting under the rules:

Whereas, The Treasury Department of the United States upon recommendation of the Surgeon-General of the Marine Hospital Service has recently decided to classify tuberculosis as a dangerous contagious disease, thereby placing a stigma wholly undeserved upon every American citizen who is suffering with consumption, be it

Resolved, That the academy considers the exclusion of non-pauper tuberculous immigrants and tuberculous aliens visiting our shores unwise, inhumane, and contrary to the spirit of American justice; and be it further

Resolved, That while the academy upholds the fact of the communicability of tuberculosis, and urges all possible precautions against the spread of the disease from sputum and other tuberculous secretions or from ingestion of tuberculous food substances, the academy is opposed to all measures by which additional hardship is imposed upon the consumptive individual, his family, or his physician.

Dr. HENRY P. LOOMIS said that the crying need of New York was a sanatorium supported by the city. The condition of the tuberculous poor here was well known to physicians. These people applied at one hospital, remained over night, and the next morning were transferred to Bellevue Hospital. At Bellevue they were fed on whiskey for a day or so, and were then sent to Blackwell's Island. Here they remained for three weeks, and were then sent away, only to begin the round again. Dr. Loomis said he knew of one case that had made this round ten or twelve times in one year. What the city wanted was a hospital to accommodate these cases. On economic terms alone the taxpayer should demand such a hospital. The speaker suggested that a large stone building on the Island, which had been vacated by the Manhattan State Hospital, be used for tuberculous patients. The present administration could do no better thing than solve this problem. Four years ago Bellevue Hospital had opened a pavilion for consumptives, and in twenty-four hours it was full. Taking two years as the length of the disease, Dr. Loomis estimated that there were from 20,000 to 25,000 cases of tuberculosis in New York City. During the month of December there had been 427 medical cases in Bellevue Hospital, and out of that number 138 had tuberculosis, or about one case in three. The important feature of the sanatorium treatment was the constant care and attention to the individual case.

Dr. J. EDWARD STUBBERT of Liberty, N. Y., read the next paper. He said that one of the most important factors in sanatorium treatment was diagnosis. It was much more complete than in private practice. At Liberty every case was examined by three physicians. One examined the upper air passages, another used the *x*-ray, and the third made an examination of the excretions in the laboratory. If there was any lack of harmony in the result of the examination, the patient was re-examined. Dr. Stubbert divided the tuberculous patients into two classes, the careful and the careless. The former were much more likely to recover than the latter. It was important to educate these patients how to live hygienically, so that when they left the sanatorium they could teach others how to take care of the sputum, etc. It was necessary to build up the tuberculous cases by food, stimulations, and the like, no known drug being a specific. It was the duty of the State, as well as of the public, to establish sanatoria, but these should be free from politics and under the charge of competent physicians. Such institutions for poor working girls and others of the great middle class were a necessity. If the State did not take such action, some philanthropist should do so.

Dr. LEONARD WEBER said that poor feeding, poor housing, and changeable climate fostered tuberculosis. The great need of the thousands of tuberculous patients in New York City was a sanatorium located near the city. He was of the opinion that State aid would not be sufficient to meet the need. The time had come for the academy not only to discuss this important question, but also to take action. He suggested that the city authorities should be addressed on this subject, and that every dispensary should have a special department for tuberculous cases, in order that the early ones might be recognized, and not only helped, but cured. Sanatoria should be established at once.

Dr. W. FREUDENTHAL said that he thought all could see the necessity of having sanatoria. The use of the building on the Island, as suggested by Dr. Loomis, would hardly be sufficient to meet the demand. The great question was, What could be done for the masses? Climate was very important, but the climate of Liberty or that of Saranac was not the best. Even in Berlin some of the best results had been obtained in institutions in the heart of that city. This was due to the fact that these institutions were in charge of the very best men. He was in the habit of sending his cases of tuberculosis to the Southwest, and he thought that there was only one way to solve the problem, and that was to buy farms. In this way, "tent colonies" could be established to accommodate these patients. Some argued that the tents would be too hot in summer and too cold in winter; but this was not so, as shown by the tent treatment of typhus fever. Moreover, the farms would give the patients an opportunity to work. He did not believe in the rest cure for consumptives. Patients who were given farm work in this way would not be obliged to go back to the crowded cities.

Dr. Alfred Meyer contributed the next paper, which was read by the secretary. He said that we should not be discouraged by the results obtained in the last forty-seven years. In 1855 Peter Cooper and others had formed a society for the benefit of the consumptive poor, and while this society had been short-lived, it could not be said that it had done no good. Even if this city would only take care of all the incipient cases, this would be a great gain for these unfortunate individuals. There were about 8,000 new cases of tuberculosis annually in New York City. Not all of these persons were poor, though it was estimated that about nine-tenths of them were. At the present time, there were 23,000 insane cases cared for by the State, with 4,500 employees, maintained at a cost of about $4,000,000. When it was suggested that the State should care for the insane, it was predicted that the State would become bankrupt. Without any doubt, New York should establish a public sanatorium for the poor.

Dr. E. H. M. Sell opened the general discussion. He said that it was most important to impress upon the patients that it was necessary for their recovery that they remain in the climate in which they had been benefited, for if they returned to their former homes the disease would recur. The speaker mentioned San Antonio, Texas, and parts of Mexico, Colorado, and California as desirable places for tuberculous persons to live. Allusion was made to a patient who had been rapidly failing in the United States, but who had been cured by living in Algiers. The village of the Nile was perhaps the poorest place of all on account of the evils arising from the system of irrigation, still some cases were benefited by living on the water. Good therapeutics was of great importance.

Dr. Edward G. Janeway said that he thought any one who had seen the effect of change of climate upon tuberculous patients could not argue in favor of the city treatment of consumption. The laws governing these changes were not well understood. Some years ago he had himself had a chronic bronchitis, which had persisted for a long time, but upon taking a trip to the western part of the State, the cough had disappeared almost in one day. This was due, he thought, to the climate. Over and above everything else climate had a great influence, and a radical change of climate was very important. One common cause for disappointment was that cases would go to the country, and while there would not have any medical care. Dr. Janeway suggested that sanatoria should be established in the country for the incipient cases, and hospitals in the cities for the more advanced ones. The offense to the neighborhood should be considered, for, here in New York, certain sections were opposed to even a surgical hospital. He felt sure that in time we would have municipal hospitals for tuberculosis, but he was not so certain that it would be this year or the next.

Dr. Louis Faugères Bishop said that he was glad Dr. Knopf had spoken of "phthisiophobia," for he thought this fear was a good thing, as it tended to force the tuberculous cases out of the crowded tenement districts to the hospitals or to the country. Mention was made of a man suffering from emphysema, who had lost his position on account of a cough, and had been unable to get employment until his cough had stopped. The public should be made to understand that persons suffering from tuberculosis should go to sanatoria and stay there. Dr. Loomis was wrong in saying that *all* tuberculous cases were sent to Bellevue Hospital, for there was a ward for consumptives at the Colored Hospital.

Dr. A. Jacobi said that it had been his intention not to speak this evening, but he wanted to call attention to the utter brutality of telling a poor consumptive to go to Colorado immediately, when that person has not enough money to buy needed food. Such unfortunates should be taken care of by the municipality. In this connection, it was well to remember the words of Holy Writ: "Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto Me."

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, December 26, 1901.

A. Brothers, M.D., Chairman.

Tubercular Adnexa.—Dr. L. J. Ladinski presented this specimen, which had been taken from a woman who had given a history of slight dysmenorrhœa. Vaginal examination revealed the presence of a fluctuating tumor on the right side, slightly painful to the touch. It was diagnosticated as an ovarian cystoma. On opening the abdomen, the right side of the pelvis was found filled with a mass and a hæmatoma. The peritoneal surface of the ovaries and tubes were studded with tuberculous nodules. The diagnosis had been confirmed by the pathologist, Dr. Jeffries. The case was especially interesting because of the absence of symptoms pointing to the disease. There was nothing to indicate the mode of infection.

Ovarian Cysts and Fibroids.—Dr. A. H. Goelet presented these specimens which had been taken from a woman, twenty-nine years of age, who had missed one or two menstrual periods. The symptoms were dysmenorrhœa, dyspareunia, and frequent micturition. Operation had revealed a double cyst of the left ovary. Two small fibroids were also discovered and removed. At the first examination it had been difficult to make the diagnosis because of the resemblance to ordinary pregnancy.

Dr. H. J. Boldt presented the following specimens:

Myo-Fibroma of Ovary.—He said that solid tumors of the ovaries were of rare occurrence compared to the frequency of cystic growths. It was said that about 2 per cent. was the proportion of fibroid and fibro-myomatous tumors. In his experience fibroid tumors of the ovaries occurred still less frequently. Histologically they did not differ from similar tumors of the uterus. It was maintained that they did not contain as much smooth muscle structure as uterine fibromata; on the other hand, a number of instances had been described in which stress had been put on the richness of muscular elements. As a rule, such tumors were well pedunculated; they might, however, have an intraligamentous development.

If a boundary line existed at all, the boundary zone merged into ovarian stroma, and the non-participating portion of the ovary then usually showed evidence of chronic ovaritis. The patient from whom this specimen had been obtained was thirty-five years old, and had never been pregnant; she had menstruated regularly, but the flow was of small quantity and of only two days duration. There had been no dysmenorrhœa. She complained of pressure symptoms in the pelvis, constipation, and frequent micturition. Examination showed the pelvis to be filled by a tumor of solid consistency, not painful on pressure. The uterus was pushed upward, was apparently of normal size, and seemingly had no connection with the pelvic tumor. The adnexa could not be palpated. The diagnosis was a pedunculated fibroid of the uterus. Abdominal section revealed a normal uterus and the tumor in connection with the left adnexa. It was pedunculated and was readily removed. No trace of ovarian structure could be seen. The Fallopian tube was but slightly thickened. The right tube and ovary were normal. The neoplasm appeared pale, had a slightly nodular surface, and was of hard consistency. The dimensions were antero-posteriorly 8½ cm., 10 cm. by 17 cm. The cysts, seen upon section, contained albuminous and fatty material. It might be inferred hat they were dilated follicles, were it not for the occasional finding of fat in them. Smooth muscle fibrillæ were abundant in the neoplasm. He had just been informed that the patient had conceived since the operation. It was his belief that occasionally solid tumors of the ovary were reported as fibro-sarcomata, when they were really either fibromata or fibro-myomata.

Two Uteri Removed per Vaginam for Carcinoma of the Corporal Mucosa.—These specimens had been removed from patients fifty and fifty-one years old, respectively. Because of slight irregular bleeding or "spotting" from the genital tract, curretting had been advised: Examination of the scrapings revealed carcinoma. Because of the general condition of the patients, it was considered advisable to perform the operation of hysterectomy as speedily as possible; hence, clamps were chosen instead of the typical ligature method. In one instance, the time taken to complete the operation was four minutes; in the other case, six minutes. The adnexa, not being readily accessible, were left *in situ*. Both patients made uneventful recoveries. In all patients whose physical condition was so much below par that it was important to complete an operation, such as vaginal hysterectomy, the clamp method should receive preference. It was indeed seldom that a hysterectomy, which with ligatures would be exceedingly difficult, requiring from one hour to one and a half hour or more, would take with clamps more than 10 to 15 minutes to complete. From the practical side, he considered the necessity to catheterize patients after clamp hysterectomies a serious objection, because, despite the greatest care used, he seldom saw a patient escape without a more or less severe attack of cystitis. Neither was the convalescence so quick or so afebrile as with the ligature method. He was of the opinion that except in cases like the ones presented, or when there were great technical difficulties, the ligature method should be selected.

Vaginal Hysterectomy for Recurrent Pelvic Peritonitis.—This uterus had been removed from a patient thirty-six years old, who, according to her statement, had been ill more than five years as the result of recurrent attacks of pelvic peritonitis. The uterus was immobile, and the pelvis filled with exudate on either side of the uterus. An abdominal section was proposed, but objected to. The profuse typical, and at times atypical, bleeding from which the patient suffered, and which aided in keeping her in such poor physical condition, must be attributed solely to the pelvic inflammation. In this instance clamps were also chosen, because the difficulties with ligatures, while not insurmountable, would have been very great. Recovery was uneventful. While the patient was not entirely free from pain, her condition had so much improved that, to use her own words, she felt like "a new-born." The exudates had not disappeared entirely.

A Corpus Luteum Cyst(?).—This ovarian cyst presented an ideal condition for conservative surgery. While the intimate agglutination of the Fallopian tube to the cyst did not permit the saving of that structure, it was possible to resect the cyst with but a small zone of the ovary. The cyst was seen to spring from a corpus luteum, so that it seemingly was, so far as the relations were concerned, a corpus-luteum cyst. Whilst this could not be settled until a microscopical examination had been made, the appearance of the cyst would not warrant such assumption, the contents appearing like those of a cyst adenoma. The situation of the cyst excluded the assumption of its being a follicle cyst. The ovary was attached to the uterus by a few catgut sutures.

Dr. Boldt said that he had no faith in the belief expressed by some authors that conception might take place from such conservative surgery. All that it did, in his opinion, was to conserve the menstrual function, which, however, was of such importance that it behooved all to practise it with this end in view whenever consistent. Were it true that conception could take place without the presence of the oviducts, our teachings in this line would necessarily have to be changed.

A Specimen of Somewhat Advanced Extrauterine Pregnancy.—Dr. A. Brothers presented a fœtus and placenta removed from a case of extrauterine pregnancy at the third or fourth month.

A Quack Method of Removing Tumors.—Dr. Brothers also presented a mass of tissue that a woman had discharged after having taken a certain quack remedy with the idea of dissolving and bringing away the tumor. Although the woman thought the detritus discharged was the dissolving tumor, examination showed the growth to be even larger than before.

Dr. S. W. Bandler said that he had only had an opportunity to make a very hasty examination of frozen sections of this tissue. This showed the presence of squamous epithelia and leucocytes, and these findings indicated an inflammatory and ulcerative process; in other words, a desquamation of the vagina.

Prevention of Cystitis.—Dr. H. Lilienthal said with reference to the remarks made by Dr. Boldt on catheterization in certain cases that he had been experimenting with various methods with a view to preventing cystitis in both men and women. Instead of waiting for the bladder to become distended in cases requiring catheterization he had had the catheter passed as often as every three hours. This method alone, by preventing stagnation of urine, often proved sufficient to cure a case of cystitis without resort to washing out of the bladder. In addition to this, he had also made use of prophylactic doses of certain urinary antiseptics, especially urotropin, giving usually four grains twice daily. Owing to faulty technique or the carelessness of nurses, this means of prophylaxis seemed desirable. He had seen no case of severe cystitis since adopting this plan.

Dr. A. Brothers said that he had had a case similar to one of those reported by Dr. Boldt, and had committed the same error in diagnosis, looking upon it as a fibroid of the uterus instead of a fibroid tumor of the ovary. He thought the ligature method was more surgical than the use of clamps, though the latter might be desirable at times.

Dr. Boldt replied that he did not favor the clamps under ordinary circumstances, and under no conditions did he approve of the use of the angiotribe.

Some Points in the Diagnostic Palpation of Prolapsed Kidney.—Dr. Augustin H. Goelet discussed this subject briefly. He was satisfied that prolapse of the kidney had been very much underestimated, and that it had been often overlooked through lack of familiarity with the symptomatology and lack of expertness in abdominal palpation. The gynecologist often overlooked it because of making the examination on the back, or in the standing position after a gynecological examination in the recumbent position. It should be understood that when the organ had been replaced it often remained in good position for some time afterward. A study of his records showed that this condition of prolapsed kidney was found in 25 per cent. of gynecological cases taken at random. If the kidney prolapsed to any extent it would be pressed against the ovarian vein which lay in front of the ureter. When this prolapse was extreme, the dragging on the vena cava probably caused some obstruction in that vein. If this pressure were constant, it would be equalized by a collateral circulation, but, as a matter of fact, it was intermittent.

Symptomatology.—The chief symptoms of the condition were stated to be the following: (1) Chronic digestive disturbances; (2) Unusual fatigue on exertion; (3) Nervousness, restlessness, and insomnia; (4) Palpitation of the heart, vertigo, and syncope; (5) Epigastric pain extending to the left of the median line over the heart; (6) Dragging pain in the loin and down the thigh; (7) Inability to rest comfortably on the side opposite to the prolapsed kidney; (8) Irritability of the bladder; (9) Transient jaundice; (10) Pain in the region of the appendix; (11) Pain in the region of the ovary; (12) Acute attacks of renal colic; (13) Intolerance to pressure of the corsets or clothing at the waist.

Method of Examination.—The patient should be placed before the physician in the standing position against a firm support, and should bend slightly forward. With one hand the loin should be grasped just below the free border of the ribs, and deep pressure made during expiration. With the tips of the fingers of the other hand, placed below and making pressure upward, the kidney could be caught between the two hands. Sometimes the kidney could not be palpated until the patient coughed. When the abdominal wall was unusually rigid or thick and flabby, the palpation of the kidney could be better effected with the patient on the back and the thighs flexed upon the abdomen. A distended colon very frequently interfered with examination, as did also sensitiveness of the kidney and rigidity of the abdominal wall.

Dr. M. EINHORN agreed with Dr. Goelet as to the relative frequency of movable kidney in women, and it should be noted that many of his own cases were not gynecological. Movable kidney might exist without any symptoms whatever, and there were many cases of prolapsed kidney associated with digestive disturbance. The mere prolapse of the abdominal organs he would not look upon as a disease, but it was of interest to the physician because of its tendency to aggravate digestive disorders or other diseased states. To the symptoms already given he would add a disposition to become tired and weak in the back on slight exertion, a dragging sensation, and frequency of micturition. Only the cases of extreme prolapse of the kidney could be detected by the older method of performing palpation with only one hand. He did not think the method recommended this evening was applicable to cases of only the second or third degree. A kidney prolapsed in the first degree was one which could be felt on deep inspiration.

Dr. A. ERNEST GALLANT said that when the prolapsed kidney was tender and not easily replaced, speedy relief would be afforded by rest in bed and massage directed upward along the free border of the ribs. It had been claimed on good authority that the normal mobility of the kidney was from three to five centimeters. What had been said about the number of persons having movable kidney was all right, but nothing had been said about the proportion of those who suffer from the condition. The suffering was certainly not in porportion to the degree of mobility. A kidney in the false pelvis might become adherent there, and still give rise to no special discomfort. A kidney at the waist line would, however, invariably cause distress because of its intolerance to the pressure of the corset. The most troublesome movable kidneys were those which descended only from two to five centimeters. Intolerance to the pressure of the corset or clothing at the waist seemed to him the most important of all the symptoms, though the patient would not generally mention it of her own accord. It would be found that the cord was worn unusually loose, and on inquiry the woman would say that she could not wear a tight corset. Some of the worst cases of jaundice that he had ever seen had been due to movable kidney. He had personally been able satisfactorily to examine the patients standing; but had found it better to place the patient in the reversed Trendelenburg position. With the thumb in front, one could not get up high enough in many cases to reach above the kidney.

Dr. H. LILIENTHAL believed that too much stress had been laid upon the mere presence of movable kidney, though undoubtedly in many cases treatment was demanded. He had noted that the very worst cases of movable kidney were those of acute displacement, the result of traumatism. Such cases could only be properly treated by operation, and if this were done sufficiently early, the best results might be expected. In general splanchnoptosis, if the patient were suffering from the displacement of the kidney, pressure upon this organ would aggravate the symptoms. He was of the opinion that with one hand on the loin and the other on the abdomen, the examination would be facilitated by having the trunk at least erect. It was not always possible when there was a tumor of the kidney to state whether the tumor was connected with this organ or with some of the surrounding organs.

Dr. E. ROSE said that all of the symptoms enumerated by Dr. Goelet he would ascribe to displacement of the stomach, with the exception of pain in the region of the ovary. He had reported three cases in which the displacement of both the stomach and the kidney had been reduced, and had remained so until after a severe illness, when both had returned. It was evident, therefore, that we should not discuss these different displacements separately.

Dr. H. J. BOLDT was of the opinion that that method of palpation was the best which most thoroughly relaxed the abdominal muscles, and for this reason he favored having the patient in an erect posture. He did not, however, believe that the method recommended by Dr. Goelet was the best. It was his opinion that probably not more than 1 or 2 per cent. of the cases of movable kidney required surgical intervention because of the severity of the symptoms thus produced. In a goodly number of these cases he had seen a thickened condition of the appendix.

Dr. M. I. KNAPP said that he had seen at his clinic in the past few months 498 females and 163 males. Of this number, 27.51 per cent. of the females and 7.36 per cent. of the males had prolapsed kidney. Of the females, the right was prolapsed in seventy-six, the left in forty-eight and both in fifty-six cases. He favored examining these patients by the method of Ewald. The patient was placed in the semi-prone position, and the examiner placed one hand at the back and the other on the abdomen. For the first or second degree of prolapse of the kidney he doubted if anything but the recumbent position would enable one to detect it. In the treatment of these cases he advocated the use of the corset made with whalebone, applied snugly but not tightly, and the clothing suspended from it.

Dr. GOELET in closing said that he had been studying the relation between prolapsed kidney and pelvic disease in women, and he cited several cases to illustrate the effect of such prolapse on the production of pelvic congestion. He thought that at least 60 per cent. of his cases of prolapsed kidney had symptoms, and that 50 per cent. demanded operation. When there was difficulty in palpating the kidney by his method, it was a good plan to compress the abdomen between the fingers and thumb of one hand at the free border of the ribs, and then instruct the patient slowly to take a deep breath. On doing this, the kidney would be felt to slip down between the fingers of the examining hand.

The Effect of Passive Congestion on the Formation of Callus.—Anton Bum describes experiments on dogs which indicate that Bier's and Dumreicher's methods of producing passive congestion about tubercular joints or ununited fractures are justified by the actual histological changes produced. The author broke both tibiæ of young dogs, and then applied elastic constriction for an hour and a half daily above the knee on one side. The animals were killed, and sections made on from the twelfth to the thirty-second day later, with the result that in every case calcification and ossification were found further advanced on the side that had been subjected to the congestion. It was principally the periosteal callus that was stimulated, the myelogenous and intermediate callus not being markedly affected.—*Centralblatt für Chirurgie.*

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 23, 1901.

FRANK VAN FLEET, M.D., PRESIDENT.

Osteomyelitis; Its Etiology and Pathology.—Dr. JOEL E. GOLDTHWAIT of Boston, Mass., presented a paper on this subject. He defined osteomyelitis as a suppurative inflammation of bone, due to infection of the bone by microorganisms. According to Nichols, the process had been described as a furunculosis of bone, but the inflammatory process was modified by the peculiar anatomy of bone. In osteomyelitis the process began in the marrow spaces of the bone which communicate freely with one another, so that the process might extend quickly and the products of the inflammation be retained. In a certain number of cases, however, the process might remain local, giving rise for many years to symptoms simulating joint disease. In the spreading variety the streptococcus was usually present, and in the more localized form the staphylococcus. All observers agreed that the staphylococcus pyogenes aureus was usually the organism present. Not infrequently the pneumococcus was the cause, and in such cases the onset was sudden, the invasion rapid, and the seat of the disease usually in the cancellated structure near the epiphyseal line. More frequent than this form was that variety of osteomyelitis usually following typhoid fever, and due to the typhoid bacillus. Keen had collected thirty-eight cases of this kind, in fourteen of which the bacillus had been in pure culture. In long-continued osteomyelitis with open sinuses, various organisms, some of them nonpathogenic, were present. Osteomyelitis, therefore, was not a specific disease, but an acute disease resulting from the invasion of various pathogenic organisms. The disease very commonly attacked individuals whose bones had not attained a complete development; about half of the cases reported had occurred in children between the ages of fourteen and seventeen. The disease frequently followed extreme fatigue and exposure to cold, or occurred subsequently to measles, scarlet fever, or pneumonia. Osteomyelitis often occurred after slight injuries, such as bruises or contusions of the infected bone, even without visible break of the skin. The infection of bone was often secondary to a local infection of some other part of the body, as for example, a furuncle or ulcer; sometimes the infection was secondary to some process, such as pneumonia. Osteomyelitis often appeared to be primary; indeed, in none of the speaker's own cases had it been possible to determine the point of entrance of the organism. Osteomyelitis might attack either the long or the flat bones, though most commonly the latter. It might attack the shaft or the cancellated tissue near the ends. It was almost always on the shaft side of the epiphyseal line. While osteomyelitis was commonly seen affecting the shaft of the bone, it should not be forgotten that it might attack the bones of the spine. A considerable number of persons affected with spinal disease had osteomyelitis of the vertebræ. The laminæ were probably more commonly affected than the bodies of the vertebræ. From a study of the literature, as well as from his own experience, he felt convinced that not infrequently cases of Pott's disease with abscess, which had been reported as cured without deformity, were cases in which there had been osteomyelitis. He had found radiography of the greatest assistance in locating the disease and making an exact diagnosis. A number of radiographs were exhibited in illustration of the different varieties of osteomyelitis.

Its Chemical Aspect; Symptoms and Differential Diagnosis.—Dr. ROBERT TUNSTALL TAYLOR of Baltimore, Md., discussed this part of the subject. The symptoms, he said, were those of a malignant form of progressive sepsis, as Senn had stated. The physical signs were those of septic pyæmias. The premonitory symptoms of apathy, anorexia, malaise, and exhaustion were followed by profound chill, or, in young children, by a convulsion. In this stage of invasion the spleen would be found enlarged, and the intense pain would direct attention to the seat of the local process. The greater the exudation, or the higher the evening temperature, the more intense the pain. Tenderness could be easily detected by palpation, and the point of greatest tenderness usually indicated where the incision should be made. It was usually found near the epiphyseal junction. Deep fluctuation might be slow in development until the inflammatory products had involved the periosteum. At times, the periosteum might be entirely separated from the bone, with secondary death of the underlying bone and an unusual enlargement of the adjacent bone. Forty-one cases of acute vertebral osteomyelitis were on record. The process was most common in the lumbar region. As a rule, in children the epiphysis was a barrier to the extension of the process into the joints. Serous synovitis might occur from circulatory disturbances, and not from extension of the process. Epiphyseal separation might occur suddenly, and even a pathological fracture. Should the patient survive the initial toxæmia of the acute stage, and the abscess find sufficient drainage, there would be a decided abatement of the symptoms, but a moderate fever would persist during the formation of the sequestrum. The differential diagnosis ordinarily presented no serious difficulties. The diseases which were more commonly confounded with osteomyelitis were typhoid fever and rheumatism, though sometimes tubercular joint disease, scurvy, and osteosarcoma were taken for osteomyelitis. Examination of the blood and the determination of the presence or absence of leucocytosis would sometimes assist in making the differential diagnosis. Acute rheumatism never assumed the aspect of a grave septic invasion. Hayem and Osler had called attention to the rapid destruction of the red blood corpuscles in acute rheumatism. The absence of high temperature in tubercular joint disease, scurvy, and osteosarcoma should serve to differentiate them from osteomyelitis. Radiography would, of course, clear up many cases.

Tubercular, Rheumatic, and Other Affections of the Joints; Their Etiology, Pathology, Symptoms, and Differential Diagnosis.—Dr. H. AUGUSTUS WILSON of Philadelphia, Pa., presented a brief paper with this title. He said that Dr. V. P. Gibney had analyzed 596 cases of tubercular joint disease, and had found tubercular disease in the parents in 68 per cent.; and Dr. C. Fayette Taylor had analyzed 845 cases of Pott's disease, with the result that 34 per cent. of the parents had been found to be tuberculous. In old tuberculosis the tubercle bacillus might be destroyed or no longer demonstrable. The apparent triviality of the earlier symptoms of tubercular joint disease often prevented the making of an early diagnosis. Specialists were prone to criticise the family physician for not having made the diagnosis until deformity or abscess had appeared, but the diagnosis was often made with difficulty in the incipiency of the disease. If the statements of the parents of children afflicted with tubercular joint disease could be believed, the greatest share of blame for not making an early diagnosis must be laid upon the hasty examination, or the failure to make any examination, when the case first came under observation. Reflex muscular spasm gave a characteristic expression to the affected joint, and the occurrence of night-cries should always lead to careful investigation. Two serious errors occurred so often as to require mention. One of these was examination of the joint under an anæsthetic, thus eliminating the reflex muscular spasm, and making it easy to inflict traumatism upon the joint. The striking of the heel or the knee in examining for coxalgia was a reprehensible practice, because of the trauma thus produced. The greatest reliance could be placed upon the manner in which the functions of the joints were performed, and this was to be determined by critical inspection and careful comparison with the corresponding joint. The use of immobilization as a means of diagnosis was fraught with danger because of the great liability to an error in diagnosis as a result of the subsidence of the symptoms under these conditions. Much harm arose from endeavoring to consider hip disease with reference to the conventional three stages. These so-called stages were in reality the result of bone disease, and in no sense should be considered a part of it. Recoveries from bone tuberculosis might and should be without external evidence of its existence.

The Mechanical and Operative Treatment of Such Joints.—Dr. A. M. Phelps took up this part of the subject. He said that just as soon as the pain and deformity had been overcome, mechanical treatment with splints should be employed. The object of such treatment was to secure immobilization and to relieve intra-articular pressure. In children, any form of apparatus intended to protect a limb should extend at least two inches and a half below the bottom of the foot, and have a point of impact against the tuberosity of the ischium, preferably by means of a ring. In the treatment of hip-joint disease it was absolutely necessary to have lateral traction, that is, in the axis of the neck of the femur, as well as traction in the line of deformity. After the deformity had been overcome, he used the lateral traction splint, and if properly applied, it would effectually prevent the limb from ever becoming deformed again. As a rule, cases so treated recovered without ankylosis. He wished to lay down the rule that no case of hip-joint disease recovered in less than two years, and that, therefore, the lateral traction splint should be worn for this period of time. After this a walking brace should be worn for at least another year. Occasionally one met with cases of apparent hip-joint disease which recovered within a few months, but these were examples not of tubercular, but of simple inflammation of the joint. For the treatment of knee-joint disease in children there was no brace better than the Thomas brace. In knee-joint disease, traction must also be made in two directions, *i.e.* one longitudinal and the other at a right angle to the head of the tibia. This principle should not be lost sight of when using the Thomas brace. He also made use of the Thomas brace in ankle-joint disease, the ankle being encased in plaster-of-Paris. However, for the adult he preferred a brace which he had devised some years ago. In diseases of the shoulder joint he made use of pads in the axilla and adhesive plaster straps placed around the arm in such a way as to counteract the tendency to drive the head of the humerus into the glenoid cavity. In disease of the spine the same law applied as in disease of the joints of the lower extremity. He favored the use of the aluminum corset. Regarding the treatment of the abscesses connected with joint disease, the speaker reiterated his well-known radical views on this subject. The abscess, he said, should be opened and cleaned out, the joint cavity washed out successively with pure carbolic acid and alcohol. Packing with gauze was a pernicious practice, because it tended to prevent free drainage; it was far better to make use in all these cases of glass speculum drainage. It was especially important, in his opinion, promptly to attack the abscesses of hip-joint disease. Abscesses which had discharged into Scarpa's triangle should not be opened at this point, but by means of an incision along the anterior border of the femur. In dorsal disease, with ulceration, occurring in children, immediate operation was indicated. If the periosteum were left, the bone would be reproduced in over 60 per cent. of the cases.

Dr. A. B. Judson said that he had been looking for a number of years for a short cut in the treatment of osteitis of the joints, and had come to the conclusion that there was none except in those cases which were taken in hand in their very incipiency. It was, however, almost absolutely certain that the patients, if properly treated, would recover. These diseases were, in a sense, self-limited, that is, we might regard as certain the arrival of the time when pain and destruction of tissues would cease, and give way to comfort and cicatricial repair of bones and of the softer tissue. Operations had not shortened the histories of these cases. General improvement of the diet and surroundings were most promising, but in the first rank were to be placed mechanical means which relieved pain and added so much to the patient's ability to take his share of active pleasure and work. Since the general adoption of mechanical treatment the absorption of abscesses had become so common, and their behavior, in general, so harmless, that the question of the behavior of abscesses, formerly so serious, was now of but little moment. It was also interesting to note that remarkable degrees of functional ability were secured, and that as most of the patients were little children, their growth was of great assistance in the treatment.

Dr. George R. Fowler of Brooklyn said that osteomyelitis might present itself as an ordinary acute infection, as a hyperacute infection, and sometimes even as a subacute infection. In some of the cases of the last class it was exceedingly difficult to differentiate them from the ordinary cases of infection of the flat bones. The sternum was perhaps the one most likely to become involved. In his own experience, it had several times happened that a subacute infection of the sternum, in many respects simulating a tubercular process, had finally proved, on exploration, to be either an infection with the staphylococcus aureus or albus; it had rarely proved to be a streptococcus infection. It was well known that in all cases of so-called caries of the sternum considerable difficulty was experienced in securing healing after the incision and curettement, and perhaps the removal of considerable portions of bone. In his earlier experience this had been a matter of considerable difficulty. The older practice was frequently and repeatedly to curette and to pack. Some time ago he had endeavored to make use of Schede's method of obtaining the mechanical advantages of the presence of the blood clot in aiding the formation and proliferation of the vessels, and so facilitating the filling up of the cavity. Occasionally good results had been obtained. Later, he had attempted to secure the formation of clot by thorough curettement and filling of the cavity successively with pure carbolic acid and alcohol. The cavity was then filled with clot. This method had given better results than any other. In the so-called hyperacute cases the most threatening symptoms developed in a very short time. In the ordinary acute cases there was a tendency to become chronic and there was a succession of infections which might continue for weeks or months.

Dr. V. P. Gibney said that he had been delighted with Dr. Goldthwait's lucid paper on a disease whose pathology was so little known, and so very obscure. The subject was of great practical importance, for, in the past many persons would have been spared years and years of suffering had our diagnostic powers in this class of cases been better. He was rather disappointed that Dr. Wilson had said nothing about bovine and human tuberculosis, a subject that might in the near future assume considerable importance in connection with bone tuberculosis.

Dr. Reginald H. Sayre commented upon the wonderfully rapid course of some of these cases of osteomyelitis, and pointed out that it was one of the most prominent points in differentiating between osteomyelitis and ordinary bone tuberculosis.

Dr. Royal Whitman agreed with Dr. Goldthwait that localized subacute osteomyelitis of the spine was not particularly uncommon. These cases were marked by an extremely rapid recovery.

Dr. W. R. Townsend said that if surgeons were called in early to see these cases of joint disease, he thought the general results would be better. It was a distinctly special subject, and did not come within the sphere of the general medical practitioner.

Dr. Willy Meyer remarked that not in all cases of osteomyelitis was the bone swelled; hence, in some instances it was difficult to make the diagnosis without careful search for a point of tenderness. He also pointed out that osteomyelitis of the maxilla was exceedingly common, and was the result of the lack of surgical cleanliness among dentists. It was a distressing truth that very few dentists regularly employ antiseptic or aseptic surgical methods. The speaker also said that he had used Bier's method of treatment since 1893, and thought exceedingly well of it. The method consisted in the employment of pressure by means of an elastic bandage with the object of producing venous stasis. He had found this method peculiarly useful in tubercular disease.

Dr. **W. O. Plimpton** said that he had met with a number of cases of osteomyelitis in which after surgical operation the healing process had not been satisfactory until antisyphilitic treatment had been instituted.

Dr. **Robert T. Morris** raised the question as to why, in cases of osteomyelitis, the bacteria chose for their point of invasion the very home of the phagocytes, and a time of life when the phagocytes were supposed to be the most active.

Dr. **Henry Ling Taylor** said that this evening's discussion showed very clearly that orthopedic surgeons were fully alive to the fact that the basis of all good treatment was a sound pathology.

Dr. **Goldthwait**, in closing, said that he had desired to direct special attention this evening not to the very acute cases, which were usually diagnosticated by the general practitioner, but to the more insidious ones, which were apt to lead to errors in diagnosis.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending January 4, 1902.

	Cases.	Deaths.
Measles	702	25
Diphtheria and croup	286	41
Scarlet fever	265	17
Smallpox	8	2
Chickenpox	46	..
Tuberculosis	235	139
Typhoid fever	45	10
Cerebrospinal meningitis	..	5

The Bacteriology of Schools.—Ernesto Cacace says that the study of the organisms to be found in the dust of schools, though of the highest sanitary importance, has never been cultivated as it deserves, and gives the results of a set of observations made by him in the normal school of Capua. Two sides of the question were studied, the quantitative and qualitative bacteriology of the dust, and secondly, its virulence, when injected into guinea-pigs, with especial reference to the presence of the tubercle bacillus. The organisms identified were as follows: Bacillus subtilis, Proteus vulgaris, Bacterium megatherium, Bac. mesentericus vulgatus, Bac. fluorescens liquefaciens, Sarcina alba, lutea, and aurantiacea, Bac. coli (very abundant and virulent). Staphylococcus aureus and albus. The dust collected at the end of the daily session was always much richer in organisms than that taken early in the morning, while the largest number of bacteria was always found in the room where the kindergarten classes were held. The month of June was found to be particularly favorable for bacterial growth, and this fact points toward the expediency of especial care in cleaning at this season. All of the guinea-pigs injected with larger amounts of the dust died of septicæmia, and Bac. coli and Staphylococcus pyogenes aureus and albus were recovered from their blood. No signs of tubercular or tetanic infection were ever discovered. In view of the susceptibility of the intestinal tract of the child, the presence and virulence of the Bac. coli is of great importance, and this alone should insure the thorough and systematic disinfection of all schoolrooms at regular intervals.—*Centralblatt für Bakteriologie, Parasitenkunde und Infectionskrankheiten.*

The Agglutination Reaction in Infections of Different Grades.—S. J. Goldberg has found that the power of agglutination does not always correspond to the degree of immunity possessed by the animal, and that it is not possible to take it as a measure of the power of resistance. His experiments were made upon rabbits and guinea-pigs, and two sets of investigations are described, one with the B. pyocyaneus and the other with the typhoid bacillus. The normal agglutinating power of the blood of each animal was first determined by repeated examination, and then after infection with cultures of varying degrees of virulence a further set of observations was made. It was found that in fatal infections the agglutination reaction remains unchanged, while non-lethal doses produce an increase in agglutinating power. This property, however, is variable in different animals, and is much more pronounced in rabbits than in guinea-pigs. The reaction gradually increases in intensity, reaches a maximum, and then by degrees returns to the normal again. While immunization is going on against typhoid or pyocyaneus infection, the agglutinating power of the blood increases, but is by no means proportional to the degree of immunity. —*Centralblatt für Bakteriologie, etc.*

The Treatment of Eclampsia.—W. Stroganoff, who is not an advocate of the various heroic operative measures, such as immediate cæsarian section, which have been proposed for this condition, reports that in the past four years out of 9,000 labors he has had over 100 cases of eclampsia. Of this number, six were lost, three owing to complications, and three owing to the extreme gravity of their condition when admitted for institutional treatment. Under the plan of treatment advocated by the author, the attacks rapidly diminish in frequency, the percentage of children saved is large, and the labors progress in a comparatively normal way. Narcotics are to be given as prophylactics after the first attack for a period of twelve to forty-eight hours, the most favorable results being attainable from the combined use of opium and chloral. The greatest attention is to be paid to the lungs (position, nursing, cleanliness of mouth and nose, oxygen, cupping) and heart (physiological salt solution in the rectum, fluids by mouth, digitalis). All excitement must be spared the patient, and delivery be hastened by operative means if the procedure does not endanger mother or child. —*Centralblatt für Gynäkologie.*

Yellow Fever in Bermuda.—Dr. Eldon Harvey, Medical Officer of Health, Hamilton, Bermuda, in his report for the year 1900, makes some interesting remarks upon the connection between mosquitos and yellow fever. He says: "After carefully reading the ancient records and the histories of the epidemics in Bermuda of 1864, '56, '53, and '43, and especially those of 1864 and 1856 in the light of the recent investigations and discoveries in Havana, one is very forcibly impressed by some of the following facts: It was noticed that the disease seemed to follow the course of the wind; mosquitos go with the wind. Many instances of a cessation of the disease with fresh outbreaks some twenty days after can be found in these reports. The marked interval of time between the first cases and the general outbreak of the disease seems to correspond with the time required by the parasite of yellow fever to undergo a definite cycle of development in the body of the mosquito before she is capable of conveying infection. Improvement was shown by fever cases occurring among troops when they were encamped in exposed and windy places. Mosquitos do not like strong wind."

Discharged Soldiers.—From India the British Army report for 1899 reads: There were 968 men discharged in the service as medically unfit for further service, the equivalent ratio being 14.30 per 1,000, which is below the previous year's rate by 5.64, and the average by .48. The principal causes of discharge were: Dysentery, 12 cases, or .18 per 1,000; malarial fevers, 34, or .50 per 1,000; tubercular diseases, 70, or 1.03 per 1,000; secondary syphilis, 154, or 2.28 per 1,000; gonorrhœa, 10, or .15 per 1,000; rheumatism, 21, or .31 per 1,000; debility, 58, or .86 per 1,000; nervous affections, 140, or 2.07 per 1,000; diseases of the organs of special sense, 91, or 1.35 per 1,000; diseases of the circulatory system, 193, or 2.85 per 1,000; diseases of the digestive system, 42, or .62 per 1,000; diseases of the organs of locomotion, 31, or .46 per 1,000; and injuries, 62, or .91 per 1,000.

The Causation of Cancer.—With reference to the article published in the *Lancet*, December 7, by Dr. Braithwaite, claiming that excess of salt was a probable factor in the causation of cancer, another British physician of some note has taken the opportunity in the same journal of December 14 to support this theory. Nevertheless there are no firm grounds for a belief that salt has any effect on the origin of the disease. One contention advanced by Dr. Braithwaite in favor of his statements was that the Jewish race was very much less liable to cancer than the Gentile race, on account of the fact that they consumed no pork, and less meat generally.

This assertion has been contradicted by several authorities. We ourselves do not think that Dr. Braithwaite's views, will bear the test of a close investigation.

Professor Simpson on the Plague.—Professor Simpson, one of the best known authorities on the plague, and who has been sent out by the British Government to India, to conduct a series of investigations bearing on that disease, has contributed to the *Lancet*, December 14, an article dealing with the system of harbor inspection at Bombay. He contends that the manner in which this work is carried out is thorough in the extreme, and could scarcely be improved upon. Professor Simpson also recommends that the Indian treatment of quarantine patients might be with advantage copied by France and Spain, the two nations which complain most bitterly of the ineffective measures used by Great Britain, to check the spread of plague.

Salt and Pepper.—Condiments generally, and especially salt and pepper, have a real and distinct value, outside their use in bringing out the flavor of the food, to which they have been added.

The *Chicago Tribune* points out that in eastern countries the condiments such as pepper, are used to profusion in all foods. Gastric troubles common enough in other countries are conspicuously absent, and the free use of pepper has much to do with the fact. Salt and pepper work against fermentation.

One of the best remedies for a disturbed digestion is hot water, to which has been added salt and paprika. Certainly there is no question that salt is a very valuable constituent of food.

Epoch-making in Typhoid.—The following may be considered epoch-making events in the history of the advancement of our knowledge of typhoid: (1) The hippocratic grouping of typhic diseases in the fifth century, B. C.; (2) The differential description of Galen in the second century, A. D.; (3) The doctrine of contagiousness by Fracastori in the sixteenth; (4) Recognition of the nervous involvement (Willis) in the seventeenth; (5) Nosology based upon morbid anatomy (Röderer) in the eighteenth, and in the nineteenth; (6) Description of the true nature of typhoid by Louis (1829); (7) Its complete differentiation from typhus by Gerhard and Pennock (1837); (8) The discovery of the typhoid bacillus (1880), by Eberth and Koch.—*Maryland Medical Journal.*

The Value of Sanatoria for Consumptives.—Professor E. Von Leyden, writing in the *Wiener klinische Rundschau*, 41, on the recent Tuberculosis Congress, considers that the question of "prevention" was dwelt upon too much, and that not sufficient acknowledgment was given to sanatoria in the treatment of the disease. Professor Leyden was himself one of the first advocates of sanatoria. There were in Germany at the end of 1900, 49 public sanatoria and 16 private institutions, with 5,500 beds, capable of treating about 20,000 patients a year; of these, 20 per cent. are cured, and a still larger proportion receive marked benefit.

Contribution to the Pathological Histology of Leprosy.—Alberto Michelazzi from his researches concludes that the leprosy cell of Virchow is merely a dropsical endothelial cell filled with bacilli, with atrophied protoplasm and nucleus. It is eliminated by the sudoriparous glands, and may be a cause of contagion by that means. In the leprous process there may be the formation of giant cells. If bacilli are found in the blood vessels, there may be profound alteration of the red blood corpuscles with the formation of abundant quantities of pigment. There is a visceral form of leprosy in which the nervous lesions are found only in the cutaneous branches of the nerves.—*Giornale Internazionale delle Scienze Mediche*, 1901.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended January 4, 1902:

SMALLPOX—UNITED STATES.

		CASES.	DEATHS.
California, San Francisco	Dec. 15-22	9	
San Pedro	Dec. 7	1 case, origin Randsburg, California.	
Indiana, Evansville	Dec. 21-28	5	
Kentucky, Lexington	Dec. 21-28	4	2
Louisiana, New Orleans	Dec. 21-28	1	
Maine, Portland	Dec. 21-28	1	
Massachusetts, Boston	Dec. 21-28	27	8
Cambridge	Dec. 21-28	1	
Fall River	Dec. 21-28	1	
Medford	Dec. 21-28	1	
Quincy	Dec. 21-28	4	
Woburn	Dec. 15-21	1	
Minnesota, Minneapolis	Dec. 15-28	22	
Winona	Dec. 15-21	3	
Missouri, St. Louis	Dec. 19	1	
Nebraska, Omaha	Dec. 21-28	20	
New Hampshire, Nashua	Dec. 21-28	1	
New Jersey, Camden	Dec. 21-28	16	3
Newark	Dec. 21-28	20	6
Passaic	Dec. 15-28	4	1
New York, Binghamton	Dec. 21-28	1	
New York	Dec. 21-28	19	4
Ohio, Ashtabula	Dec. 21-28	1	
Cincinnati,	Dec. 20-27	9	
Pennsylvania, Hazleton	Dec. 24-31	11	
Lebanon	Dec. 21-28	35	
Norristown	Dec. 21-28	5	
Philadelphia	Dec. 21-28	79	19
Rhode Island, Providence	Dec. 21-28	1	
South Carolina, Greenville	Dec. 15-21	2	
Tennessee, McMinn Co.	Dec. 15	24	
Memphis	Dec. 21-28	2	
Polk Co	Dec. 15	4	
Utah, Salt Lake City	Dec. 21-28	2	
Wisconsin, Green Bay	Dec. 22-29	10	
Milwaukee	Dec. 21-28	2	
SMALLPOX—FOREIGN.			
Belgium, Ghent	Dec 7-14		5
Brazil, Pernambuco	Nov. 1-30		130
Rio de Janeiro	Nov. 10-24		119
Canada, Halifax	Dec. 21-28	11	1
Quebec	Dec. 15-28	56	
Winnipeg	Dec. 15-21	2	
Colombia, Cartagena	Dec. 9-15		2
Panama	Dec. 16-23	15	
France, Lyons	Nov. 30-Dec.7		1
Paris	Dec. 7-14		8
Great Britain, London	Dec. 7-14	506	29
Mexico, Merida	Nov. 23-30	1	
Russia, St. Petersburg	Nov. 30-Dec 7	4	4
Warsaw	Nov. 23-30		2
Spain, Corunna	Dec. 7-14		1
YELLOW FEVER.			
Brazil, Rio de Janeiro	Nov 10-24		3
Mexico, Merida	Nov. 23-30		1
Vera Cruz	Dec. 14-21	10	9
West Indies, St. Lucia	Dec. 16 Present.		
CHOLERA.			
Java, Batavia	Nov. 16-23	21	15
Straits Settlement, Singapore	Nov 8-16		10
PLAGUE—UNITED STATES.			
California, San Francisco	Dec. 15-22	1	
PLAGUE—INSULAR.			
Hawaii. Honolulu	Dec. 11-14		4
PLAGUE—FOREIGN.			
Brazil, Rio de Janeiro	Nov. 10-24		23
Mauritius, Mauritius	Nov. 28-Dec. 5	52	37
South Africa, Massell Bay	Nov 23-30	5	
Port Elizabeth	Nov. 23-30	1	

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PROGNOSIS: ITS THERAPEUTIC VALUE.*

BY HENRY FREEMAN WALKER, M.D.,
NEW YORK.

THE relation of the physician to his patient has three bearings.

First, he is expected to make a diagnosis of disease. Second, he is asked for a prognosis. Third, he guides the patient on the way to recovery, or smooths the downward pathway to death.

It is of the second division of this triple relationship that I write, as I believe it to be, in some respects, the most important to the patient.

A large and successful branch of our profession ignores the necessity of a careful diagnosis of illness, being content with the symptoms apparent, and regarding them, rather than the changes underlying them, as the object of treatment.

Other sects, not recognized by the medical profession, but increasingly strong in their following, ignore both diagnosis and treatment, and rely wholly on prognosis as the means of relief. To this class belong the Mental and Christian Scientists, Faith Curists, *et id omne genus*. In this course, they are not lacking in worldly wisdom.

Among better educated physicians, one rarely hears the phrase "curing a disease." It is so widely recognized that acute diseases are self-limited, and that the majority of them tend to recovery. The Homœopathists helped markedly in the establishment of this fact by treatment with high dilutions, and the more recent sects go yet further and show that the same results may follow with absolutely no treatment. This demonstration ought to be of value to us. Chronic diseases persist with, perhaps, change of phase, in spite of skilful management, to the end of the chapter. Alleviation is what is there expected as best result. But though a cure is not claimed, the victim can be helped by care and stimulated to self-help by a prognosis which shall give courage.

The inquiry always existing in the mind of the sufferer, and often put to the physician, is: "Am I going to get well?"

A tactful doctor, if he can speak the good word, does not wait for the question, but, as first advice, gives the encouraging answer, and the patient is started healthward by the word itself.

The tendency, aside from keen discrimination, to make a favorable prognosis is partly due to natural temperament. The sanguine man, if a physician, is sanguine with regard to his patient. To another type the reason for making an unfavorable prognosis is grounded on fear that blame will follow if anything disastrous should happen, and its probability be unannounced. Another is due to a yet lower grade of thought. If a patient recover after an unfavorable prognosis, the greater credit will redound to the practitioner.

To this class belong the instances where we hear of the physician saving a patient from typhoid fever or preventing pneumonia. The typhoid fever certainly did not exist, and the pneumonia possibly. But both are sufficiently alarming diseases to make families grateful if they do not develop. Again, it rejoices some patients to have been given up by the doctor and to be able to tell the fact. They think they have outwitted death.

The relationship of the doctor to a patient and to the patient's family is wholly different. It is the physician's duty to give the most favorable prognosis possible to the patient as a part, and the initial part, of treatment. If he errs, let it always be toward the favorable side.

To the family he may disclose his fears, and dwell more on the hazards of the illness, but to the patient it must be hope and assurance.

The consultant or the specialist is always compelled to give a prognosis more definite than the family doctor; he, in people's minds, holds the life or death verdict, and to the patient the effect is often like that of a sentence.

The mental scientists and faith curists, to use a lawyer's phrase, enter a demurrer against disease and the "what-of-it" helps scores of people to recovery.

A reason, on the positive side, for making prognosis favorable is because we can never be sure of one element in any given case, and that is the personal equation, which makes each individual unique. There is as much difference in men, as to vital strength, as there is between the cat and the guinea-pig.

There are stages in all chronic diseases where the only prognosis demanded is that of time. But a habit of toleration is acquired by a sufferer, and an onslaught of illness which would annihilate a robust person is endured by the chronic invalid without disaster.

Two large classes ought never to be given up, even in the physician's own mind—the very young and the very old. The laws of life do not apply to them as they do to those in active life; so little is needed to preserve life in the infant, while the vitality of the very old has already proved so tenacious. As example, during last winter, I saw, with a friend, an old lady of seventy-eight. She had pneumonia of great severity. Though there was extensive solidification of the lung, my prognosis, based on her age and attendant vigor, was favorable. The case progressed to complete recovery. Another, of ninety-one, had an equally good experience. Had they been sixty-eight, I should have felt less confident of the outcome. In all cases of pneumonia of the very aged my expectation of recovery is increased rather than diminished by the very fact of age.

On the other hand, an infant pinched and sunken with an exhausting diarrhœa, with pulse so flickering that one hesitates to move it on its pillow, may rally in a half-hour's drive from its city home to the seashore.

In the chronic diseases of the chief organs of the body, the heart, lungs, and kidneys, a prognosis is often most difficult. We know what the patient will die of, if he only live long enough. But we see many cases where a man has been a victim to disease of one, perhaps more, of these organs, whose taking off is by something radically different.

The man expected to die of Bright's disease has winter cholera, a grippe may take the sufferer with the liver, or an essential fever end the life of the pulmonaire.

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*Read at the meeting of the Practitioners' Society, December 6, 1901.

In such cases, if an unfavorable prognosis had been given early, remaining life would have been made more miserable, perhaps shortened, in fact. The sufferer would have lived a life of terror. If saved that, we do the best to save life.

Every one has had experience with those who wish a frank statement with regard to the condition of the heart, and who fall in a faint if told the truth; and for this reason the popular belief is that heart disease is an essentially fatal disease and followed by sudden death. The prognosis of the life insurance companies has had much to do with this—even more than the collection of items for the daily journals. The insurance companies have rejected so many candidates because of anything the matter with the heart. Of late they have begun to realize that all organic cardiac changes do not indicate diseases that immediately threaten life.

I have a patient who has an imperfect heart from rheumatism. He has slight aortic obstruction and decided mitral insufficiency, but he has a well-hypertrophied heart, which does its work efficiently, and is likely to do so till general vigor declines with age. He, knowing the facts, applied for an endowment policy. The examiner inclined to advise granting the policy, and did so after writing me. I think my friend, a man of good habits, in active professional life, a cyclist and a golf player, runs only the risk of acute intercurrent disease, for the present at least, though, I suppose, he runs more risk than another that the intercurrent trouble may be rheumatism.

Another friend with cardiac distress on slight effort received from his physician, for the time being, a most unfavorable prognosis. His temperament could not bear it. With a greater knowledge of the man's habits I was able to give a better promise, and he is now, after several years, an active man of business. He has learned prudence, but is not a valetudinarian.

In a heart with loud murmurs, but increased size and strengthened beat, so long as the blood stream is retained within its bounds, and there is no show of tissue weakness in the way of dropsy, I think one can always give the patient a good prognosis—that is, a prognosis of continued life. It is death that the sufferer fears most. We can admit disease, but say, "What of it?"

There is the subtler change that gives trouble, when a man has a little discomfort, an annoying dyspepsia, perhaps with slight nausea, some shortness of breath. Then life may be stopped by a sudden effort or a strong emotion. Oftentimes such a man has not had sufficient discomfort to consult a medical adviser.

Among the forms of heart disease, one that gives great discomfort to the patient because of rapid and violent action of the heart, is that due to adherent pericardium. To the doctor's ear the sounds are strangely mixed and confusing. There are all sorts of sounds, and only perhaps when the heart is quietest can a slight friction be detected. I never listen to such a case without being impressed with the heart's action being like that of a bird inclosed in the hand and beating its way to escape.

I believe many of our cases of persistent tachycardia are due to slight pericardial adhesion.

And yet, with all this disturbed action, the prognosis as regards duration of life is good. The heart lasts, though apparently driven by whip and spur.

I have a man now under observation who suffers from this condition. He is past sixty and in childhood; he tells me that in the violent exercise of the playground he would fall exhausted. But he lived, and is not, even now, an invalid, though his heart's action is always violent and erratic.

In children one often finds marked signs of organic imperfection of the heart, which the child not only bears well, but outgrows.

In these cases, the best guide in prognosis is the child's nutrition. If the child continues to grow normally, a favorable prognosis can be given; if general growth is wholly or in part arrested, the outlook is bad.

In chronic trouble with the lungs, fortunately, the most favorable opinion can be given where it is most needed. It is the man who has some remediable disease, who is in most need of cheer. The man, with one lung useless, and the other unsound, is often painfully confident of recovery.

In Bright's disease, I think we should be guarded in our prognosis against unfavorable opinions.

The name, to the laity, carries death in its sound. But there is so large a group of diseases under the one head that discrimination must be intelligent.

The acute forms from the poisons of malaria, grippe, scarlatina, and the progress of pregnancy so often disappear completely that a favorable prognosis is in order there.

And in chronic types it is not necessary to discourage a patient wholly.

In older people, in whom the changes in all tissues have begun to be retrograde, a certain degeneration of the kidneys is to be expected. The presence of a few casts and a trace of albumin, though definable by book as Bright's disease, is not sufficient ground for so naming it to the patient. He would be much more harmed by the name than by the disease. If told that the action of the kidneys is normal for his time of life, he is saved anxiety, while guidance can be given which will aid him. But if impressed with the notion that he has Bright's disease, however slight, he is made an invalid. He will watch his urine, and usually, in spite of treatment, these minor symptoms will persist, while health is impaired by the effort to thwart nature's method of slow change.

A case of Bright's disease which occurred early in my practice made a strong impression upon me. The man was a wealthy brewer. All the habits he had were bad. He had an enlarged liver. He had general anasarca. His urine, heavily albuminous, in the microscopic field was crowded with every discovered variety of casts, and yet this man, relieved by treatment of many troublesome symptoms, but not of the disease, without reform of his habits of life, lived for eight years tolerating the kidney lesions.

This experience, though I name it singly, was to me a revelation of the tolerance of disease, and has ever since been of advantage by giving courage, if not confidence, in similar cases.

Practically, a favorable prognosis does not interfere with proper guidance of the sick man.

If I know that a man who is ill with pneumonia or typhoid fever has essential business to do—perhaps has not made a will, where a will is very important—it is easy to tell him that these things should be done now to avoid accidents, and to have no cause for worry which might thwart his progress toward convalescence. In the same way, the rites, even the extreme rites of the Church, may act favorably. The mind at ease, both body and mind can rally.

I close as I began. Prognosis should be regarded as a part of treatment.

The most favorable prognosis possible should be given the patient, first, because we cannot be absolute in our own knowledge, and, second, positively for the patient's good. We have no right to shorten life an iota by adverse judgment.

THE PATHOLOGICAL AND THERAPEUTIC ASPECTS OF THE EFFECTS OF THE RÖNTGEN RAYS.

By CARL BECK, M.D.,
NEW YORK.

The peculiar integumental changes which manifest themselves in some cases after exposure to the Röntgen rays naturally suggest that they are due to a specific influence. That they are in fact not caused by simple electric discharges, but are of their own kind, needs no further discussion nowadays.

It is only partially explained in what manner this specific influence, sometimes resulting in burns, exerts itself. Analogous to the integumental changes produced by sunlight, heat, caustics, and acids, it is largely dependent upon the strength and the amount of the Röntgen rays. The tissues are influenced differently by different rays, just as the photographic plate is impressed differently by various kinds of light. The sensitized coating of a photographic plate not only reacts the more intensely the stronger and longer it is exposed to the light, but it also shows different impressions, according to the different refrangibility of the rays. Thus the solar spectrum, even in long exposure, scarcely affects that portion of the plate where red is projected, while the blue and violet light leaves intense impressions. Green and yellow light produces stronger impressions than the red. The more refrangible the rays are, the more they are absorbed by the bromide of silver of the photographic plate.

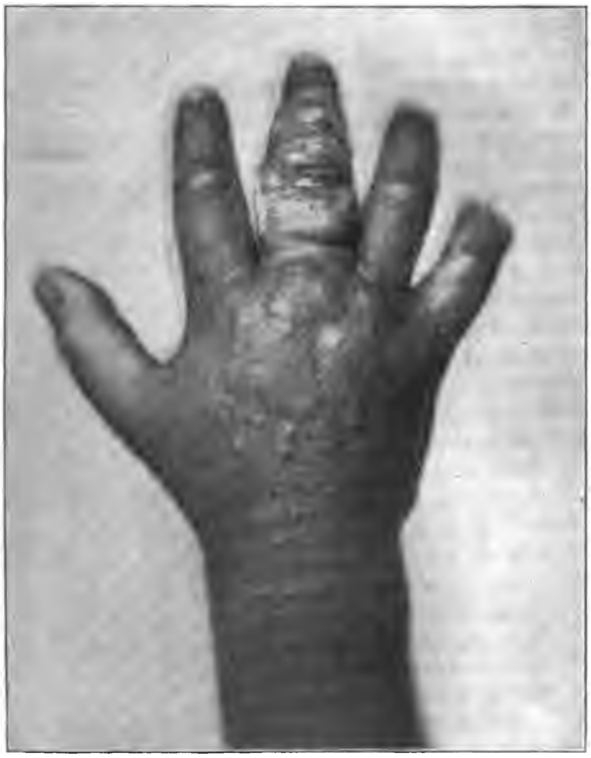

Fig. 1.

By comparing the human integument with a sensitized plate or a fluorescent screen, we learn to appreciate the specific influence of the rays on them.

We may, as in ordinary burns, distinguish three different degrees. The first degree is characterized by the symptoms of hyperæmia. Epidermis and cutis are infiltrated, and their temperature is somewhat higher. Exfoliation takes place in small scales. The most pronounced subjective symptom is a tormenting itch in the skin. Effluvium capillorum, which manifests itself, as a rule, without showing any visible signs in the integument, belongs to the same category. It seems that there is a regressive metamorphosis (atrophy) of the differentiated elements of the skin, viz., the glands, hairs, and nails.

The main feature of the second degree consists in the formation of blisters, the clear or yellowish contents of which lift the corneal from the mucous stratum of the rete Malpighi (Fig. 1). The inflammatory signs are well pronounced, the tension considerable, and the pain intense accordingly. After the removal of the blisters the corium is exposed as a red and sore surface. (Bullous form of Röntgen-ray dermatitis.)

The third and gravest degree is characterized by the escharotic destruction of the irradiated tissues. They show the signs of dry gangrene, and their appearance is brownish-black. If they exfoliate by a slow suppurating process, or if they are removed, as they should be, by surgical interference, a granulating ulcer remains, the cicatrization of which may take months. (Necrotic form of Röntgen-ray dermatitis.)

The most characteristic difference between ordinary burns and the integumental changes produced by the Röntgen light is the fact that the latter do not manifest themselves before the lapse of a period of incubation, as a rule, after about two weeks.

This stage, which we may properly call the latent, lasts about ten days in the simple type of Röntgen-ray dermatosis. Then the integument becomes hyperæmic. At first there is light, later dark, redness, and finally the skin becomes brown and scaled. After a few weeks there is complete recovery. Sometimes slight pigmentation of the integument remains.

In the bullous type of the Röntgen-ray dermatitis, after an incubation of about two weeks, intense reaction takes place. This is of a subjective as well as of an objective character, and lasts about as long as the period of incubation. Then cicatrization takes place. If the area of the irradiation was covered with hairs, depilation occurs. The process of regeneration of the hair is slow. Pigmentation and teleangiectasis nearly always remain.

The necrotic type of the Röntgen-ray dermatitis, as a rule, develops itself a few days later than the bullous form, and requires months for its cure. This type reminds one of the stationary form of gangrene, which is known in Europe as "glacier gangrene." The antediluvian face of the old inspector of the ice-grotto at the Eiger glacier in Switzerland, well known to many medical tourists, affords a study of this interesting kind of tissue change.

At some of this year's congresses I had an opportunity of studying the terra-cotta-like hands of some Röntgophilic colleagues, which presented the chronic type of Röntgen-ray dermatosis. The integument was wrinkled, shriveled, vulnerable, and partially cracked; the nails horny and also cracked, and the phalanges so much thickened that there was tension when motion was exercised. The elasticity was lessened and the sensibility increased. Effluvium capillorum was an invariable companion. Undoubtedly there was a cumulative influence. Fig. 2 illustrates this chronic type of Röntgen-ray dermatosis on a tubercular knee after the twenty-fourth irradiation.

In studying the effects of the Röntgen rays on the integument, and trying to draw conclusions for therapeutic indications—in other words, to understand their physiologic significance, we must begin with a careful clinical observation of the various kinds of Röntgen-ray dermatitis.

The details of the changes which take place in the deeper tissues of the body while permeated by the rays will be considered later. It may be said, however, that a series of clinical signs have been reported, resembling those of sunstroke, as the consequences of moderate irradiation, the predominating symptoms being giddiness, vertigo, palpitation, headache, and vomiting or colicky pain.

But sufficient proof of connection between cause and effect still remains to be furnished. Such reports, indeed, remind me of a tragicomic episode of my school-days. Soon after a demonstration of the Leyden jar, one of our comrades, who had served as a link in the chain of the electric circuit, took sick from colicky pain and diarrhœa after having felt the electric shock. The incensed father appeared, and assailed our good professor, declaring it was an outrage to administer such a mysterious power in a manner so utterly reckless of consequences. *Post, non ergo propter.* The father became pacified when he learned that a few hours before receiving the electric current his son had swallowed three pounds of cherries, with their stones.

In long irradiation, of course, changes of tissue are to be expected.

Since February, 1896, I have made over 10,000 examinations with the rays; among them are nearly 5,000 skiagraphic exposures, and until a few months ago I could pride myself on never having burned any of our numerous patients, some of whom were in a rather precarious state. In my treatise on fractures I reported two cases of effluvium capillorum; in both instances the skull was irradiated often and in short intervals. Both individuals were blond. In one of the cases depilation began after the fifth, and in the second one day after the sixth, exposure. After three weeks complete restoration had taken place. No disturbances of any kind remained.

In spite of the freest manipulation of my armamentarium I was never affected by the rays myself, so that I was inclined to imagine at last that I was blessed with a certain immunity. But one day, after handling powerful tubes in connection with high electric powers, I noticed an intense burning sensation at the dorsum of the right hand, the surface which I used to turn toward the Röntgen tube, while the strength of the light was tested through my own wrist. The burning sensation was accompanied by a most distressing tension, which was intensified by every motion. At first the hand appeared erythematous. Later on it became terra-cotta-like, and then the epidermis exfoliated in small scales, so that it resembled leather (compare Fig. 2). Perspiration ceased entirely. During the sultry days which last summer brought in such an unwelcome number, the distress was especially great; this I would explain from the stimulation which rendered the hardened follicles functionless. I then substituted the left hand for the fluoroscopic control, and protected the right one with a tinfoil glove. The violent symptoms disappeared. Soon, however, the same signs developed at the dorsum of the left hand in a somewhat milder degree, so that I was finally condemned to complete abstention from the Röntgen rays. Since restricting myself to the most necessary manipulations only, and observing a fair distance from the light as long as fluoroscopic control can be dispensed with, no disturbances have been felt by me, and the appearance of my hands is again perfectly normal.

About the same time I observed the first case of the bullous form of Röntgen-ray dermatitis in a man thirty-eight years old, who in the course of two years had to submit to five thoracotomies for pyothorax. In view of the thickened pleura, which lined the immense pyothoracic cavity, I had resorted to pleurectomy, and a few weeks later the Röntgen rays were expected to give information as to the extent of the cavity, as well as of the rib-resection.

At first soft tubes were employed, the use of which gave but little contrast. Although a large pleural portion was removed, still a considerable part of thickened pleura remained. This and the fact that some of the ribs showed signs of osteomalacia veiled the image of the ribs. After having repeated our unsatisfactory efforts seven times, I resorted to hard tubes, which gave a better picture, but at the same time seemed to be responsible for the development of a bullous dermatitis. The incubation had lasted ten days; the skin was light red at first, then dark red. Later on a blister of the extent of a large hand formed, the contents of which consisted of aqueous serum. After the blister was removed an excoriated surface was exposed, which cicatrized under a xeroform-dressing in three weeks. Fig. 3 illustrates the pigmented integument, and indicates the persistence, after two months, of a few teleangiectatic areas. The patient is of blond complexion.

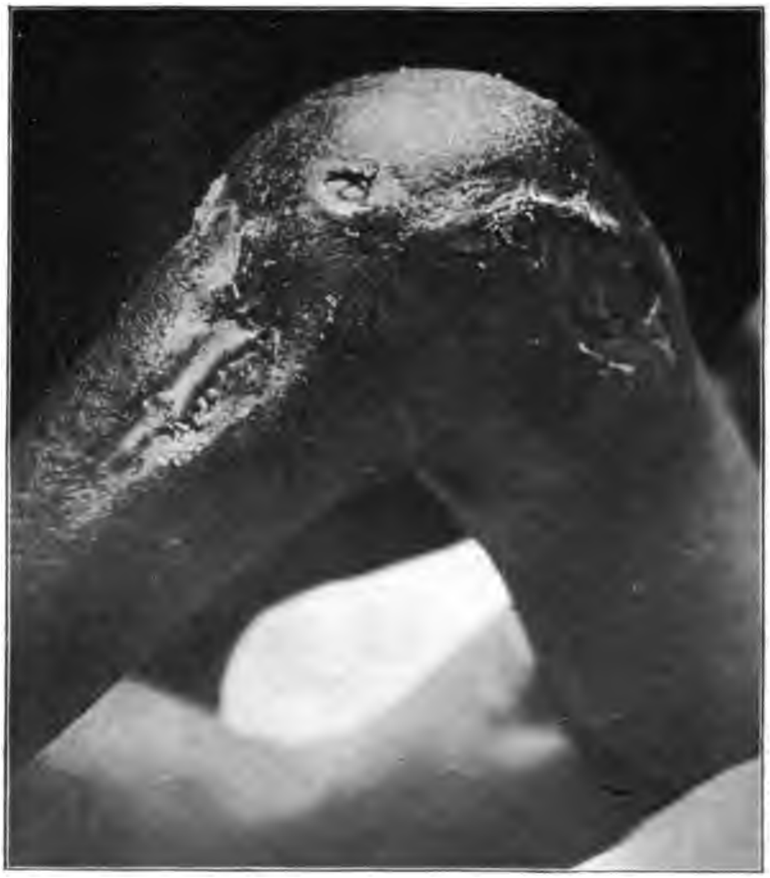

FIG. 2

Shortly afterward the same accident happened in a blond man twenty-five years old, who had suffered from traumatic lung abscess for three years. In trying to measure the various distances of the walls of the cavity, five exposures were made. Thirteen days after the last exposure a blister of the size of a man's palm established itself at the anterior thoracic wall, opposite the opening of the cavity.

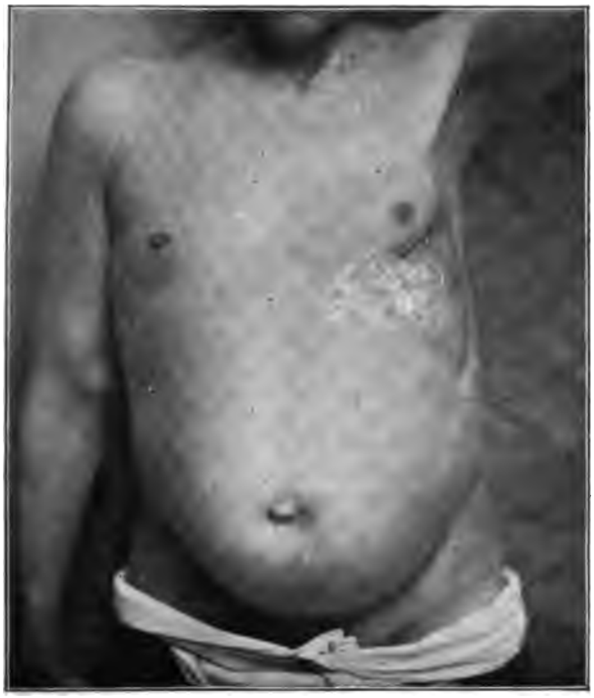

Fig. 3.

The contents of the blister were serum of light-yellowish color. After the opening and removal of the blistered tissues a superficial non-suppurating excoriation remained, which cicatrized under the application of a 10-per-cent. xeroform-lanolin ointment. Fig. 4 shows the excoriated surface three days after the first symptoms of the dermatitis had appeared.

A third case concerned a boy of twelve years, who, after having sustained a fracture of the anatomic neck of the humerus, was irradiated nine times. The difficulty of retaining the small displaced fragment in correct apposition necessitated frequent control, to which I feel justified in attributing the blameless result. Several irradiations had taken place through the thoracic plaster-of-Paris dressing, which had to be used for six weeks. After the fifth week folliculitis developed around the axillary pad. After seven weeks, eleven days after the ninth exposure, the bullous type of Röntgen-ray dermatitis developed at the infraclavicular region to the same extent as is shown by Fig. 4. Recovery was perfect in two weeks. The patient was blond.

In the first two cases, individuals were concerned the vitality of whose organs was lowered by exhaustive processes which had lasted for several years. In both instances suppurating cavities were irradiated with powerful tubes which seem to be apt to impair the resistance of the superimposed structures. In spite of this fact pathologic changes manifested themselves only after many and prolonged irradiations.

In the third case, the long-continued influences of the plaster-of-Paris dressing in connection with the axillary folliculitis were sufficient reasons for the lowering of the vitality of the integument.

Does, in cases like these, an idiosyncrasy exist? This has not yet been proven. Clinical observation makes it probable; so also does my own immunity, lasting for more than five years, when considered in contrast to the dermatoses which supervened in others after a few months only of exposure. Blond individuals seem to be especially predisposed, all our affected patients (except myself) having been blond. We may also assume that children, weak individuals, and patients like those described, react quicker and more intensely. It seems, also, that certain regions of the body are more susceptible in this respect than others. No doubt, the prolonged influence of the Röntgen rays is able to produce a more or less intense hyperæmia in any part of the human body. In experiments of long duration conducted by reliable investigators, not only hyperæmia and swelling of the conjunctivæ, but also retinitis and contraction of the pupils were observed. Thus we can readily understand that hyperæmia may also take place in internal organs, if the powerful influence lasts long enough.

It has been sought to approach this important question by experiments on the lower animal. Thus Tarkhanoff (*Gaz. degli ospedali*, March 4, 1897) observed that irradiation of the cerebral hemispheres of the frog inhibits reflex. The color of the batrachian integument appeared much darker when, after being irradiated, the frogs returned into their moist element. After prolonged irradiation of frogs, mice, guinea-pigs, rabbits, and birds, they died mostly under paralytic symptoms.

That the Röntgen rays display a powerful influence upon the action of the skin, upon metabolism and the temperature of the blood, has been demonstrated by Lecercle. In one of my experiments made on dogs, alopecia of the area, which was irradiated intensely for three hours, developed as early as on the fifth day. The hair-bulb showed no atrophy, but the epidermis and the skin-follicles were destroyed. Microscopic examination of an excised integumental fragment manifested the usual signs of inflammation.

Of the experiments on mice I am making at the present time, I may report, that depilation began on the fifth day on an average, when irradiation was done three hours a day. The first symptoms usually appeared at the forehead. During the time of observation the animals showed no disturbing symptoms—only one among nine died after being exposed to the Röntgen light for twenty-three hours. This mouse was irradiated one-half hour daily for one week, one hour daily for a second week, and two hours daily for the third week. Depilation began over the dorsum then. Soft tubes had been used for this case exclusively. The autopsy showed slight congestion of the viscera. Microscopic examination revealed the general signs of inflammatory changes. In two of the animals which were treated in the same manner, bu

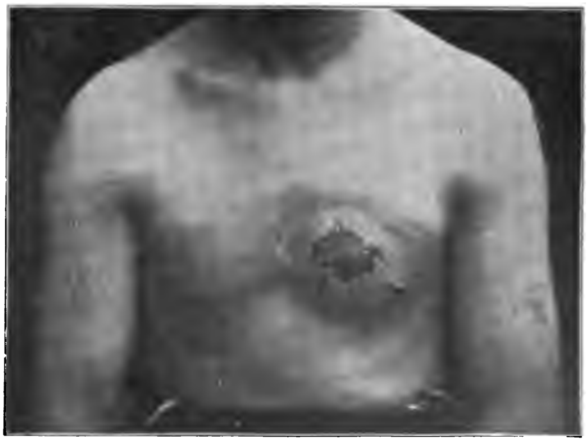

Fig. 4.

where tubes of high vacua were used, the integumental changes were slight, but the viscera, especially the intestines, were much more hyperæmic. A more extensive report on these experiments will be published shortly.

So much for observed facts. The question how these inflammatory processes are originated cannot be easily answered, because it touches not only the broad field of physics and chemistry, but also has physiologic, pathologic, and even bacteriologic features. It seems to me, however, that it can best be answered on the basis of clinical observation. While the experiments on lower animals are extremely useful for comparison and suggest new ways for investigation on the human body, they cannot be conclusive for the pathology of man. The thick hairy coat of the animal reacts differently upon burns from the human integument. The same must be considered in connection with the effects of the Röntgen rays upon the skin. It will, therefore, be more proper to compare our knowledge on the conditions produced by ordinary human burns with those caused by the Röntgen rays. Here, as well as there, a disturbance of nutrition in the walls of the blood vessels, and their consequences, become at once apparent. By considering, for instance, the consequences of a simple burn of the second degree, it will be found that the destruction of the red blood-corpuscles, as it is described by Fraenkel, Lesser, Pawlowsky, Ponfick, and Wertheim, is of no significance even in extensive burns of this kind. According to Hoppe-Seyler, even in fatal burns of the second degree the maximum of the destroyed blood-corpuscles did not amount to more than 2 per cent. to 4 per cent. But the products of this pathologic disintegration of the tissues are much more detrimental. According to Fraenkel, they originate in the same manner as during the process of digestion of albumen. The albumen is split, absorbs water, and is finally transformed into albumose and peptones. Krehl and Mathews examined these disintegrated products of the albumen in the human body. From the results of their investigations we may conclude that in burns of the second degree the change of the tissues produces, besides destruction of the red blood corpuscles, disintegration of albumen. The consequence of this latter and most important change is the formation of exudates, which during the process of absorption produce albumoses. And albumose, being a product unfit for assimilation, is eliminated by the way of the kidneys.

On the various degrees of toxicity of these substances the greater or lesser severity of the clinical symptoms seems to be dependent. They also explain the fatal outcome of extensive surfaces of burns of the second degree. In addition, the loss of fluid (blood plasma) must be considered, which is the larger the wider the burned surface extends. The waste of fluids impairs the natural resistance in the organism, so that the toxic products described find a more favorable soil.

These considerations suggest, by the way, the necessity of the subcutaneous injection of saline solutions in extensive burns, which should suffice to compensate the loss of fluid.

In burns of the third degree the destruction of the red blood corpuscles is of much greater importance, since the elimination of a large quantity of them is the equivalent of carbonic-acid poisoning. To this condition, absorption of the products of the disintegrated tissue (toxæmia) is added. This brings us near the question of wound infection.

I take this opportunity again to call attention to the fact that burns are wounds, and must be treated on the same principles. For years I have advocated the immediate removal of blisters in burns of the second, and the speedy excision of the mortifying tissues in burns of the third, degree (see "Ueber die Behandlung von Verbrennungen," *New Yorker medicinische Monatsschrift*, May, 1891). I am well aware that the latter procedure involves technical difficulties, but it is the only treatment which answers true surgical principles.

After prolonged over-irradiation the same signs may be produced in various degrees. The death of some of the irradiated animals alluded to above was caused by loss of plasma in the bullous, and by septic absorption in the necrotic, form.

The main difference between an ordinary burn and the changes of tissue caused by Röntgen light consists, as already said, in the slower development, in the latter case, of the process. The peculiar chemic influence of the Röntgen light on the tissues is so exerted that the nutrition of the cells is impaired. It is only when this impairment has reached a greater degree that the signs described above manifest themselves. And these signs are again influenced by the power and amount of the Röntgen light. A greater or lesser susceptibility has also significance.

Effluvium capillorum is explained by inflammatory processes in the matrix cells.

From these pathologic considerations, rules may be deduced for the therapeutic utilization of the rays, just as from the study of the deleterious properties of the poisons in their maximum doses, in order to establish their therapeutic indication and dosage.

The most obvious therapeutic application was that for hypertrichosis. In fact, irradiation has become the treatment *par excellence* for large-haired surfaces. It is only for small areas that electrolysis or galvanocautery should still be recommended.

Since the cure of sycosis is mainly dependent upon most thorough depilation, the beneficial influence of the rays can be well appreciated in this obstinate disease.

Favus, eczema, psoriasis, rosacea, acne vulgaris, and prurigo are also amenable to treatment with Röntgen light. Kuemmell succeeded as early as 1897 in curing lupus by the Röntgen light. He was soon followed by Albers-Schönberg, Hahn, Schiff, Freund, Ziemssen, Muehsam, Holland, Schenkel, Jutassy, and Neisser. In all their cases at first an inflammatory reaction was observed, followed by the drying up of the nodules. The cicatrization of the lupous portion, which was changed into a fresh granulating surface, took a considerable length of time.

I reported on my cases in previous publications, and will only add that the cure of our first patient has remained permanent now for three years. (*Deutsche Medicinalzeitung*, 1900, No. 51.)

The nodules usually shelled out together with the destroyed tissue. In their place a light red ulcus remained which bled on the slightest touch. In one case the nodules shrank and showed a terra-cotta-like appearance.

Cases of lupus vulgaris were cured under the administration of moderate energies after a small number of exposures, which had not lasted longer than five minutes. It is natural that under such circumstances the macroscopic evidence of inflammation did not show itself. Such cases also leave very little scar-formation—a factor which is not to be underestimated, when the face, for instance, is concerned.

In lupus erythematodes irradiation must be continued for greater length of time than in the case of lupus vulgaris.

Successful treatment of nævus vasculosus is also reported. In epithelioma of the lower eyelid and of the cheek I have also obtained a perfect result after a few exposures only. (See *Münchener medicin-*

ische Wochenschrift, No. 32.) In spite of this fact, however, I still continue to regard extensive removal the proper treatment. The Röntgen rays, however, should be considered in the after-treatment. From the observation of Heidenhain, that carcinoma-cells are found below the fascia, even in apparently light cases of carcinoma mammæ, we surgeons saw the necessity of removing the pectoralis major muscle, or at least its superficial stratum. In fact, no surgeon expects perfect recovery from the simple removal of carcinomatous portions, but always tries to extirpate as much of the surrounding tissue as surgical technic permits. It is only too well known that if the carcinoma cells have disseminated themselves so far that they are not accessible to the scalpel, a speedy relapse is to be expected. Now, if we have a means, which would, after a thorough operation, penetrate the deeper strata, so that those carcinoma cells which were situated beyond the reach of the knife would still be attacked by it, and perhaps destroyed, or at least arrested in further development, the question of the therapy of cancer would be solved.

If the parasitic nature of carcinoma should some day be proved, the effect of an antiparasitic medium, like the Röntgen rays, could be easily understood. That the Röntgen rays possess antiparasitic properties will be shown below. But on the theory that carcinoma is an atypical proliferation of epithelial cells, independent of any bacterial influence, we can also conceive that the Röntgen light counteracts the proliferation.

Recently I have also tried to treat sarcoma with the Röntgen light. (See on a case of sarcoma treated by the Röntgen rays, *New York Medical Journal*, November 16, 1901.) While in the case reported the disease had reached a stage in which recovery could not be expected, the healing influence of the rays on the sarcomatous area was very marked.

Further experiments, of course, have to define the indications for the treatment of carcinoma as well as of integumental sarcoma.

In regard to the technic of irradiation for therapeutic purposes careful individualization is the condition *sine qua non*. The proverb: "Trying is better than studying," holds good in this connection too. At first it is best to expose for a short time and in long intervals, until the individuality of the patient is well studied. Some patients react soon, some after many exposures, and some do not react at all. It should be regarded an iron-clad rule to stop the exposures as soon as the patient feels a burning sensation in the irradiated area. Only after symptoms of this kind have again disappeared entirely, the irradiations may be repeated.

For the first time it is best to expose five minutes only. A week should elapse then before a second exposure is made. If after the third exposure, made two weeks later than the first, no inflammatory signs have shown, the patient does not seem to have an unfavorable idiosyncrasy, longer exposures and shorter intervals can be attempted.

The exposures may then last ten, twenty, or even forty-five minutes, and may be repeated every other day, in obstinate cases even daily. The risk of burning the patient under such powerful treatment is not small. In the treatment of malignant disease, however, this should not bear great weight. If a strong effect is desired, strong means must naturally be chosen. For the treatment of most skin diseases, however, an exposure of five to ten minutes, repeated every third day, is sufficient.

The tube is placed as near the area to be irradiated as possible (as an average at a distance of about four inches).

As a rule, tubes of low vacuum (soft tubes) should be selected for therapeutic purposes. The abdominal skin of the animals irradiated by me with hard tubes showed little change, while the viscera were hyperæmic. This shows that the penetrating light of the hard tubes is absorbed by the integument to a small extent only, while the internal organs are more strongly affected. On the other hand, the peritoneum showed hardly any reaction, while the abdominal skin became inflamed, when a soft tube was chosen. Still, these conclusions have to be taken *cum grano salis*.

That the Röntgen rays possess bactericidal properties cannot be doubted any longer. The antibacterial effect of sunlight is an illustrative analogy. "Where the sunlight has no access, the physician will soon appear," is an old and significant Italian proverb. In harmony with this consideration, derived from the observation of the development of tuberculosis, is the fact that cultures of the tubercle bacillus die if exposed to sunlight for three hours. Regarding the great similarity between the effect of sunlight and the Röntgen rays, the bactericidal property of the latter was obviously apparent. And, in fact, staphylococcus, bacillus coli communis, and cholera vibrio die after being irradiated for one hour only. That tuberculosis is influenced by the rays can be well assumed, the action being of a bactericidal as well as of an inflammatory character. It is well to remember that in tuberculosis we are to consider not only the bacillus, but also that metamorphosis which we know as the tubercular nodule. Artificial hyperæmia, as we were taught by Rokitansky, also arrests development of tuberculosis. It is well worth while to investigate this most important question more closely.

It seems, furthermore, that various bacterial types show various reactions in proportion to the different qualities of their plasma. Schaudinn (Pflueger's *Archiv für die gesammte Physiologie*, 1899, Bd. 77), for instance, found that among the protozoa labyrinthula macrocystis, Cientk showed no changes at all. The plasma of these types is viscid and inert. It is also indifferent against all kinds of irritation, while the lively amœba princeps Ehrbg., the liquid plasma of which contains large quantities of water, shows considerable change and dies, after being irradiated for ten hours. All kinds of infusoria perished after being irradiated for six hours.

In summing up, we may feel justified in expecting from the future many more valuable hints for the rational therapy of bacterial diseases.

In regard to precautions, it may be said that the healthy skin surfaces should be protected by tinfoil or lead plates during the process of irradiation for therapeutic purposes; for the face, masks made of lead are handy.

The patient who is advised to be treated by the Röntgen light must be informed of the risks of burning.

The treatment of the inflammation caused by the Röntgen light is virtually the same as that of ordinary burns quoted above. In simple dermatosis (burn of the first degree), applications of Burow's solution are most comfortable for the patient. For the bullous form (second degree) a xeroform gauze-dressing, after the blisters are opened and removed, is indicated for the first few days. Later on, I recommend a dressing of a 10-per-cent. xeroform-lanolin ointment, which is changed daily, provided there is but scant secretion. The necrotic form (third degree) requires speedy removal of the mortified tissues, the after-treatment being conducted after the principles of wound treatment. (Xeroform or iodoform gauze, the latter to be preferred if there is much secretion.) Torpid granulations are stimulated by an 8-per-cent. solution of chloride of zinc.

During the intervals, xeroform salve should be employed prophylactically.

SUPRAPUBIC CYSTOTOMY IN OPERATIONS UPON THE PROSTATE.*

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"In the present state of our knowledge, hypertrophy of the prostate is not curable by any means that have yet been used." This statement will be found in the 1884 edition of Van Buren and Keyes.[1] By it we may understand that the unfortunate sufferer from an extremely common disease had to resign himself as best he could to a life of continued invalidism with the prospect of fatal complications staring him continually in the face. I will not here attempt the description of such a miserable existence. It is bad enough when a man advanced in years and feeble becomes thus a burden to himself, but when one considers how those in their prime, vigorous in mind and body, may be compelled all too soon to say of active useful life, "It is finished," and to give up the occupations and pleasures which they loved, it is small wonder that the spirit of rebellion is strong within them, and that no sacrifice is too great, no risk too hazardous, if it but holds out a promise of relief.

At a meeting of the Clinical Society of London, held in the year 1887, Sir Henry Thompson[2] reported a case in which, after repeated surgical procedures, he was gratified to present as a result of his endeavors a patient with a permanent suprapubic fistula. By means of a tube the leakage was controlled so that the man was fairly comfortable. Such instances are far from rare in surgical literature, and various devices have been contrived to render the fistula a tolerable burden. At the same meeting, and following Thompson's communication, McGill[3] reported three cases in which he had removed prostatic obstructions by the suprapubic route with the brilliant result that his patients were able to pass their urine in a normal manner. The accidental removal of obstructing portions of the prostate during the performance of perineal lithotomy had been occasionally reported with the information in a number of cases that there was considerable improvement in the condition. Länderer[4] after such a fortunate accident in which he took away a median lobe together with the stone for which he was operating, suggested that the procedure might well be more generally adopted. Belfield, Gouley, and other surgeons have with varying success removed obstructions by cutting them away with specially constructed scissors and forceps, and finally White and Harrison were responsible for the thorough testing of double orchidectomy and vasectomy.

Still, success with perfect function was the great exception, and the catheter had to be resorted to more or less in most instances. Finally, Fuller began the systematic enucleation of fibrous, myomatous, and adenomatous prostates in 1894[5] with excellent results, while the achievements of Alexander and others working through the perineum, and the revival of the Bottini operation of electrocaustic prostatotomy caused the entire subject to receive renewed attention. Yet, so late as last year, P. J. Freyer[6] in a paper on perineal prostatectomy shows a strange lack of confidence in the radical cure of senile enlargement of the prostate by remarking that "The vast majority of cases . . . are . . . best treated by careful, cleanly and judicious catheterism," an opinion which will hardly be shared by those who have seen the ideal results obtained with the aid of operative treatment.

I have performed the operation of suprapubic enucleation of the so-called hypertrophied prostate seven times with one death, one failure, and five complete cures. In addition, I have operated a number of times for other diseased conditions of the prostate, but these cases will not be considered here.

Case I.—The first patient, R. L., upon whom I attempted to perform prostatectomy was a very corpulent man, sixty-six years of age, who had had suprapubic cystotomy done by me some months before because of acute retention with urinary sepsis. The enucleation was attempted on August 26, 1896. At the first operation he had taken the anæsthetic so miserably, owing to asthma from pronounced emphysema, that I resolved to do what I could with the help of eucaine injected into the vesical mucous membrane covering the prostate. There was so much straining, however, during the operation, and the abdominal walls were so enormously thick that I was obliged to desist after removing two adenomatous growths about as large as filberts. The man's condition was practically unimproved, and he now wears a glass tube which keeps him pretty dry during the day, but is forced to use thick gauze pads at night.

Case II.—H. M., sixty-five years old, had been troubled for years with renal colic, and the symptoms of vesical calculus. Occasionally a small round stone, about the size of a pea, was passed by urethra. November 5, 1896, he was suffering from acute retention with genito-urinary sepsis following instrumentation. I operated on November 12, during the acute attack, the sepsis having proved intractable to the usual forms of treatment. Eighty-five small round stones were removed through a suprapubic vesical incision, and at the same time the enlarged and obstructing prostate was enucleated, a procedure which I believe should have been undertaken at a second sitting in this case. The urine could not be satisfactorily examined as to the condition of the kidneys, on account of the large amount of blood present, probably the result of the instrumentation. The operation was not a difficult one, but the patient died within twenty-four hours, his sepsis unchecked. No autopsy permitted.

The next case came four years after the one just reported.

Case III.—I. L., seventy-four years old, but in excellent physical condition, except for his local disorder, had been afflicted with the burden of "catheter life" for twenty-two years, during which time not a drop of urine had been voided naturally. Several attacks of cystitis and epididymitis had threatened the patient's life with urinary sepsis, but had yielded to treatment. At the age of seventy, I had castrated him during an acute attack with some relief, but without any change in the obstructive condition. At last the exacerbations began to occur with greater frequency, and while he was convalescing from one of them, I performed suprapubic section with enucleation of the prostate and perineal drainage on September 25, 1900. A ball-valve median and two enlarged lateral lobes were easily shelled out. The combined mass weighed 41 grams. Hemorrhage was slight, and post-operative shock absent. Recovery was quick, complete, and apparently permanent, for the man remains absolutely well now, more than a year afterward. His stay in the hospital was twenty-three days. Although not strictly relevant, it is interesting to note that there were disagreeable nervous symptoms, apparently connected with the orchidectomy, such as sleeplessness and hot flushes, and that these phenomena promptly and entirely vanished on the internal administration of orchitic substance, and that the patient had not the remotest idea of the nature of the medicine he was taking.

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*Read before the New York Surgical Society at its regular meeting, November 27, 1901.

Case IV.—J. R., fifty-eight years old, had had two attacks of gonorrhœa when he was eighteen years of age, and an initial lesion with secondaries at twenty-eight. Until his fifty-third year his history is otherwise negative, but at that time he began to have increased frequency of micturition, noticed especially at night. He was first catheterized about the middle of May, 1901, when his physician noted that there was residual normal urine to the amount of seven ounces. Regular catheterization was instituted, and five weeks before I saw him there developed a severe cystitis, accompanied by left epididymitis. On July 3 I had Mr. R. admitted to Mount Sinai Hospital. At that time there was no fever, and pulse and respiration were normal. The urine contained a trace of albumin and considerable pus, in spite of the fact that he had been under the usual preparatory treatment for several days. On July 4 I operated, and on opening the bladder from above noted that there was a large prostatic mass projecting over the internal urethral orifice from above, and that the remainder of the gland was very much enlarged, as one would have been led to suppose from the rectal palpation. The anterior portion was first removed by enucleation, and then three other masses were taken away, and the operation concluded without perineal drainage. Hemorrhage was moderate and easily controlled. The subsequent course of the case was uneventful and the patient was discharged from the hospital well, except for a granulating suprapubic wound which has since closed. The recovery is perfect, and the functions of micturition and coition apparently normal.

Case V.—M. G., fifty-eight years old, had suffered for two years with frequent micturition and finally with retention and overflow. On May 26, 1901, when he first came under my observation, there was marked cystitis with fever. Catheterization with the rubber instrument was impossible, but a woven Mercier passed a distinct obstruction at the neck of the bladder with comparative ease. The prostate was felt to be enlarged, on examination with the finger in the rectum; but the complete retention led me to suppose that we had to deal with a middle lobe. Operation was proposed and accepted. After two days of preparation with frequent catheterization and diuresis, the suprapubic section was done at Mt. Sinai Hospital. There was still considerable urinary sepsis, the temperature rising as high as 102°. Thirty-six ounces of urine were passed on May 27, the day before the operation, and there was but 1.2 per cent. urea, the specific gravity being 1.010. There was a trace of albumin, accounted for by the presence of pus; but there were no casts. At the operation the bladder wall was found considerably hypertrophied, and there was a large sacculation in its upper right portion. A middle lobe, the size of a marble, pedunculate, and acting as a ball valve, was easily enucleated. The remainder of the prostate, though somewhat enlarged, was fibromyomatous in character, and could not be enucleated. I assured myself that the obstruction had been perfectly relieved by passing a very soft rubber catheter into the bladder through the urethra, and concluded the operation without perineal drainage. There was practically no reaction, and convalescence was ideal. The patient was discharged on July 8, passing all the urine in his bladder at each micturition, and apparently well. Since his discharge from the hospital, he has enjoyed sexual congress in an apparently normal manner.

Case VI.—J. R., sixty years old, entered Mt. Sinai Hospital in June, 1900, with a characteristic history of senile prostatic enlargement dating back a number of years. The immediate cause of his seeking admission was severe hæmaturia, with great vesical distress. The patient was quite feeble, and suprapubic cystotomy for drainage seemed to be all that he would safely stand in the way of operative therapy. Dr. Brewer, at that time adjunct surgeon, operated for me, and found that in addition to a considerable prostatic enlargement, which could be felt by rectum, there was a distinct pedunculated middle lobe which he was tempted to remove. On account of my suggestion that drainage would probably be all that the patient would safely endure, the operation was completed by the insertion of a tube, and the man was sent back to bed, where continuous vesical siphonage was instituted. Recovery with very great improvement followed and in a few weeks, the suprapubic sinus having closed, the patient was taught to catheterize himself and was discharged. He re-entered the hospital on May 16, 1901, suffering with dangerous bleeding from the urethra after an attempt at catheterization. Besides the occasional reopening of the suprapubic fistula, the patient, with frequent catheterization, had been quite comfortable until the hemorrhage, which had begun five days before his readmission, and had continued the entire time with varying severity. There was no fever. The urine was so bloody that it could not be properly examined. Cystitis, if present, was not severe. A soft-rubber catheter could not be passed, but a silk Mercier entered the bladder apparently through a false passage in the floor of the urethra. Some urine came through the suprapubic opening. Under the influence of urotropin and frequent catheterization, together with the injection of nitrate of silver solution, 1-750, the hemorrhage ceased, excepting on attempts at voluntary micturition, when the urine was always of a bright red color. On May 25, nine days after admission, I operated, employing nitrous oxide and ether anæsthesia. The old scar with the sinus was excised, and the peritoneum wounded during the procedure. The opening was closed by continuous suture, and a piece of gauze laid over the line of union further to protect the abdominal cavity. The prostate was enucleated in three masses weighing in all 66 grams, and the cavity packed with gauze to control the bleeding, which was considerable. No perineal opening was made. Convalescence was rather slow, after the first shock of the operation, on account of the formation of a dense tumor to the right of the bladder, evidently a pelvic exudate. The mass was aspirated through an incision, but with a negative result. Urine was voided through the urethra on June 10, and the patient was discharged, emptying his bladder and passing all urine by the natural channel, on August 17. He is now well, and when I last examined him, there was no residual urine. He gets up once at night, and passes water every four hours during the day.

Case VII.—J. H. C. was referred to me on June 23, 1901, because of impediment to urination and severe bleeding from the urethra on attempted catheterization. He was fifty-six years old, and, with the exception of a gonorrhœa in his youth, had been in robust health until three years before, when an attack of retention had been relieved by the use of the catheter. For two years he had remained apparently well except for some frequency in micturition. Then another attack of retention occurred, and the catheter had to be once more resorted to. After that the attacks became more and more frequent, and about three months before he came to me, there was severe bleeding after the use of the instrument. Following this, any attempt at catheterization or other manipulation about the urethra occasioned hemorrhage, which was described by the patient as extremely severe. Some residual urine was invariably present after he had voided all he could. I found the general condition very good, excepting that the loss of blood had resulted in a fairly marked anæmia. With the greatest gentleness I attempted to pass a woven olive-tipped catheter, but on reaching the compressor urethræ a hemorrhage began which was the most alarming in my experience. A steady, fast stream of arterial blood came from the meatus, as if from a wound in a large vessel, and I was glad to be able to check the flow by compression of the urethra. The prostate by rectum felt large and hard.

The patient was advised to enter the hospital so that an operation through the perineum might be performed for the purpose of checking the tendency to hemorrhage. He was admitted as a private patient on June 25, and the following day the operation was undertaken. The curved von Dittel incision, as for the evacuation of a prostatic abscess, was made, and the deep urethra thoroughly exposed. On opening the canal, a severe hemorrhage at once occurred, and it became evident that there was a false passage directly into the bulb. This region was packed, and the bleeding having ceased, the urethral incision was continued backward into the prostatic portion, it being my intention to explore the bladder with the finger. The prostate was, however, so large, and the urethra was so much lengthened by the hypertrophy, that my finger would not reach the vesical cavity. Suprapubic section was made, and the prostate enucleated with little difficulty in three large fibrous lobes weighing together 126 grams. Drainage by tubes in the perineum and in the suprapubic wound completed the operation. Within the following twenty-four hours there was considerable bleeding, so that the bladder and perineal wounds had to be packed again. A bronchopneumonia with delirium made me very uneasy for several days, but by the middle of the second week convalescence was safely established. A suppurative epididymitis developed on the sixteenth day, and an incision was necessary a few days afterward. By the twenty-fourth day all the urine was voided through the normal channel, the suprapubic vesical opening having closed. One month after operation the patient was discharged, a granulating wound of the scrotum still present, but otherwise well. The urine was not yet perfectly clear, but there was perfect function as to micturition, not a drop of residual urine remaining. He is at present in excellent health, and his urine is normal.

Each one of the last five cases was reported on by Dr. F. S. Mandlebaum, pathologist to Mount Sinai Hospital. Every specimen was cut, stained, and microscopically examined. The report states that in all there were evidences of an increase in all the elements of the prostate, gland, fibrous tissue, and muscle, forming the usual "hypertrophy" of the prostate. No pure adenomatous or fibromatous masses were found.

I have ventured to bring before you this evening these patients and histories, in order to demonstrate the value of the suprapubic vesical incision in removal of the prostate—a procedure which, for reasons unknown to me, has not attained the popularity which I feel it deserves. In speaking with my colleagues I find that it is the exception to meet one who has had experience with it. Then, too, while I am willing to admit that this particular operation for the relief of the disease may not fit all cases equally well, I wish to argue that, as a general rule, with few exceptions, the first step in the operative cure of any form of prostatic obstruction should be a suprapubic cystotomy, even if it should later become evident that the disease itself must be attacked from another quarter. It is the only way in which we can gain absolute certainty as to the condition of the bladder. Those who favor the perineal route may be successful in selected cases, but there must always be an element of doubt, unless the interior of the bladder can be thoroughly seen or palpated. Naturally, it can never be properly examined by vision through the perineal opening, and often, especially in the presence of great enlargement of the prostate, the finger is not long enough to reach the vesical opening. The cystoscope, valuable as it is, has its limitations, and in any event cannot be compared in point of accuracy to direct observation through a wound in the bladder. In the presence of active hemorrhage the instrument is far from one of precision, and in certain forms of prostatic obstruction it cannot be introduced at all. Thus, ulcerations, neoplasms, diverticula, sacculations, incrustations, and even stones, especially those occupying pouches, may be overlooked, to the detriment of accurate prognosis and good surgery. Galvanocaustic prostatotomy is, undoubtedly, an important means of relief, and is eminently suitable in many cases; but it must be admitted that, unless this operation is preceded by suprapubic section, one must take the risk that serious intravesical trouble exists which may nullify the expected benefit. Besides, the cystotomy gives us the additional advantage of drainage in complicating cystitis. I have in mind a case of carcinoma of the prostate in which cystoscopy was impossible, because of hemorrhage, and in which the diagnosis of probable prostatic hypertrophy had been made. Suprapubic operation was undertaken for purposes of exploration as well as treatment, and the tumor thoroughly curetted. The result was cessation of hemorrhage, and great amelioration of the symptoms, the respite lasting for several months. The suprapubic wound healed quickly. This might not have been thought a fit case for galvano-cautery, in any event, but the perineal operation might have been considered with the probability that the bleeding would not have been checked, and that the wound, being in cancerous tissue, would never have closed.

In dealing with chronic obstruction at the neck of the bladder, the primary step, then, should be suprapubic section. After this, according to the condition of the bladder and the character of the obstruction, the operation may proceed. If the case is one of prostatic "hypertrophy," the second step should be selected according to the condition of the patient and the character of the obstructing mass. Small nodules obstructing the internal urethral orifice may be removed either through the incision already made or through an additional opening in the perineum, which may be left for drainage. Moderately large masses which can probably be enucleated, may be removed either from above or below, according to anatomical conditions, and the superior wound will then be found of great value because it permits an assistant to press directly upon the gland, forcing it within easier access from below. If the patient is very old or feeble, or if he takes the anæsthetic badly, the operation of enucleation from above will usually be found much speedier than the perineal dissection. Should a very large prostate be encountered, it is not probable that it can be enucleated from below.

If the prostate is very soft and hyperæmic, or if it is of such a texture that it cannot be enucleated, one has the choice of galvano-cauterization through the urethra (Bottini), through the perineal wound, or of removal with the cutting-forceps by conjoined manipulation.[7] In any case, the suprapubic wound will be of great service. Its disadvantages I believe to be greatly exaggerated. The operation of opening the bladder from above is quick, simple, and in my experience accompanied by little shock. The mere cystotomy is far less bloody than the usual perineal section. When speed is the all-important element, as it frequently is in old persons, it must be remembered that the cystotomy takes only a few moments. The entire operation with removal of the prostate is finished in from fifteen minutes to half an hour.

The steps of the operation as I have performed it are briefly as follows: Washing out the bladder, the catheter being left in the emptied viscus. Incision of the tissues through the linea alba. Retraction of the recti. Inflation of the bladder with air, using an ordinary atomizer bulb fixed to the catheter. Palpation of the parts through the wound, so as to judge of the size and shape of the bladder, as well as the degree of inflation. Pushing up the peritoneal reflection. Opening the bladder between two retracting sutures. Exploration of the viscus with the finger, then by the eye, raising the pelvis if necessary. Snipping the mucous membrane covering the most prominent portion of the prostate. Enucleaation of the gland with two fingers of the left hand, while an assistant with finger in the rectum supports the parts. A perineal opening may or may not be made, according to the exigencies of the case. I am of the opinion that when a capable nurse is to be in charge, the bladder and the laceration in its floor can be perfectly drained with the continuous siphon apparatus without the opening from below. If perineal drainage is decided upon, however, it is easy to cut down upon the beak of a sound placed within the space left by the removed prostate, and pushed against the tissues, so that it presents in the perineum.

In two of my operations I placed sutures of chromic catgut at either side of the drainage tube, inverting the bladder wall after the manner suggested by Gibson;[8] but, in all of my cases, time seemed an important element, and anything which tended to lengthen the operation was avoided.

All patients should be prepared by free purgation and diuresis. The latter is most important, and I attribute the fatal termination in Case II. very largely to the fact that this precaution could not be thoroughly carried out. The administration of urotropin and copious draughts of water seem to be perhaps the best way in which this can be accomplished, the urotropin acting as a urinary antiseptic as well. It is my habit to continue the administration of the water until within two hours of the time set for operation.

The principles of the scientific treatment of chronic prostatic obstruction are being steadily evolved. As with all diseases, so here; each individual case must be treated according to its needs, and the skill of the surgeon is not so much required in the carrying out of his plan as in its proper and careful selection and elaboration. My argument for suprapubic section is advanced with the hope of aiding the cause of thoroughness and accuracy.

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ALCOHOLIC AMAUROSIS.*

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IN the Manhattan Eye and Ear Hospital Reports for 1897, I published the case of a man who became suddenly blind after drinking a large quantity of methyl alcohol. According to Dr. G. E. de Schweinitz of Philadelphia, this was the second recorded case; since then a number of similar cases have been recorded.[1] So far as I know there have been reported no cases of blindness following the use of ethyl or ordinary alcohol.

In all cases reported the inference has been that methyl or wood alcohol was the agent which produced the blindness, but there has been no positive proof that this was the real cause. As a rule, blindness has followed intoxication, and wood alcohol has been a factor in the production of the intoxication. In the case reported by De Schweinitz, blindness supervened on a sleep following the administration of morphine in a man who had been exposed for some time to the fumes of wood alcohol, and who suffered from symptoms identical with those described in textbooks as following the inhalation of the vapor of this kind of alcohol.[2] In this case the patient had not taken any of the substance internally, but was addicted to the use of alcoholic drinks; the report does not say to what extent. He had worked in white lead for five years, and he had also suffered from previous attacks of temporary obscuration of sight. Stierin reports the case of a man who had been drinking heavily, and who becoming sober in a place where he could not obtain his accustomed beverage, and feeling that he must have some sort of drink, took the only thing he could get hold of, which was what is known as Jamaica ginger, of which he drank twelve ounces. He fell into a deep stupor, from which he awoke blind, recovering, however, in a few days excellent vision. Stierin, in commenting on this, states he has found eight recorded cases of blindness following the ingestion of ginger.[3] It has been suggested that blindness following the ingestion of these strong alcoholic essences is due to the methyl alcohol contained in such preparations.

In the case I reported in 1897, a man addicted to the habit of periodic sprees, after exhausting his means of supplying himself with whiskey, resorted to a solution of red pepper in water. This not satisfying him, he drank a sufficient quantity of methyl alcohol to plunge him into a profound stupor, from which he awoke blind. After a temporary improvement, he finally lapsed into a condition of permanent blindness, with total atrophy of the optic nerves.

The case I desire to report now is that of an inmate of a place of detention for inebriates. This patient, a woman of refinement, had voluntarily secluded herself in this institution in the hope that she might rid herself of an appetite for alcoholics. For six months she was not out of the institution, and during this time took no alcoholics, drugs, or medicines of any kind. Feeling that she had overcome her appetite, and having some business to look after, she sought and obtained permission to leave the institution for a few hours. After transacting her business, the desire for a drink seized her, but she knew the people in the institution would detect the odor on her breath, and she fought off the desire as long as possible. Finally, she went to a drug store and bought a bottle of ordinary alcohol, and returning to the institution, pleaded fatigue and retired. Once in her room, she locked the door and drank the alcohol. She soon sank into a deep sleep, which became a prolonged stupor lasting several hours, from which she awoke blind.

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* Read before the Medical Society of Queens-Nassau.

The patient was transferred at once to a general hospital, and was told her sight would return. I saw the patient eight weeks after the sudden loss of vision, and made the following note: Pupils dilated ad maximum, with no reaction to light. Vision in the right eye, ability to count fingers at two feet. Vision in the left eye, barely perception of light. Optic nerves, dead white; blood vessels, small.

I began at once the administration of sulphate of strychnine hypodermatically, commencing with $\frac{1}{60}$ of a grain once a day, increasing at the rate of $\frac{1}{120}$ of a grain each day, until the daily dose became $\frac{1}{6}$ of a grain. This seemed to be the point of tolerance in this case, and the dose was continued at $\frac{1}{6}$ of a grain daily for four weeks, after which the same quantity was given by the stomach daily, for a considerable period. At the end of six weeks' treatment, the vision in the right eye had increased to 20/200, and in the left eye to 3/200. The fields of vision were markedly restricted.

So far as I know, this is the only recorded case of acute retrobulbar neuritis following the ingestion of ethyl alcohol. In conversation with friends I have been told of other cases similar to this. There is no reason to doubt that such an event may not be infrequent.

Chronic or subacute retrobulbar neuritis in people addicted to the use of alcoholic beverages is not uncommon, and if we may expect a gradual or passive inflammation of the optic nerves from a gradual alcoholic poisoning, there is no reason why we should not have an acute inflammation following acute poisoning. There are, however, points of difference in the two conditions, *i. e.* the chronic and the acute forms.

Retrobulbar neuritis of the subacute or chronic variety, resulting from the use of alcohol or tobacco, is a gradual process, and manifests the most gratifying results with appropriate treatment. Acute retrobulbar neuritis, following the use of alcohol in toxic quantity, is sudden in its onset, and, as a rule, treatment accomplishes little or nothing. Let us consider these two conditions separately.

In people who are addicted to the use of alcohol or tobacco, or both, we sometimes have a gradual failing of vision, constituting what we term tobacco amblyopia, toxic amblyopia, amblyopia ex abusa, and so on.

This form of amblyopia results from a bilateral interstitial inflammation of the orbital portions of the optic nerves. The first symptom is failing vision. The person affected finds he cannot see as formerly, but the progress of the disease is so gradual that the patient may not be able to state when his vision began to fail. He is able to see better in a subdued light, and for that reason, Arlt has given to the condition the name of amblyopia nyctalopia.

Generally, when the patient consults a physician, the affection has been going on for some time, and the diminution of vision may be considerable.

An examination of the eye externally reveals little or nothing. If vision is markedly reduced, there will be the peculiar stare common to people who have poor vision. The pupils may be slightly dilated, and the reaction to light sluggish. The fields of vision are not restricted; indeed, peripheral vision may be better than central vision. There is an inability to distinguish red and green in the center of the visual field, constituting what is called a central scotoma for these colors. This is a symptom of value, which may be absent in the early stages of the affection.

The ophthalmoscope reveals nothing on which we can base a positive diagnosis, except that the optic papilla presents, to one familiar with ophthalmoscopic pictures, an appearance which is suggestive. The nerve has a peculiar, dirty look, which—taken in connection with the diminished vision, the central scotoma for red, and the over-indulgence in alcoholics, or tobacco, or both—makes the diagnosis positive. I have seen patients who complained of a heavy feeling in the eyes, when the vision was slightly or not at all affected, and who presented no scotomata, but whose optic nerves had this peculiar appearance, become entirely relieved of their disagreeable symptoms by stopping the use of tobacco and taking strychnine.

The prognosis in this form of retrobulbar neuritis is good. Possibly, if patients refrained from any kind of treatment and persisted in the unrestricted use of alcoholics and tobacco, atrophy of the optic nerves would result; but I have never seen a case where this could be demonstrated. I have seen a great many cases of complete atrophy of the optic nerves in which there was no history of any disease capable of producing such a condition, and it is fair to suppose some of them may have been due to this cause. There are people in this world who would allow themselves to become almost blind before seeking medical advice; so it is possible a person afflicted with this form of retrobulbar neuritis might wait until the disease had reached this final stage before seeking relief. As a rule, however, when the vision has become reduced to a point when it is no longer sufficient for the ordinary uses to which vision is put, the person seeks medical advice. If vision is not reduced below 20/70, and the central scotoma is only for red and green, removing the cause and placing the patient under the influence of strychnine will be sufficient to effect a cure.

The central scotoma or blindness for red and green is not a permanent condition unless it is allowed to run its natural course, in which case it becomes a complete blind spot. This result is due to atrophy of the papillomacular bundle of the fibers of the optic nerve, and, as we all know, there is no power of which we have knowledge which can restore an atrophied nerve.

In acute retrobulbar neuritis we have a different condition of affairs. This acute disease is said to have resulted in some cases from great chilling of the body, and from excessive physical exertion.[4]

Most of the reported cases have followed the ingestion of alcoholic preparations, or of pure alcohol, in quantities sufficient to produce intense constitutional disturbance. I have never heard of a case following the drinking of the ordinary forms of alcoholic stimulants; the cause has generally been the ingestion of either pure alcohol, or of strong alcoholic preparations. The essences of various kinds, as essence of anise, essence of peppermint, essence of ginger, etc., contain from 80 per cent. upward of pure alcohol, and supposedly the ethyl or common alcohol. De Schweinitz suggests that some of these essences now in the market may contain methyl or wood alcohol, or, as it is sometimes called, Columbian spirit. In conversation with druggists, I find it is commonly believed that wood alcohol is often substituted for ethyl alcohol because the former is cheaper. In Great Britain, methyl alcohol, not being fit for internal administration or for drinking purposes, is not subject to taxation, whereas ethyl alcohol is taxed. In order to obtain ethyl alcohol for use in the arts at a reduced cost, a mixture of nine parts ethyl alcohol with one part methyl alcohol is made, and this, not being fit for internal administration, escapes taxation.[5]

There must be a strong temptation on the part of unscrupulous manufacturers to substitute the cheaper alcohol for ethyl alcohol, and while the case I record shows that the same results may follow the use of ethyl alcohol, the fact that such cases have not been recorded must demonstrate that they are not so apt to follow the use of this form of alcohol.

The constitutional effects of all forms of alcohol seem to be the same, except that those produced by ethyl alcohol seem, as a rule, to be much milder. The addition of amylic alcohol, or fusel oil, to alcoholic drinks, causes more rapid intoxication. In large doses, fusel oil produces insensibility, or a profound and death-like sleep.[6]

Wood alcohol and ethyl alcohol produce the same results as amylic alcohol in this respect, but in the cases of poisoning from amylic alcohol reported by Dr. Fucher of Baltimore[7] no mention is made of the optic nerves being affected in any way. However, it may happen in many cases that intoxication from methyl or wood alcohol produces no trouble with the optic nerves, and there may yet be cases reported of blindness following the use of amylic alcohol. It is reasonable to suppose, as the constitutional symptoms produced by the ingestion of all forms of alcohol are the same, that they all may be capable of producing the same effect on the optic nerves.

It is, of course, possible that the blindness following the use of common alcohol in the case I have reported may have been due to contamination, or adulteration with wood alcohol, and that there may be something in wood alcohol which makes it especially dangerous to the eyes.

The condition presented in all cases of blindness following the ingestion of wood alcohol has been about the same. After taking a sufficient quantity to produce profound stupor, the victim has awakened blind. The pupils are widely dilated and do not respond to light; there is no perception to light, the patient being unable to distinguish between light and darkness. The ophthalmoscope reveals in the beginning little or no change in the interior of the eye. The nerves may be slightly reddened, and there may be engorgement of the retinal veins, with a diminution of the size of the arteries. These appearances are often seen when there is nothing the matter with the eyes at all. In the case of blindness following wood alcohol poisoning, which I reported, and which I observed from the beginning, there was at first nothing to be seen in the eye ground which could be said to be abnormal, but gradually the nerves became whiter and whiter, until complete atrophy was present.

The poison produces an interstitial inflammation of the optic nerves sufficiently severe to prevent retinal impressions being carried to the brain. If this inflammation is sufficiently intense, atrophy supervenes and the blindness is permanent. No cases of papillitis from this cause have been reported, hence the disease is called retrobulbar neuritis with descending atrophy.

The affection in some cases has been transitory, the patient recovering with good sight; but in others, although there has been temporary improvement, total and permanent blindness has resulted. The result must depend on the intensity of the inflammation; if it is sufficient to produce atrophy, blindness, or at least impaired vision, must result. The prognosis must therefore be guarded until the acute stage is passed and vision begins to return, or atrophic appearances present themselves. The derivative treatment seems to have given the best results. This consists of free catharsis from jalap, calomel, and salines, with diaphoresis from hypodermics of pilocarpin. The beneficial results from this treatment must be obtained, if obtained at all, in the first few days of the acute inflammatory stage. If positive beneficial results do not follow in a week, atrophy is likely to result. When atrophy begins to show itself, the orthodox treatment will be strychnine, given hypodermatically in increasing doses. A solution of the sulphate is generally employed of the strength of 1 in 60, and the patient is given one minim, which represents 1/60 of a grain of the drug. The next day two minims are given; the third day three minims, and so on, increasing by one minim a day until the point of tolerance is reached, at which dose it must be continued for at least a month. The patient must be watched for half an hour after each injection so that dangerous symptoms of strychnine poisoning may be checked.

When this form of treatment was first advised, it was recommended that the forehead or the temporal region be the place selected for the injection. I prefer to give them in the arm, and I also prefer starting with a smaller dose. A solution of strychnine, 1 in 120, is better, I think, which enables you to increase at the rate of 1/120 of a grain daily, enabling you to watch its effects better, and enabling the patient to tolerate a larger dose in the end.

The point of tolerance in most cases when the patient is robust will be from ⅙ of a grain upward. I have given as much as ⅔ of a grain of the sulphate of strychnine twice a day hypodermatically in optic-nerve atrophy, producing marked constitutional effects, without influencing, I am sorry to say, the atrophy.

The prognosis when atrophy begins to show itself is very bad, the most you can hope to do under these circumstances is to check the atrophic change, which we are seldom able to do. As a rule, the affection goes on until complete blindness results.

Cases of this class demonstrate to the physician two plain duties. First, to point out to the public the fact that wood alcohol is a positively dangerous substance to take internally, and which may even produce permanent blindness if the fumes are inhaled for a long time. Possibly other forms of alcohol may produce the same results if concentrated. Second, to point out to health authorities the fact, if it is a fact, that the cupidity and avarice of certain unscrupulous manufacturers and dealers in alcohol and alcoholic preparations may lead them to substitute methyl alcohol for the ordinary alcohol of commerce, because the former is cheaper, and that this substitution may work injury to consumers.

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The World's Centenarians.—"It is not surprising," says an English weekly journal, "that more people live to be 100 years old in warm climates than in the higher latitudes. The German Empire, with 55,000,000 inhabitants, has 778 centenarians; France, with 40,000,000, has 218; England has only 146, and Scotland 46; Sweden has 10; Norway, 23; Belgium, 5; Denmark, 2; Spain, 401, and Switzerland none. Servia, with a population of 2,250,000, has 575 people over 100 years old. It is claimed that the oldest living person, one Bruno Cotrim, living in Rio de Janeiro, is 150 years old."

REPORT OF A CASE OF ADDISON'S DISEASE.

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EASTON, PA.

Inasmuch as cases of Addison's disease are so rare in this country, it has occurred to me that members of the profession might be interested in a report of a case which I had the privilege of seeing some time ago. I regret that the notes of the case are so meager, but as there were but three days on which the patient was seen before death it was impossible to secure a full report.

On May 29, I was consulted by a lady with regard to her health. She was of slender build, small stature, about forty years of age. She complained of repeated attacks of gastric trouble with vomiting and said that she thought she was in a bilious condition, because her skin had become so yellow, in fact almost brown. I noticed that there was no discoloration of the conjunctiva, and therefore concluded that there was no jaundice. In fact the conjunctiva had a peculiar pearly hue, which I believe has been stated by some authorities to be frequently seen in persons suffering with this disease. Attempting to make an examination of her abdomen in order to ascertain the condition of the abdominal organs, I found its walls very tense and hard, the intestines being so filled with gas, and the whole abdomen so tympanitic, that it was impossible to outline the abdominal organs. I accordingly prescribed for her a carminative preparation, intending to get rid of the gas before attempting to outline the internal organs or ascertain her exact condition. I also requested a specimen of urine for examination. She was going out of town for a week or more and I expected to lose sight of her for the time being. I was much surprised, therefore, at having a visit from her on the evening of June 2, just four days later, when she told me that she had felt so bad while she was away and her stomach had troubled her so much that she had decided to return home. She complained that evening of extreme sick stomach, and the abdomen was still much distended with gas. I again prescribed for her, giving her some remedies to correct her sick stomach. On the morning of June 4, I was called to see her at her house and found her vomiting continuously and complaining of considerable pain in the abdomen. This continued throughout the day with marked failure of strength and increased rapidity of pulse, and all efforts to settle the stomach were entirely unavailing. Every attempt to give food or medicine resulted in the rejection of each dose as rapidly as taken. I might say here that by this time I suspected that the patient was suffering with Addison's disease, but could not fully convince myself of it because of the great rarity of this affection. On the night of June 4, the lady's husband greatly surprised me by asking me this question, "What is this Addison's disease?" I replied that it was my opinion that she was afflicted with that disease. I inquired how he had heard of this disease and whether any physician had ever told him that his wife was suffering with it. He replied that no physician had ever stated that his wife was suffering with "Addison's disease," but that her skin had been so much discolored that on looking up pigmentation of the skin in an encyclopædia he had found a description of "Addison's disease" and had suspected that this was the trouble with his wife. The following morning, June 5, I called upon my patient early in the morning and found her rapidly sinking. She died some time before noon.

Fortunately the family consented to an autopsy being made, and with the assistance of Drs. Kotz and Dudley the body was examined. I will not now take up space with a detailed description of the postmortem appearances, but will merely say that the abdominal organs were practically in a normal condition. The stomach was somewhat congested and irritated, as it, of course, would have been from the patient's repeated attacks of gastric trouble and vomiting. The suprarenal bodies, however, were much wasted (not more than one-third or one-half the size of these organs in health). No marked lesion of the sympathetic nervous system was discoverable. The mesenteric and lymphatic glands were apparently healthy. My own opportunities for studying this patient were so few that it was impossible for me to gain an accurate knowledge of her personal history or the course of the disease. On account of the rarity of the disease, it surprised me to have a case occur in my own practice. I had previously seen two cases during my course of study at the Medical Department of the University of Pennsylvania. They were both in men, and singularly, too, both were hunters from the Alleghany Mountains.

My patient's husband has given me the following outline of her personal and family history: I found that she had rarely been ill during her life except with various forms of gastric trouble. She was born on a farm of about sixty acres and during her early years had to do a great deal of the work of a hired man, such work, at least, as a girl can do, so at that time her life was quite an active one. After she became of age she attended school for several terms. She married at the age of twenty-five and during the first five years her life was an active one, but after that she became more engaged in writing for her husband, who was a professional stenographer, and consequently she led a rather inactive life. For some years after her marriage, especially at a time of mental strain, she was troubled with severe bilious attacks, as the family called them, with vomiting of bile, and at these times would be quite prostrated. After five or six years this passed away and she thought her general health much improved. She always had a dark complexion, and was always inclined to be sallow. Her husband stated that he was particularly impressed with the marked sallowness of her skin during the month of January previous to her death. For a year or more before her death she failed in strength; and, in fact, during this period of time it was noticed that the heat of the summer seemed to oppress her very much more than ordinarily. It was impossible for me to ascertain the exact length of time during which she had a return of the so-called bilious attacks, as these had been so numerous in the years of her married life that it was easy to see that the return of them would not excite any great surprise.

Family History. Her parents are still living. Her paternal grandfather died young from habits of intoxication, the paternal grandmother is said to have been a very strong and vigorous woman (though small in stature), who, almost unaided, raised a large family; none of those, however, developed very robust health. The maternal grandfather was a man of vigorous constitution and apparently lived to a good age. Of his children, however, only one seemed to be possessed of much stamina. Two or three of his children died of consumption. Of the patient's own family, one brother and two sisters are still living, one sister died at the age of twelve, another died three or four years before my own patient, leaving one son who seems to be quite healthy. This sister, I was told, had died of a malady similar to that of my own patient. I was never able to corroborate this statement, although one or two members of her family told me that their ailments were certainly very similar. Her sister died at the age of about thirty.

As before stated, my own opportunities for studying this case were so few that it is impossible for me to give a full and accurate history of the course of the disease. It may not be uninteresting, therefore, for me to quote Addison's own words: "The leading and characteristic features of the morbid state to which I would direct attention are, anæmia, general languor, and debility, remarkable feebleness of the heart's action, irritability of the stomach, and a peculiar change in color in the skin, occurring in connection with a diseased condition of the suprarenal capsules." I think no better definition than this could be given now, though it is many years since Addison wrote these words. The disease is more frequent in males than in females. According to Dr. Greenhow's inquiries, the relative proportion is 119 males to 64 females. The majority of the cases occur between the twentieth and fortieth year. As a good example of how infrequently the disease occurs, and how rare it is in America, it may be stated that Dr. William Osler, writing in 1892, states that but eight cases had come under his personal observation, either clinically or anatomically.

With regard to the pathology of the adrenals, it may be said that their most common affection is: (1) Tuberculosis. There may also be (2) Atrophy of one or both glands due to an interstitial cirrhosis. In the case reported above there was atrophy of both glands, which had also undergone a hyaline degeneration, with almost entire destruction of the stroma; (3) There may be malignant disease of these organs, although this is not a very common condition; (4) The condition of the abdominal sympathetic nervous system may be disturbed. "The nerve cells of the semilunar ganglia have been described as degenerated and deeply pigmented, and the nerves sclerotic. The ganglia are not uncommonly entangled in the cicatricial tissue about the adrenals." As to the causation of this disease, several theories have been advanced: (1) That the disease depends upon the loss of function of the suprarenal capsules. This was the view of Addison himself. It was supposed that the blood became poisoned by the retention in the system of some material, the destruction or alteration of which was the peculiar function of the suprarenal capsules; (2) That it is an affection of the sympathetic nervous system most frequently produced by disease of the suprarenal capsules, but also by other chronic affections, involving the solar plexus and its ganglia. According to this view, the disease is really one of the nervous system, and the pigmentation is caused by changes induced through the trophic nerves. Dr. Osler states, with regard to this last theory, that "opposed to it are the facts that the lesions described in the sympathetic system are indefinite, and identical changes occur without the symptoms of Addison's disease."

With regard to the duration of the disease, no definite course has been observed. Inasmuch as the early symptoms are uncertain, it is usually impossible clearly to define the onset of the disease. It has been stated by some authors that there are acute and chronic varieties of the disorder. Most cases are said to end fatally in the course of a year or eighteen months, others have been known to last for some time.

Malaria Following Abdominal Operations.—I. T. Freeland reports two cases which prove that there are exceptions to the rule that post-operative fever means sepsis. One case was operation for appendicitis, the other a myomectomy. After both, the temperature rose to over 102°, without traceable cause. Finally, recollecting that in malarious districts, laparotomies are apt to be followed by malarial fever, quinine was given, with very rapid fall of temperature as a result, and excellent recovery.—*Indiana Medical Journal.*

Myositis Fibrosa.—Montgomery H. Biggs reports a typical case of this comparatively rare affection. The site of predilection may be said to be the lower extremity, the muscles of the thigh and leg being attacked with equal frequency. There is seldom any febrile reaction and little if any general constitutional disturbance. Spontaneous pain may be intense. Upon palpation one finds an immovable firm tumor of woody hardness, the overlying skin is leathery, cannot be picked up in folds, and is of a deep brown color. The symptomatology of the secondary form is of more widespread distribution, and is ushered in by a process essentially acute. The diagnosis of both primary and secondary forms is difficult, and in many instances can be made only by a histologic examination of the affected tissue. The conditions with which it is liable to be confused are neoplasms, especially osteosarcoma, chronic osteomyelitis, and osteoperiostitis, and other forms of polymyositis, especially the syphilitic. In spite of the long duration of this affection, the prognosis is usually favorable; operative interference is indicated only when the mass causes sufficient pressure on adjacent nerve trunks to account for sensory or motor disturbances. Internal medication is practically of no avail. Massage and electricity, together with the use of variously medicated baths, seem to promote the absorption of a part at least of the fibrous tissue, and to give the best results.—*University of Pennsylvania Medical Bulletin.*

The Difficulties in the Treatment of Infantile Scorbutus.—E. W. Saunders considers the following complications: (1) *The infant has complete anorexia and refuses all food.* Forcible feeding must be resorted to; the food must be given in small quantities with a spoon, or better still, with a dropper. It may have to be introduced to the stomach tube; (2) *The infant vomits incessantly.* Several tablespoonfuls of orange juice in three or four ounces of starch solution or some cereal decoction should be given per rectum high up in the sigmoid twice a day; the irritability of the stomach must be quieted by appropriate means. Egg-albumin water is one of the best foods. When the stomach is improved in condition, meat juice, whey, and cream mixtures, or better still, human milk, is given; (3) *The infant suffers from enterocolitis.* Intestines must be cleansed by rectal irrigation; serous stools controlled by atropine and morphine. Some cereal decoction should be used as the base of foods; to this is added a little white of an egg, whey, human milk, or meat juice, but fruit juice must be added to whatever is used. Water with a little lemon juice should be given. Peach juice and grape juice can be given.—*St. Louis Courier of Medicine.*

What You Can Learn by the Study of the Urine Without a Microscope.—D. N. Kinsman says that the daily amount of urine should be measured many times in important cases. The daily amount in a healthy adult varies from forty to seventy ounces. It may be increased by refrigerative fluids, early stages of contracting kidney, polyuria, hysteria, diabetes mellitus, amyloid kidney, alcoholic drinks, critical discharges, and irritant poisons. Decreased, in cardiac weakness, last stage of contracting kidney, parenchymatous disease of kidney, choleraic diseases, and all diseases in which there are colliquative sweats. Color, odor, specific gravity, all indicate certain conditions. The amount of urea is of importance in certain diseases, and uric acid, creatin, and creatinin possess interest. Ethereal sulphates indicate proteid putrefaction, the other sulphates run parallel with the urea. Hæmaturia is significant, and albuminuria indicates a variety of conditions according to its amount, time, and manner of appearance, etc. Glucose may be temporarily present from the ingestion of certain articles of diet, from whooping-cough, or from some injuries to the brain. It is permanently present in diabetes mellitus. —*The Columbus Medical Journal.*

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THE REGULATION OF THE PRACTICE OF HYPNOTISM.

EVER since hypnotism has been studied from a scientific viewpoint and placed in the rank of a rational therapeutic means, the principle, "Hypnotism for none but physicians," has been established by the consensus of authority.

In most European countries, where, as we well know, so much arrant quackery flourishes side by side with the strictest medical laws, it is unlawful for any person who is not a licensed physician to practise hypnotism as a means of treatment, or for any other purpose. In Russia—a country which we have long considered barbaric and semi-Oriental, but which in legislation against charlatanism probably leads the world—the regulations on this subject are most stringent. Not only must the hypnotizer be a physician, but a hypnotic séance cannot be held except in the presence of other physicians—a rule which, by the way, applies in Russia to all operations. In order to surround the patient with further safeguards, the hypnotizer must notify "the local administrative authorities"—in other words, the police—of his intention to hypnotize a patient, giving the date, hour, and the names of the medical witnesses. Public performances of hypnotism are absolutely prohibited, except in clinics or hospitals where only physicians and students of medicine are admitted. Public medical institutions are also exempt from the requirements of notification, simply because their officers are always directly responsible to the government. A careful press censorship is, in addition, exercised in Russia over all works on hypnotism accessible to the lay public.

Of course, the Russian regulations are incompatible with our ideas of personal and professional liberty, but it must be admitted that they express nothing but the legitimate solicitude of the government for the victims of ignorant and unscrupulous hypnotizers. In practice, we fancy that the enforcement of the requirements of notification reacts rather unpleasantly on the physicians themselves. Imagine a patient's thoughts, when he hears that, in order to obtain permission to treat him, the doctor must apply to the police! There is no doubt that the prejudice against hypnotism, which is unfortunately by no means confined to the uncultured classes, is immeasurably increased by such regulations.

We shall not attempt to discuss here the question as to whether hypnotization at the hands of physicians may produce injurious effects upon the patient. In general, it may be said, however, that restrictions placed upon physicians which set difficulties in the way of using any mode of treatment whatever are wrong in principle, and hurtful in practice, except, of course, laws that concern acts criminal in intent. Yet in so enlightened a country as France, we are told by Grossmann in the *Zeitschrift für Hypnotismus*, the use of hypnotism as a therapeutic measure is prohibited in the military and naval hospitals. The source of such legislation is probably to be looked for in the prejudice of the authorities at the head of the medical departments of the French army and navy. Speaking of prejudice against hypnotism among physicians, it may be remembered that Virchow himself, on one occasion, thundered against the "hypnotic leanings" of a certain class of German physicians. On the other hand, such authorities as Bernheim, Liébault, Forel, Krafft-Ebing, Schrenck-Notzing, Moll, Pierre Janet, and Danilevsky are unanimously in favor of unrestricted practice of hypnotism by physicians.

When it comes to the quack hypnotist, and to the amateur mesmerist of the drawing-room, we are entering upon quite a different phase of the subject. In addition to the medical or scientific aspect, there are several questions in connection with this theme that should receive attention from our legislators. The first of these is the opportunity which the hypnotic séance gives for criminal acts, the second the possibility of inducing the "medium" to commit crimes under the influence of post-hypnotic suggestion. The effects of public performances, lectures, and "popular" literature on hypnotism upon the community is accurately expressed in the words of the circular of the Medical Department of the Russian Empire, as quoted in a recent article by Rosenbach in *Vratch*, 1901, 34, 1030: "Public performances of hypnotism may give unscrupulous persons the opportunity of learning the method of hypnotizing, and may enable them to employ this knowledge for immoral or criminal purposes; and, in general, hypnotic performances, without the appropriate scientific explanations, may breed wrong conceptions and create prejudices in the public mind, while post-hypnotic suggestions may be the cause of violations of the public order and peace, or of criminal acts on the part of the hypnotized persons."

In this country, unfortunately, the quack hypnotist, mesmerist, magnetist, or whatever he may call himself, is free to practise his "art" almost everywhere. The truth is, we have not yet, as a people, come to the realization that all freakish, sectarian, and mystic forms of quackery, whether profanely allied to religion or not, should be weeded root and branch out of our national existence. The lay mind is, and ever will be, so blinded by the brazen effrontery, the sleek and suave manner, and the irrational doctrine of the quack that it tolerates him, and alas! in how many instances greets him as the last resort. The result is that "hypnotists," who have been made in a few hours by paying the modest fee of five dollars to one of the numerous "institutes of hypnotism" that advertise broadcast in our best magazines, prey upon the public's credulity, endangering the health and the pocket-books of new victims day by day.

Let us hope that the time may come when physicians will assert their influence in the community in a less timid manner than they do now, and will secure the passage of laws against quackery in all its forms. In the meanwhile, the medical societies should take the regulation of the practice of hypnotism under consideration, and should begin a movement which will arouse the apathy of the public and of the profession to the abatement of the quack hypnotist.

FILTH AND DISEASE.

Popular Science Monthly, January, contains an article on the above subject by Dr. Charles V. Chapin, which is a fairly good exposition of the views that largely prevail now, with regard to the connection between filth and disease.

Dr. Chapin takes the ground that the filth theory of disease, which has so long dominated medical thought, and has been accepted with trusting faith by all classes of the community, is absolutely dead, and forever discredited.

The writer claims that the germ theory of disease has shown that the deductions drawn by believers in filth as a cause of disease have been entirely erroneous and misleading, and further asserts that the germs themselves are rarely air-borne.

Cholera, typhoid fever, diphtheria, and bubonic plague are among others instanced as diseases, which knowledge, gained during the past twenty or thirty years, has proved to be due to a germ origin, and not, as was formerly held, to filth.

It has certainly been definitely decided that all these maladies are caused by bacilli; but on the other hand, no conclusive proof has been forthcoming, that in some, at least, filth has not played a conspicuous part.

With regard to typhoid fever and cholera, it is now known that the germicidal poison is excreted from the bowels, and that the focal discharges may infect water, or the germs may be conveyed to food by flies or insects. As to whether the said germs are frequently air-borne, however, is a point which has been by no means settled, some experienced observers holding that such is the case.

Speaking of the plague, Dr. Chapin denies that filth is a *sine qua non* in its production, and advances the statement that we might have a perfectly drained city with modern plumbing, efficient scavenging, and the purest of water; yet, if the inhabitants were careless in their habits and opposed to isolation, the disease would spread as in an undrained and poorly watered city.

This sweeping statement is hardly in accord with facts; it is true that the plague is of germ origin, but the mode of its dissemination is almost as much of a mystery as in the dark ages; nevertheless, proof upon proof has been in evidence, and indeed is at the present time, that the malady spreads most virulently amid unsanitary surroundings, and that where sanitation is good it makes but little headway.

It may be that the rat and flea are the most prominent disseminators, but there are yet numerous authorities who believe that the plague germ is conveyed by clothing and other fomites.

In the light of experience during the past decade it may be said that efficient sanitation is the best safeguard against plague.

Again, it must be something more than a coincidence that a disease like typhus fever has almost wholly disappeared, sanitary reforms surely were mainly responsible for the suppression of this disease.

Sufficient is not known concerning bacteria and parasites and their relation to disease to affirm that various other causes may not influence to a great extent the inception and spread of contagious maladies.

Personal cleanliness and efficient sanitation have in the past bulked largely in abolishing disease, and will do so in the future. The names of Chadwick, Pettenkoffer, and Shattuck will ever stand out conspicuously among those benefactors to mankind who have accomplished much in the fight against disease.

THE PRESYSTOLIC MURMUR OF AORTIC INSUFFICIENCY.

Under ordinary conditions, the vibrations that are necessarily generated by the passage of blood from auricle to ventricle and from ventricle to pulmonary artery and aorta, are lost in the sounds generated by other factors at the same time, and they are thus not separately audible. Did one possess sufficient acuity of hearing, it might be possible to differentiate the elements that go to make up the normal sounds of the heart; and one should be able to appreciate by sound the movement of the blood in its course through this organ. When, however, the blood current is obstructed, or when regurgitation takes place, the vibrations in question are intensified to such a degree as to give rise to readily detectable adventitious sounds. The auditory sense varies so widely in different individuals, and the interpretation of that which is heard is susceptible of such differing explanations, that it is not surprising that not rarely in a given case as many different opinions may be expressed with regard to cardiac murmurs present as there have been observers. Fortunately, the treatment depends rather upon the physical and functional state of the heart-muscle than upon the nature and the situation of the valvular lesion; and the therapeutic indication is usually the maintenance or the restoration of cardiac compensation, of circulatory equilibrium. It must be admitted, however, that this object can be the better and the more intelligently fulfilled if all that can be known concerning the lesion is known.

Nearly forty years ago, Dr. Austin Flint described a murmur—since known by his name—attending aortic insufficiency, occurring just before the systole, and only with difficulty distinguishable from that due to mitral obstruction. His explanation of the phenomenon was that the blood returned to the left ventricle by regurgitation from the aorta during the diastole, together with the blood entering from the auricle, causes approximation of the mitral leaflets through distention of the ventricle, and that the oncoming stream of blood from the auricle sets these leaflets into abnormal vibration. Other observers have attributed the more important influence to the returning current of blood falling especially upon the anterior mitral leaflet. The mechanism of the murmur, like its physical characters, is thus virtually the same, as that of mitral obstruction. The two conditions, however, are each characterized by certain peculiarities that afford a means for their differentiation. The whole matter has recently been subjected to careful analysis by Dr. W. S. Thayer (*Am. Jour. of the Medical Sciences*, November, 1901, p. 538) on the basis of seventy-four cases of aortic insufficiency observed at the Johns Hopkins Hospital, and in which the lesions were determined after death. As a result of this inquiry, the conclusion is reached that in uncomplicated cases of aortic insufficiency a rumbling, echoing presystolic or mid-diastolic murmur, limited to the region of the apex of the heart, is a very common occurrence when carefully looked for in fully half of the cases. The characters of this murmur are in no way different from those commonly observed in cases of true mitral stenosis, with the exception that the murmur is usually of moderate intensity. It is, however, rarely associated with a tapping systolic impulse and a snapping first sound, which are the rule in cases of true mitral obstruction; while the pulse is large and characteristic of uncomplicated aortic insufficiency. In the absence of these sounds, and with a large pulse, the functional character of a presystolic murmur at the apex, associated with aortic insufficiency, is to be suspected, especially in cases in which there is no history of acute infectious processes such as are ordinarily associated with endocarditis, and in which there is evidence of well-marked arteriosclerosis. A presystolic murmur due to aortic insufficiency may, however, be associated with many of the clinical features of a true organic mitral obstruction.

HEALTH OF AMERICAN TROOPS IN THE PHILIPPINE ISLANDS.

Colonel Charles R. Greenleaf, late chief surgeon to the American troops in the Philippines, has submitted a report of the work of the medical department under his charge.

The report is a succinct narrative, and deals with the health of the troops, the mortality, sanitation, hospitals, transfer of invalids to the United States, transportation, Board of Health of Manila, health of prisoners of war, medical supplies, medical, personnel, and hospital corps.

The health of the troops continues to be good, the ratio of non-effectives to the whole strength having decreased still further. This improvement, says Colonel Greenleaf, is to a certain extent, no doubt, due to greater care in sanitation; but the greatest factor is that the regiments have been gradually weeded of their weaklings and chronic invalids. Service in the Philippines shows on a grand scale the operation of the law of the survival of the fittest. Seasoned soldiers of proper age, disciplined, and intelligent enough to appreciate the primary rules of hygiene, and moderate in their habits, remain. The proportion of sickness among such men as these would be surprisingly small but for two adverse factors.

The first is the inevitable undermining of the strength of the most robust by tropical service; the second, the increase in venereal disease.

Typhoid fever has given little trouble, only a few sporadic cases having occurred from time to time.

Malarial fever has been, as usual, the most prevalent disease. The maximum in August, 1901, 21.55 per cent., and the minimum in April, 10.48 per cent. The percentage of dysentery remained about constant, while diarrhœal and gastric disorders exhibited a slight increase. Wounds and injuries showed little variation, and smallpox was infrequent.

Intestinal parasites, which are common throughout the islands, sometimes caused serious illness; but as a rule, these were responsible for only a small amount of sickness.

Colonel Greenleaf is particularly emphatic as to the grave aspect of the venereal disease question in the Philippines. In the period from September, 1900, to April, 1901, the increase in these affections rose from 8.97 to 20.42 per cent. of total sickness.

Colonel Greenleaf is of the opinion that lest our forces become seriously crippled, and an irreparable injury be done the people of the Philippines by those whose object is to help and elevate them, the subject must be looked squarely in the face, and dealt with as any other contagious disease.

Venereal disease is spreading from Manila as a focus outward into the provinces, and in time a large number of native women will be affected, and with less prospect of cure than their sisters in Manila.

Colonel Greenleaf thinks that a segregation of this class of women in Manila to a certain part of the town, a supervision of their health and a duly recorded treatment of the diseased should be systematically carried out.

The experience of the American troops in the Philippines differs not at all from that of soldiers of other countries, who have gone to tropical countries thickly populated, and which have been under the dominion of white men for a considerable time. Hong-Kong and the large cities of India are striking instances in support of this statement.

Laws strictly enforced regulating prostitution have been shown in these places to be the only effective means of controlling venereal diseases.

The Contagious Diseases Act in India did much to check venereal disease; its repeal alone proved its merits.

Sentimentality or false modesty should not be allowed to stand in the way when the point at issue is the health and well-being of a large number of American citizens.

Sanitation has progressed in Manila. The chief difficulty with soldiers in the field and even in the city itself is to obtain a supply of absolutely pure water, and when such is obtainable by means of sterilizers, to induce the men to take the extra exertion necessary to procure the beverage free from hurtful bacteria and parasites.

The hospitals at the time of the report were in good condition, and a well-earned tribute of praise is paid to the work of the Army Pathological Laboratory.

The transportation of invalids to the United States has been on the whole successfully conducted.

An interesting description is given of the work of the Manila Board of Health, which has been productive of excellent results.

Colonel Greenleaf renews the applications made in former reports for a larger force of medical officers to do duty in the Philippines. He again points out that the number there is altogether inadequate.

The report concludes with a eulogy of the Hospital Corps, the members of which appear to have greatly distinguished themselves by their intelligence, knowledge, and self-reliance.

Colonel Greenleaf's experience in the Philippines invests his statements with much force, and his views, especially with regard to the control of venereal diseases in the islands, are deserving of attention at the hands of the authorities.

THE CARNEGIE INSTITUTION.

MR. CARNEGIE'S gift of $10,000,000 is to be transferred in 5-per-cent. bonds to a Board of Trustees elected by the incorporators of the institution.

The purpose of the institution is expressed by Mr. Carnegie as follows:

"It is proposed to found in the city of Washington, in the spirit of Washington, an institution which, with the coöperation of institutions now or hereafter established there or elsewhere, shall, in the broadest and most liberal manner encourage investigation, research, and discovery; encourage the application of knowledge to the improvement of mankind; provide such buildings, laboratories, books, and apparatus as may be needed, and afford instruction of an advanced character to students, whenever and wherever found, inside or outside of schools, properly qualified to profit thereby.

Among its definite aims is to promote original research, paying great attention thereto, as being one of the chief purposes of this institution. To enable such students as may find Washington the best point for their special studies, to avail themselves of such advantages as may be open to them in the museums, libraries, laboratories, observatory, meteorological, piscicultural, and forestry schools, and kindred institutions of the several departments of the Government. To insure the prompt publication and distribution of the results of scientific investigation."

The scope of the whole scheme is conceived on wide and generous lines, and should not fail to advance the cause of education in this country.

The fact is especially gratifying that so much attention should have been paid to scientific research of every description.

The MEDICAL RECORD has always emphasized the need of large endowments for this purpose, and has insisted that, without the necessary facilities for this kind of work, America cannot successfully compete with those European countries which are well provided in these respects.

THE FOOT SOLDIER'S SHOE.

In an article in the MEDICAL RECORD, written at the commencement of the Spanish-American War, much stress was laid on the necessity of providing our soldiers with suitable and comfortable footwear. The requirements of an infantry soldier's ideal shoe were then briefly sketched.

The proper covering and protection of the soldier's foot is the most important item of an infantry soldier's accouterment.

All the most celebrated leaders of armies, including Marshal Saxe, Napoleon, and the Duke of Wellington, were agreed on this point. Notwithstanding this unanimity of opinion among generals that well-fitting shoes are of supreme moment to foot soldiers, and that an army of men footsore are comparatively useless, the footgear of infantry troops in all parts of the world is notoriously very far from perfect.

It is announced in the *Lancet*, December 7, that Surgeon-Major Berthier of the French claims to have invented an almost ideal boot. Surgeon-Major Berthier's "brodequin haut" is eight inches in height, without reckoning the heel, and is closed in front by two flaps, which are laced in a novel manner. Below on either side there are four eyelets, which should be tightly drawn together over the instep, while above there are five pairs of hooks and two eyelets which may be approximated tightly or loosely, according to circumstances.

Meyer of Zurich is regarded in Europe as the chief authority on soldiers' footwear, but Surgeon-Major Berthier disagrees in toto with the principles upon which the Meyer shoe is constructed, claiming that the soles and uppers are not rational.

There is one feature of Surgeon-Major Berthier's shoes which will not meet the universal approbation of experts. The French surgeon is in favor of heels of a considerable height, asserting that this elevation "facilitates marching by diminishing the muscular work demanded at each uprising on the toes. At the same time a certain inclination of the trunk forward is rendered necessary, which is favorable to progress, forcing the legs to bend and lengthening the step."

Heels of moderate height are probably best adapted for use on soldiers' shoes, although many hold that low heels are the best calculated to give comfort and ease, when much walking is to be done. Certainly authoritative opinion is adverse to very high heels, and at any rate, they should be wide.

INFORMATION REQUIRED REGARDING PULMONARY TUBERCULOSIS.

Dr. Daniel Lewis, the New York State Commissioner of Health, is sending to physicians of the State a series of questions for the purpose of obtaining some fundamental facts concerning pulmonary tuberculosis.

The primary object of these inquiries is to learn, with such accuracy as possible, the number of the population of the State thus affected.

A secondary consideration is to learn something of the conditions which surround them, as indicated by the questions, as they may apply to individual localities.

The questions ask for the initials of the sick, age, and sex, residence, occupation, nationality, duration of disease, source of infection, family history of tuberculosis, whether others of the household are affected, sanitary surroundings, tenement houses, and precautions to prevent spread.

It is not proposed to secure a registry of cases of consumption, but to accumulate data, which will make the Health Department better able to cope with the problem before it in the State.

The plan seems to be a good one, and the medical profession will be acting in the interests of the public health if it will afford all the information it can.

THE MILITARY BOARDS OF HEALTH AND OF CHARITIES IN PORTO RICO.

No reading American can fail to be aware of the good results which have followed the establishment in the towns of Cuba of effective sanitary measures. Little, however, has been heard of the equally good results produced by similar methods in Porto Rico.

An epitome of reports of the Superior Board of Health, and the Board of Charities of Porto Rico, has been published recently, and provides some very instructive reading.

Lieutenant-Colonel John Van R. Hoff, U. S. A., was the leader in this sanitary reform movement, and upon his recommendation the Superior Board of Health was established, and of which he was appointed President.

Perhaps the most important work done by this board has been the task of vaccinating the entire population with lymph from its own vaccine station. But the members of the board have been tireless in their endeavors to introduce a system of sanitation complete in all details, and it must be said that their efforts have been crowned with unqualified success.

In addition to this, Colonel Hoff, as President of the Board of Charities of Porto Rico, together with his coadjutors, performed yeoman service in the cause of humanity, by relieving the great destitution consequent on the hurricane of August 8, 1899.

The board received and distributed thirty-two million pounds of food and many thousand garments; built roads; cleaned towns; rebuilt houses; planned the organization of a leper colony, and did much other necessary charitable and social work.

In Cuba and Porto Rico, Americans can point with pride to the successful administration of their military and army medical officers. The improvements brought about by their agency should alone suffice to justify the American occupation of these islands.

INOCULATION AND ENTERIC FEVER.

Dr. Raymond Crawford, writing in the *Therapeutic Gazette*, December 15, refers to an analysis by Elliot and Washbourne of statistics of 262 cases of enteric fever in South Africa, which they compared with statistics of the Maidstone epidemic in 1897, of the Metropolitan Asylums Board, and of Johns Hopkins Hospital, with a view to showing whether the disease in South Africa was identical with that met with in England and America.

Their general conclusion was that South African enteric fever is identical with that seen in England and America, and that inoculation is of little practical value.

Dr. Crawford is inclined to dissent from this conclusion as somewhat premature. He thinks that a full analysis of the intervals between inoculation and the attacks is necessary before coming to a definite decision on the point, as it has never been claimed that inoculation provides more than a very temporary immunity.

Others who have had a large experience in enteric fever in South Africa, consider that some degree of immunity is almost unquestionable for a period of a few months, and that the severity of the attacks is also diminished by inoculation.

The question of inoculation against enteric fever is still an open one. The evidence for or against has not as yet been decisive enough to warrant a definite conclusion. When the results from its use during the South African war have been collected and tabulated, an authoritative opinion as to its immunizing effects may be expected. Until then views expressed do not carry sufficient weight to uphold or discredit the method.

AMERICAN ARMY DENTAL CORPS.

The establishment of a dental corps in the American army is largely a result of the Spanish-American war, and of the campaign in the Philippines. The government has realized the importance of this branch of military hygiene.

The dentist of the present time is a skilled operator, indeed a specialist, and it was not to be expected that the army surgeon could perform delicate dental work, or treat successfully various ailments of the teeth, gums, and jaws.

The Army Dental Corps consists of thirty members, is organized on the contract system, belongs to the regular establishment, serves officers and enlisted men of the regular and volunteer armies. Each has the relative rank of first lieutenant and receives $150 a month, and quarters when serving with the troops.

Of the thirty men appointed, three compose the examining board of the others, some are in Cuba and Porto Rico, but the majority are in the Philippines, where there is the greatest need of their skill.

"The intention is not," says Surgeon-General Sternberg, "to fit up the entire army with complete sets of teeth, or to do fancy crown or bridge work. Men enlist for only three years. Their teeth must appear sound or they will be rejected, but few of them have their teeth in as fine condition as a gentleman of means outside the army would. We do not propose to do any extravagant repairing unless a man sustains injuries in the service necessitating it."

The organization of the Army Dental Corps is in the way of an experiment, but it seems certain that the results will be so satisfactory that the dentist will be regarded as necessary an adjunct to the army as is the surgeon and the veterinarian.

THE FUNCTIONS OF APPETITE.

The *Literary Digest*, of a recent date, contains an epitome of the lectures of Prof. J. P. Pawlow of St. Petersburg on "The Work of the Digestive Glands," which have recently been translated from Russian into French and reviewed in the *Revue Scientifique* (September 7). The *Literary Digest* commences its article by remarking that too little account, it is thought, is taken by physiologists of the functions of appetite. As these functions belong in one sense to the domain of psychology, the physiologists are apt to devote themselves wholly to the nutritive value of foods, leaving out matters of the taste entirely. Professor Pawlow deprecates this neglect, and fully recognizes the part played by appetite, not only in ordinary digestive processes, but in bringing on or in curing diseased conditions of the digestive organs.

Dr. Pawlow declares himself convinced that a grave mistake is made in not giving special heed to appetite, and that to regard a poor appetite as a subjective symptom of slight importance is a gross error of judgment.

The Russian professor thinks that it is the duty of the physician not only to regulate the lives of certain individual patients according to the principles of promoting digestion by the means best adapted to the case of the sufferers, but also to endeavor to extend and to explain widely a knowledge of the importance of the act of eating.

"If we consider," says Dr. Pawlow, "the influence of the psychic factor in digestion, the question of condiments appears in a new light. Justification is found for the statement which has long been made on empirical grounds—that it is not sufficient to provide nutritious food at meals; it must also be agreeable to the taste.

TELEPHONES IN LONDON.

Unlike New York, or indeed any large American City, the means of inter-communication by telephone in London is limited. This backward condition of things is now about to be remedied, and the work of the British metropolis, it is announced, will soon be pervaded by the method of transmitting the human voice as necessary to the citizens of this continent as the electric car or breakfast.

The London Hospital, December 14, has an editorial on the matter, the writer of which does not appear to regard the coming universal installation of telephones in the big city as an unmixed blessing. He dreads, or feigns to dread, that such an event may be of no especial service to the medical practitioner, but perhaps the reverse, and warns each and all that the impending invasion of London by a telephone system on so extensive a scale will be attended with many drawbacks.

The idea of the London medical journalist would seem to be that the telephone will render the doctor too get a table, so to speak, and that he will be ofttimes at the mercy of bores and patients who will, by the agency of telephone, endeavor to obtain cheap advice. In short, he fears that the unfortunate physician may be compelled against his will to listen to the hair-brained chattering of irresponsible frivolity.

So far as America is concerned, it can be asserted in perfect good faith that to scarcely any class has the telephone proved a greater boon than to the medical man. He may sit in his office with telephone on desk, and hear reports from his patients, and can decide when such or such a one will require his presence. The merits of the telephone system are in fact so obvious that it is needless to further dilate upon them.

Telephones here are not entirely perfect yet, but the benefits derived from their use greatly counterbalance their defects.

London medical men in time to come will wonder however they managed to get along without such a convenience.

"Tipping the Nurse."

We have heard not a little of late concerning a division of fees between the attending physician and the consultant, especially the surgical consultant in cases in which an operation is performed, and it is to be feared that this practice does exist in some places, though it is hoped in not any considerable degree, and certainly not among reputable men. Despicable as is such a course, it appears that even a worse condition of affairs may exist, as is indicated by a communication to the *Lancet* from a medical practitioner who calls attention to the practice of certain medical men (unfortunately for the profession far too numerous) of paying sums varying from 1s. to half the confinement fee or more to the nurses in attendance. Such a state of affairs can only exist when and where the practice of medicine is looked upon as a business rather than a profession, and it is comparable with the conduct of a certain, and fortunately small, class of lawyers who are responsible for the institution of suits for damages in cases that may charitably be designated as of doubtful character.

The First Award of the Nobel Prizes.

Alfred Nobel, the inventor of dynamite, and who left his immense fortune of over $9,000,000 to found prizes, has an appreciative memoir in the *American Review of Reviews*, January.

According to the terms of his will, the annual interest upon the whole of his fortune was to be divided into five equal portions, which were to be distributed every year as rewards to the persons who had deserved best of mankind in five departments of human activity.

One part to go to the man who shall have made the most important discovery or invention in the domain of physical science; another, to the man who shall have made the most important discovery or introduced the greatest improvement in chemistry; the third, to the author of the most important discovery in the domain of physiology or medicine; the fourth, to the man who shall have produced the most remarkable literary work of an idealistic nature; and, finally, the fifth, to the man who shall have done the most or best work for the fraternity of nations, the suppression or reduction of standing armies, and the formation and propagation of peace congresses.

The first award of these prizes has just been made. The medical prize went to Dr. Emil Behring, professor at Marburg, Germany, and the discoverer of antitoxin for diphtheria. In the department of chemistry, Dr. J. H. Van't Hoff, a native of Holland, who has held a professorship for the past six years in the University of Berlin, received the prize. He was for some years professor of physical chemistry at Amsterdam. While there he contributed largely to the world's knowledge of molecular physics, and is regarded as the founder of a new system of stereochemistry.

William Röntgen was chosen as the recipient of the prize in physics. Röntgen, who is now in his fifty-seventh year, is, like Behring, a professor at Marburg.

Dr. Henry Dunant, the founder of the Red Cross Society, was selected, together with M. Frederick Passy, for the prize for the encouragement of peace and arbitration, which was equally divided between them.

The $20,000 which comes to Dr. Dunant is not only well deserved, but will relieve him from abject poverty, as, when the award was made, he was reported ill and destitute in a Swiss hospital.

Berthelot, the Greatest Living Chemist.

Some three months ago honor was paid by the scientific men of all civilized nations to Virchow, the renowned German pathologist, on the occasion of his eightieth birthday.

At the Sorbonne, in Paris, a like gathering was held, to commemorate the fiftieth anniversary of the publication of M. Berthelot's first memoir. The President of the French Republic presided, assisted by the entire cabinet, by representatives of all departments of the government, and by delegates from the learned societies of France and of other nations.

Pierre Eugene Marcelin Berthelot was born in Paris on October 25, 1827, and has lived in that city throughout his life.

As a student he distinguished himself in history and philosophy, as well as in science, but has since his undergraduate days made natural science his especial study. In 1851 he was appointed assistant in chemistry at the Collège de France.

His chief work has been in chemistry. During fifty years he has written 600 memoirs, and has published treatises on organic chemistry, on chemical mechanics, on agricultural chemistry, besides works on the philosophy of science and on the history of alchemy.

M. Berthelot's name is mainly associated, however, with two remarkable discoveries—the synthesis of organic compounds and thermochemistry.

He disproved Lavoisier's theory that chemistry was purely an analytical science by demonstrating that chemistry could also perform syntheses.

In 1862 Berthelot, by the agency of the electric arc, effected the direct combination of carbon and hydrogen, forming acetylene.

By his creation of thermochemistry the evolution of smokeless powder was rendered possible.

The world of commerce has benefited largely by the discoveries of Berthelot, and medicine is indebted to him for a number of new drugs.

None of his discoveries were patented, so that pecuniarily he has profited nothing from them.

He is a professor of the Collège de France, a member of the Academy of Sciences, of the French Academy, a member for life of the Senate, an ex-minister of Foreign Affairs, and a member of the principal academies and scientific societies of Europe.

The names of Pasteur and Berthelot will go down to posterity, linked together, as those of the greatest French scientists of the latter half of the past century.

News of the Week.

Gifts to Hospitals.—The Norwegian Lutheran Deaconesses' Home and Hospital in Brooklyn has received an endowment of $64,000 from a resident of Newark, N. J. The gift is intended, it is said, as a memorial to Severin S. Skougaard, the Norwegian singer. The Norwegian Hospital, which is at Forty-sixth street and Fourth avenue, was established twenty years ago. Plans for a new building to cost over $100,000, directly opposite the present building, have been completed, and work on it will be begun as soon as the money in hand warrants the undertaking.

At the annual reception in the babies' wards of the Post-Graduate Hospital, held one day last week, Dr. D. B. St. John Roosa, President of the Post-Graduate Hospital Association, announced that a man, whose name is withheld, has made a gift of $100,000 to be applied to the liquidation of the hospital's debt, on condition that the remaining $300,000 of the hospital's indebtedness be raised by other means.

Tubercular Milk in New York City.—The State Commissioner of Agriculture recently discovered a herd of tuberculous cows in a dairy from which some of the city milk supply is obtained. Fifty cows out of a herd of 108 have died of tuberculosis during the past six months. The herd was at once quarantined, and the animals which were undoubtedly tuberculous were killed, the others being kept under strict observation. One of the members of the Agricultural Committee of the State Senate makes the alarming assertion that the discovery is simply indicative of the conditions which prevail to a certain extent throughout the dairy center of the State.

Fraud Order Against a Diploma Mill.—The Postmaster-General issued an order denying the use of the mails to the "Central University of Medicine and Science," and J. W. Norton Smith, President, of Jersey City. The university represented that it was an incorporated institution in good standing and that it had an extensive medical faculty. To those desiring to practise medicine it sold diplomas, at prices ranging from $5 to $20, according to the ability of the applicant to pay. The scheme is identical with that once operated in Chicago by James Armstrong, under the title of the Metropolitan Medical College. Armstrong was tried in the United States Circuit Court and sentenced to one year in jail. The Department of Justice will probably take action against J. W. Norton Smith, who is named in the fraud order as the promoter of the present scheme, and who has already had trouble with the local authorities.

The Surgeon-General of the New Jersey National Guard.—Governor-elect Murphy of New Jersey, has written a letter to Dr. John D. McGill of Jersey City refusing to accept his resignation as Surgeon-General of the National Guard of the State of New Jersey. He urged Dr. McGill to serve during his administration and Dr. McGill has consented to do so.

The Bacillus of Canities.—It is reported that Metchnikoff has discovered a microorganism which he calls *Bacillus pigme-tophagus*, which is the cause of the loss of pigment in gray hair. This bacillus is constantly present in the hairy parts, he says, but is not virulent, and the tissues in health easily keep it under; but when the resisting power of the economy is weakened by age, especially if there is added the action of poverty or of mental or physical strain, the bacilli gain the upper hand and rapidly destroy the capillary pigment.

Bob Veal in this City.—A bill has been introduced into the Legislature forbidding the slaughter for the purpose of selling, or sale within the State, or importation into any town within the State for food of any calf or carcass of the same, or any part thereof except the hide, unless it is in good, healthy condition, and at least four weeks of age at the time of killing. Railroads are forbidden to transport any veal of the prescribed youth. It is asserted that a large amount of bob veal is consumed in this city.

The Study of Scarlet Fever.—The Memorial Institute for Infectious Diseases, founded in Chicago by Mr. and Mrs. Harold McCormick in memory of their son, John Rockefeller McCormick, who died a year ago of scarlet fever, was recently incorporated. The institution has been generously endowed, but for the present it will have no building of its own. At the beginning its researches will be devoted to scarlet fever solely, but the work will be carried on in some other medical institution. It is the intention, however, to house the institution later in a building of its own, and to broaden the scope of its inquiry, so that it will include all that its name indicates.

A Deserting Russian Naval Surgeon.—The Supreme Court in Washington recently decided that a liberal construction of the treaty between the United States and Russia demanded the delivery to that country of Dr. Leo Alexandroff, a deserter from the Russian warship *Variag*, notwithstanding he had renounced allegiance to that country and signified his intention of becoming an American citizen. He came to the United States a year or so ago, with a detail of men, to act as Assistant Surgeon on the *Variag*, then building at Philadelphia, when she should be completed, but almost immediately deserted, and announced his intention of remaining in this country and becoming a citizen. Three of the justices vigorously dissented from this decision, holding that the case was not covered by the express provisions of the treaty, and in the absence of such express provision there was no power of the executive or the judiciary to surrender a fugitive.

A Centenarian Practitioner.—Dr. John Wood, said be the oldest practising physician in the world, celebrated his one hundred and first birthday at Coffeyville, Kan., on January 4. When Kansas was admitted into Statehood, he was a United States commissioner, and John Brown was twice brought before him, once charged with murder and once with harboring fugitive slaves.

Smallpox in London.—But little headway is being made by the health authorities in London against the present outbreak of smallpox. From May up to January 10, there were 2,273 cases reported to the authorities, and the number of new cases averages from twenty-five to thirty each day. The number of cases under treatment on January 10 was 878. The patients in London are not treated in hospital buildings, but in a number of hospital ships fifteen miles down the Thames, or in shelters erected in unfrequented districts on the banks of the river. Houses are rigorously inspected, and where infection has been found, they are thoroughly fumigated, and when the diseased person is removed, the other inmates are quarantined. The death rate during the present epidemic has been 14 per cent. in the cases of persons who had been vaccinated, 65 per cent. in doubtful cases, and 50½ per cent. when the patients had not been vaccinated. The health authorities have decided to erect buildings for the accommodation of 800 additional patients, in order that they may be prepared to cope with the situation, should the present epidemic assume larger proportions.

The Carnegie Institution.—Ex-President Gilman of the Johns Hopkins, one of the trustees of the new institution for the foundation of which Mr. Andrew Carnegie has given $10,000,000, recently outlined its scope in a lecture delivered in Baltimore. The plan as outlined by Dr. Gilman is more universal than the university, and is broad enough to cover the whole field of human effort and achievement. It involves no rivalry with existing institutions, nor yet the establishment of a new one in the sense of a separate college or university with a resident faculty. Its privilege will be extended to anybody, young or old, white or black, man or woman, graduate or undergraduate, native or foreign. If a mechanic, a student, an inventor, or an institution is found to be developing a special line of work toward the welfare or improvement of mankind, such individual, or institution will be considered a proper object for assistance, if such is needed to insure success. It is not intended to build expensive permanent laboratories, when necessary laboratories may be constructed for specific purposes, but they will be of a temporary character. There will be no imposing group of buildings, and such administration buildings as may be necessary will be very modest. There will be no terms of admission or graduation, and no prescribed courses of study. It will be for the encouragement of practical workers, and not an institution for the promotion of higher learning or of learning of any degree. It will be a corporation for the creation of knowledge rather than for its promulgation. Doubtless, medical research, along with other departments of scientific and learned investigation, will profit by this example of Mr. Carnegie's philodory.

Philadelphia County Medical Society.—At a stated meeting held January 8, Dr. Ernest W. Kelsey gave a lantern exhibition illustrating many interesting features of "Arctic Alaska," observed during a service of sixteen months as surgeon to the Alaska Commercial Company.

Camden City Medical Society.—At the annual meeting held January 7, the following officers were elected for the ensuing year: *President*, Dr. Robert Casperson; *Vice-President*, Dr. J. F. Leavitt; *Secretary*, Dr. V. de Grofft; *Treasurer*, Dr. W. H. Pratt; *Historian*, Dr. Daniel Strock; *Librarian*, Dr. Joseph H. Willis.

Membership in Medical Societies.—A writer in the *Journal of the American Medical Association* estimates that there are 77,000 physicians in regular practice in the United States who belong to no medical society whatever. This estimate is based upon the assumption that there are 110,000 regular physicians in the country, about 33,000 of whom are members of one or more local, State, or national societies.

Light Anæsthesia.—The Russian surgeon Professor Minin is using the violet rays of electric light as a substitute for cocaine in surface operations. It is claimed that they are antiseptic as well as anæsthetic.

Prize Essays for Sanatorium Plans.—The following are the conditions of competition for the prizes offered, as was announced last week, for the best essays and plans for the sanatorium about to be established in England, through the donation of £200,000, for the treatment of tuberculosis: 1. Medical men of all nationalities may compete. The papers may either be the work of a medical man, or the joint production of a medical man and an architect. 2. The sanatorium is intended for 100 tuberculous patients—fifty male and fifty female. 3. Of the total number of beds, eighty-eight will be assigned to the more necessitous classes, while twelve will be reserved for the well-to-do. 4. The accommodation for all patients is to be comfortable, a separate room being provided for each. Superior arrangements to be made for the more wealthy patients. 5. It may be taken for granted that the sanatorium will be erected on an levated and sloping site, with a sunny exposure, and well sheltered from cold winds. It will have a farm at a convenient distance, and be surrounded by extensive grounds, well-wooded, and affording ample space for exercises of various kinds. The soil will be dry and permeable, and the water supply abundant. 6. The sanatorium must be fitted with the latest sanitary arrangements, and equipped with all requirements for scientific research. Provision should also be made for the recreation of the patients. 7. Economy in construction will be an important consideration, but it must not interfere with the reasonable comfort of the patients or the efficiency of the institution. 8. The essays must be in English, and typewritten. 9. The essays must not bear the name or names of their authors, but should have a motto, and each essay should be accompanied by a sealed envelope bearing the motto on the outside and containing the full name and address of the author or authors inside. 10. All essays and plans must be sent, postage paid, on or before the 15th of April, 1902, to one of the Secretaries of the Committee: Dr. P. Horton-Smith, 15 Upper Brook Street, W. London; or Dr. J. Broadbent, 35 Seymour Street, W. London. 11. Three money prizes of £500, £200, and £100, respectively, will be awarded in order of merit, on the recommendation of the Advisory Committee, for the three best essays, provided they come up to the requisite standard of excellence. Brevity will be an important consideration, and a summary of the main features of the scheme should be appended to the paper. Unsuccessful papers will be returned to the authors.

A Biological Laboratory at Vassar College.—The New England Building at Vassar College, so named because the funds for its erection came from New England, was formally opened and all the students were invited. Although generally styled the Biological Laboratory, the building is also designed for geology and physiology, and answers a pressing need in each of these directions. In external structure the building is Colonial, built of red brick with marble trimmings. In the basement are three rooms for geology, one for botany, an aquarium room, a dark room for photography, and a dark room for plant physiology, besides storage and coat rooms. On the first floor are a geology lecture and a geology recitation room, a botany and a zoology room; on the second floor are the physiological laboratory, general laboratory, lecture room, preparatory room, office, and museum.

The New York State Charitable Institutions.—In his annual message to the Legislature, Governor Odell had a good deal to say of what he regards as the unbusinesslike and extravagant administration of the various charitable institutions of the State. He gives the figures of the per capita cost of maintenance at the different reformatories, showing a difference between the highest and lowest of $1.43 per week. This margin of difference, he says, cannot be explained in any other way than by more expensive administration, as the cost of supplies does not vary enough to account for it. He adds that it is not alone in the expenditures for maintenance that the waste of public money is exemplified, but also as to the demands for improvements, "which are dictated either by sentiment or ideas that are both unbusinesslike and undesirable." As illustrating this tendency toward extravagant expenditures, he mentions some of the items asked for by various institutions. One asks for a mortuary at a cost of $4,500, another a railroad switch at a cost of $10,000. An idiot asylum wants a propagating house for flowers, at a cost of $3,200; another institution asks for a stable for officials' horses and carriages, to cost $5,000; another asks for an appropriation of $125,000 for the purchase of a farm, and still another, a cottage for its florist, at a cost of $3,000. As a remedy for the lack of uniformity in expenditures and a curb on expensive aspirations, the Governor recommends that the present State Board of Charities be charged with the care and administration of our charitable institutions, and that visiting committees be appointed annually, and be empowered to visit and report to the Governor as to the conditions found; that the present Boards of Managers be abolished and the State Board of Charities be permitted to recommend, subject to the approval of the Governor, a superintendent, either from their own number or otherwise, with a salary of $5,000 per annum, who shall have full authority, under such regulations as may be adopted by them, subject to executive approval, over all charitable institutions. He believes that a very great saving will be effected if these recommendations are adopted; but the State Board of Charities dissents from this view, and has protested vigorously against the abolition of the boards of managers of the several charitable institutions.

Increase in Smallpox.—The number of cases of smallpox reported to the Philadelphia Bureau of Health for the week ended January 11 was 131, with fifteen deaths.

A Victory for a Hospital Medical Staff.—The National Hospital for the Paralyzed and Epileptic in London seems to have got over its troubles. The recommendations of the committee have been carried by the governors. The staff has obtained the representation it desired, and the director has been got rid of—with a gratuity of £600 and a pension of £450. He evidently makes a good thing of it, and this raises the query as to the use in this way of money subscribed for the sick.

The staff dined together a night or two ago, and presented their secretary with a piece of plate.

Vaginal Cancer; Corrigendum.—Dr. W. Roger Williams writes: Will you kindly correct a misprint which occurs in my paper on "Vaginal Cancer" in your issue of November 30? I am there represented as saying that "4.3 per cent. of all cancers in women are of vaginal origin."

This is a mistake, the printer's devil having played havoc with the decimal point. I have found that less than a moiety per cent. of all cancers in women are of vaginal origin—viz., .43 per cent.

The Samuel D. Gross Prize of $1,000.00 has been awarded to Dr. R. H. M. Dawbarn of this city for his essay on the "Treatment of Certain Malignant Growths by Excision of the External Carotids."

The Season's Diseases.—The influence of the season is still exhibited in the mortality returns. Of the 488 deaths reported to the Philadelphia Bureau of Health for the week ended January 4, 72 were due to pneumonia and 63 to pulmonary tuberculosis. Four deaths were attributed to influenza and 18 to inanition. Other important causes of death were heart disease (52 cases), nephritis (34), apoplexy (21), smallpox (16), inflammation of the brain (15), convulsions (14), inflammation of the stomach and bowels (14), apoplexy (13), diphtheria (13). The total number of deaths for the week was twelve more than for the preceding week, and thirty-five more than for the corresponding week of the previous year. There were reported for the week 90 cases of smallpox, 88 of diphtheria, 66 of scarlet fever, 16 of typhoid fever.

The Health of Havana.—The report of Major Gorgas, Havana's most efficient sanitary officer, on the health conditions of the city for November is of the same tenor as those that have preceded it each month. A comparison of the statistics shows that the sanitary condition of the city is excellent, each month showing a steady improvement over the corresponding months of the preceding year. During the last eleven years the average number of deaths for November has been 902. In November this year there were 443 deaths. The death rate was 19.58, which compares favorably with cities of the same size in the leading civilized countries of the world. During November there were no cases and no deaths from yellow fever. That can be said of no preceding November since 1762. During the last eleven years the average number of deaths from that disease in November has been 48.

Society of Gymnasium Directors.—The fifth annual meeting of this society was held at Columbia University last week, under the presidency of Dr. R. Tait McKenzie of McGill University, Montreal. The object of the organization is declared to be the advancement of physical education in institutions of higher learning, and the theoretical and practical questions pertaining to gymnastics in these institutions. Men who have had three years of professional teaching experience are eligible for membership, provided they are members of the American Association for the Advancement of Physical Education. The following officers were elected: *President*, Dr. Paul C. Phillips of Amherst College; *First Vice-President*, Dr. Edward Hitchcock of Cornell; *Second Vice-President*, Dr. Frederick E. Parker of Brown; *Secretary and Treasurer*, Dr. James A. Babbitt of Haverford; *Members of the Council and Admission Committee*, Dr. William G. Anderson of Yale, Dr. Dudley A. Sargent of Harvard, and Dr. R. Tait McKenzie of McGill. The next meeting will be held at Columbia during the Christmas holidays in 1902.

The American Electro-Therapeutic Association will hold its twelfth annual meeting at the Kaaterskill, Catskill Mountains, N. Y., on Tuesday, Wednesday, and Thursday, September 2, 3, and 4, 1902. The officers of the association are: *President*, Dr. Fred H. Morse, Melrose, Mass.; *Secretary*, Dr. Georgr E. Bill, Harrisburg, Pa.; *Treasurer*, Dr. R. J. Nunn Savannah, Ga.

Dr. W. D. Lederman of this city has been appointed to the advisory board of the St. Joseph Hospital, Silver City, New Mexico; an institution established for the treatment of pulmonary tuberculosis.

College of Physicians of Philadelphia. Section on General Medicine.—At a stated meeting held January 13, Dr. D. J. Milton Miller showed "A Case of Myxœdema" that had been exhibited to the section five years previously, and in which the more obtrusive phenomena were held in abeyance by intermittent administration of thyroid gland. Dr. Miller also read a paper entitled "A Case of Pneumococcic Arthritis Complicating Acute Croupous Pneumonia." in which bacteriologic investigation disclosed the presence of diplococci in the fluid aspirated from the inflamed joint. Dr. John H. W. Rhein reported two cases of "Insanity of Doubt." Dr. J. M. Anders read a paper entitled "A Case of Aortic Stenosis Ending in Sudden Death; Dilatation of the Aorta at Its Root and Marked Stenosis of the Vessel Beyond." The development of accentuation of the aortic second sound in a case in which previously there had been the physical evidences of aortic stenosis with an enfeebled aortic second sound, together with an increased area of dulness at the base of the heart, suggested during life the dilatation of the aorta that was found after death. Dr. Augustus A. Eshner exhibited "A Case of Aortic Obstruction and Insufficiency" in a man forty years old with a history of previous attacks of scarlet fever, smallpox, and influenza, but none of syphilis or of alcoholic excess. The area of cardiac dulness was considerably increased, a diastolic thrill was palpable over the body of the heart, at its base and to the right of the sternum in the third and fourth interspaces, the first sound of the heart was accompanied by a blowing murmur and was followed by a loud, rough, musical murmur, friction sounds were audible at base of the heart, and systolic retraction was visible upon the front and back of the lower portion of the left half of the chest. Dr. F. A. Packard was elected President of the section and Dr. S. McC. Hamill clerk for the ensuing year.

Obituary Notes.—Dr. Joseph S. Carreau of this city died suddenly on January 7 of disease of the heart. He was born in Canada fifty-three years ago, and was graduated from the New York University Medical College in the class of 1874.

Dr. William Augustus Pierrepont died of heart disease at his home in Brooklyn on January 6, at the age of forty-six years. He was born in Brooklyn, and after a preparatory education he studied law at Columbia University, receiving a degree in 1876. He did not practise law, but took a course in medicine in the New York University Medical College, being graduated in 1882. The following year he became resident physician and surgeon of the Brooklyn Hospital, where he remained for two years. After that he practised with Dr. Jasper Griswold in Manhattan. Of late years, Dr. Pierrepont had not practised.

Dr. G. H. Wilson of Meriden, Conn., a homœopathic practitioner and ex-mayor of the city, died on January 10 at the age of seventy-eight years. He was a native of Stockbridge, Mass., and was graduated from the Berkshire Medical College, Pittsfield, in 1849.

Dr. Alfred N. Mahon, son of Dr. J. B. Mahon of Pittston, Pa., died in that city on Saturday night of nervous prostration, following typhoid fever, which he suffered in the Philippines while in the service of the United States as a surgeon on the transport *McClellan*. He was in the service two years, returning home last November broken down in health. He was twenty-nine years old.

Dr. J. J. Buchanan, Assistant Surgeon United States Navy, cut his throat with a razor January 10, while in delirium at his ward in the Naval Hospital on Coasters' Harbor Island. Dr. Buchanan was assigned to duty aboard the *Constellation* on January 2. About that date he was taken ill with typhoid fever and was sent to the Naval Hospital. His nurse was out of the ward, when he left his bed to-day and cut his throat several times, dying immediately. Dr. Buchanan recently received his appointment from Texas, coming to this station from the cruiser *Columbia*. He was twenty-four years old.

Dr. Wm. C Dixon died at Philadelphia on January 6, as the result of appendicitis, at the age of sixty-two years. He was graduated from the Medical Department of the University of Pennsylvania with the Class of 1860, and at the outbreak of the Civil War he enlisted as a Surgeon in the army, being assigned to the Satterlee Hospital in West Philadelphia. He was a visiting physician to the Pennsylvania Hospital for the Insane and examining physician for the insane department of the Philadelphia Hospital, attending physician to the Industrial Home for Blind Women and visiting physician to the Shelter.

Dr. Chas. Francis Carpenter died at West Chester, Pa., on January 5, at the age of seventy-six years. He was graduated from the Medical Department of the University of Pennsylvania in 1849. In 1857 he went to Louisville, Ky., where he was engaged in practice forty years, and where during the Civil War he had charge of the army hospital. He returned to West Chester three years ago. He had been an extensive traveler.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

Reorganization of the Army Medical Service—Dr. Goodhart's Purvis Oration—Prince of Wales' Hospital Fund—Smallpox—Livingstone College.

London, December 27, 1901.

Army reorganization occupies a considerable share of public attention even in this holiday season. Lord Rosebery's cry for efficiency at the War Office has been re-echoed in all directions and is being applied to the Medical Department. Possibly that may derive some benefit from the discussion that has been evoked, for it is clearer than ever that the scheme of reform of the Royal Army Medical Corps, like that for the whole army, was launched in a hasty manner, without any preliminary consultation with those who could have given expert advice. Mr. Brodrick may be clever, alert, and determined, but he is only an amateur, and could not be expected to evolve a scheme of reform of a department whose duties he could not easily grasp. He has managed to increase the distrust of the authorities which his previous conduct had produced. Everywhere one hears only of dissatisfaction, and no wonder. Think of requiring an officer to be examined once more after eighteen years' service; and think of such a requirement affecting the right to retire on a pension. Further, remember that this examination is only the last of a series which is to dog the steps of the officer at every stage through all those eighteen years. These examinations alone are quite enough to deter young men from entering the service. Sir F. Treves ventured to defend them, and evidently thinks any surgeon should be able to pass them. But though he has achieved the position of an authority on some subjects, I venture to say there are questions in the domain of surgery about which he would not care to be examined, and, of course, as a civilian, even with his late experience in South Africa, he can hardly be supposed to be familiar with all the points affecting the work of the R. A. M. C.

The earlier examination stands on a different level, but the committee seem to have so muddled the scheme that we have different interpretations of its effects. One says, junior officers are to be kept at home for four years; another declares that they will go to India on leaving Aldershot, and after three years be examined there. But the scheme gives them six months at a hospital to prepare for the examination. This looks likely to lead to disorganization. How are all these officers, scattered as they must be throughout India, to be gathered for examination? Their stations could not be left unoccupied, and the cost of supplying their places while they are on study leave and being examined would be very great.

The proposed inspection of the military hospitals by the Advisory Board looks well enough on the surface to the mere civilian, but when we come to hear from officers of experience, what it would become, it appears likely to prove impracticable.

Altogether, I doubt if the scheme will, in the long run, improve Mr. Brodrick's reputation as a politician, all because he was so satisfied of his own ability to form it that he declined to consult expert opinion.

The Purvis Oration was founded by the West Kent Medical and Chirurgical Society in memory of its late Treasurer, Dr. Prior Purvis, a practitioner of sixty-six or sixty-seven years' standing, for he took his first qualification in 1834; He added the "M.B." of London in 1839, and the "M.D." in 1842. The oration this year was delivered by Dr. Goodhart, who has always something to say well worth listening to, and generally says it in a way both attractive and instructive. He began by remarking how happy must he be to whom it is given to look back upon the wealth of experience that sixty-seven years of practice must have brought, and what a pity it seems that Prior Purvis cannot deliver his own oration and unload himself for our benefit of his stores of knowledge. If that could be, Dr. Goodhart felt sure, he said, that one thing revealed would be that the practice of medicine all along is an original research; so he took this thought for his subject and dilated upon it in a delightful manner. "Only the other day," he remarked, "the President of the British Medical Association, no doubt with that modesty which so much becomes a great position, delivered practical medicine, bound hand and foot, and cast it into the chamber of death." That was his translation of the President's estimate of the biologist above the practitioner, the former being described as a high priest of the arcana of nature," the latter as not so, although "indispensable." But Dr. Goodhart, for the practical man, claimed no less than equality with the great biologists, and as to the" indispensability " saw no more in that than the privilege shared "in common with, say, the undertaker," and he went on to say, "all of us may be, all of us ought to be, some are, let us hope, these high priests of the arcana of nature." So far from admitting that the only scientific worker is the man who spends laborious nights and days in a laboratory, he maintained nearly the opposite—"that the practitioner is the man who very often plans the coach, and that the function of the worker in the laboratory is to drive in the bolts and put on the varnish."

The practical man is the pioneer, though the last man who drives home a nail is often credited with the complete discovery—one of the injustices of progress. Where should we be if Bright, the practical man by clinical observations, had not shown biologists the way—led them, like Moses, to Mount Pisgah, showed them the promised land, and said, "Go forward, and possess it." So with Wilkes, "the father of all careful work done in England in the dead-house;" with George Johnson, and other early pathologists. So Jenner and Patrick Stewart, who discovered at the bedside and the P. M. room the differences between typhus and typhoid.

To find the germ of typhus was now to find merely a missing link in an imperfect record, "unless it be now under the influence of the night; for of epidemics also it is true, "the night cometh when no man can work."

Other illustrations mentioned were malaria, Addison's disease, myxœdema, vaccination, as long pointing to serum treatment, without the great biologists profiting by the lesson till Pasteur regenerated the idea, and Lister showed how it could be carried out safely.

From this Dr. Goodhart passed on to relate some of his own ripe experience in clinical work, and very suggestive all of them were.

The annual meeting of the Prince of Wales' Hospital Fund, which on the first of the New Year will be named King Edward's Hospital Fund, was held on the 21st.

The Prince presided and made a speech expressing his own interest in the work. The financial statement was approved, which recommended a distribution of £50,000 among the hospitals, being £1,000 more than last year.

Considerable sums have already been subscribed in connection with the fund to form a coronation gift to the King.

Smallpox is still on the increase. The week opened with the largest number of notifications yet attained, viz., forty-one on Monday. Some cases have also occurred at other provincial localities—said to be generally taken by tramps. At midnight on Wednesday there were 590 cases under treatment, and yesterday twenty-seven fresh notifications were added.

Livingstone College was founded in memory of the great medical missionary. It was opened in 1899 for the training of medical missionaries. During the last term there were nineteen students in residence and nine others non-resident.

The Poplar and West Ham Hospitals have afforded facilities for clinical instruction to the students.

THE PRIVILEGES OF THE ACADEMY OF MEDICINE AND THE DUES QUESTION.

To the Editor of the Medical Record:

Dear Sir: In your issue of January 4, a "mortified listener" ventilates his grief at what occurred in a stated meeting of the New York Academy of Medicine a few weeks ago. Being anonymous the letter deserves no reply. But for the benefit of those who may have read it and are no better acquainted with the Academy than your correspondent, I copy from its by-laws as follows:

"VIII. The Treasurer shall report to the Council in February the names of all Fellows who are one year or more in arrears of dues.

"X. Sec. 12. The council shall . . . . notify said delinquents by mail of their arrearages.

"Sec. 13. It shall within eight months thereafter report to the Academy the names of all Fellows so notified, whose dues remain unpaid."

That settles the question of the propriety of the reading of certain names before the stated meeting. No. XXIII of the by-laws militates directly against the gratuitous advice furnished by your correspondent, who wants special "executive sessions" of the Academy of Medicine for the reading of names. If he were a member of the Academy and saw fit to do so, he could use his "best" efforts—but not anonymously—to change all that.

To my anonymous mortified moralist "it seems not unduly mercenary" (what is duly mercenary, Mr. Editor?) "for the members to insist that a substantial distinction should be made between the privileges of members and non-members." The New York Academy of Medicine, however, has seen fit to follow a different policy. According to its constitution, "each candidate for resident fellowship must have been a graduate and licentiate in medicine in active practice, or have been engaged in scientific work associated therewith, for the three years preceding the application, and must be a resident of the State of New York."

This law excludes from actual fellowship many of the younger members of the profession merely on account of their ages. That is why the spirit of generosity becoming a liberal profession has caused the Academy to admit them, and those whose means do not yet allow them to aid financially in the object of the Academy—"the promotion of the service and art of medicine, including the maintenance of a public library" (Constitution, Art. II)—to almost all the privileges of Fellows; and why national medical societies are given the freedom of our halls without cost. This liberality—condemned by your correspondent—is widely appreciated, and has largely contributed to the high esteem the Academy is held in all over the country, and even in New York City. The best proof is found in the large number of non-members who crowd the reading rooms. In connection with these facts I may be permitted to divulge an observation made during my forty-five years' membership and my seventeen years' officership, viz., that those who pay up regularly as soon as the annual bill is presented (a large majority) express their delight at the multitude of outsiders, and at the general good our institution does, while fault-finding is indulged in by procrastinators, delinquents, and mortified listeners.

To be a Fellow of the Academy is a high honor, both on account of the good it does and of the difficulty encountered before admission. That is why we cordially invite meritorious and ambitious young men to join. The careful sifting practised by the Committee on Admission makes it a select society and the acknowledged head center of the body politic of New York. This honor is appreciated by its Fellows, and I trust there will be no change in that sentiment. The majority of the Fellows do not want a "substantial distribution." They will always open their doors to their young colleagues, and to such as are not yet prepared to pay for the facilities offered. The large number of persons utilizing them proves the policy of the Academy a glorious success.

Now, sir, when a man who can afford to pay twenty dollars a year for benefits offered to him and to his brethren, refuses to contribute to the maintenance of the Academy and its library, and has the nerve of getting up in public and telling the Academy that he refuses his contribution on the ground that he prefers to take its services gratis—permitted to do so by the unwritten law of the Academy—I shall always believe him almost as bad as an anonymous aggressor, and shall always, as I did lately and in a similar instance a year ago, stand up and expose—not anonymously—the callousness of parasites. These men are welcome to retire from an institution to which they should never have belonged. With their lack of public spirit they do not fit into a liberal profession, but into some money-making or money-shaving trade.

A. Jacobi, M.D.

19 East Forty-seventh Street, New York.

To the Editor of the Medical Record:

Sir: If the Academy of Medicine needed a champion there would be forthcoming far abler pens than mine to engage the lists in her behalf; my object in addressing you is to reach and reason with your humiliated correspondent of January 4th, and others, "not a few who ask themselves in the privacy of their homes, whether the honor of being a member of the Academy is a satisfactory equivalent for the twenty dollars a year paid in dues."

It is the height of hospitality for a host to make the guest in his household his equal, and where, as in the case of the New York Academy of Medicine, the profession has a common meeting ground, it would become a great folly to permit of restrictions changing this great institution into a mere club-house. Members who fall short of understanding this policy of altruism of the Academy toward the general profession certainly have the right to resign, but be they few or great in numbers, the Academy cannot recede from its position as a public benefactor.

Frederic Griffith, M.D.

New York, January 6, 1902.

To the Editor of the Medical Record:

In the issue of the Medical Record of December 28th, last, there appeared a letter from a correspondent opening a subject which must have been food for thought for many who have not written about it, but who have felt none the less keenly that there was room for reform in the management of the Academy of Medicine. The members of that organization go on paying their dues and assisting in keeping up an expensive plant in the enjoyment of which they have no privileges not enjoyed by any one, lay or professional, except that of using the library in the evenings and of taking part in the debates. The former of these is hardly worth mentioning because practically any person can get a card for an evening in the library, and participation in an occasional debate seems hardly worth twenty dollars a year. The most self-satisfied trustee or other officer of the Academy would probably not have the hardihood to claim that under the present system, membership in the Academy carries with it any important honor or proves the possession of any great professional ability, since it is well-known that any graduate in medicine, in good standing within the meaning of the law, can easily get himself elected, provided he is willing to invest twenty dollars annually in the "honor," the material privileges of which can be enjoyed by any outsider. Many members will, no doubt, agree with me that they are not getting a fair return for their money, and most of us probably do not care to assist in supporting an expensive institution merely that large numbers of outsiders shall enjoy the use of an extensive library for which they contribute no support, and that a certain number of men shall enjoy the advantages which may accrue from being known as officers of the New York Academy of Medicine. Perhaps some sort of library subscription fee could be charged to those who wish to use the library, or who may be ineligible for election as regular members. Many members, especially the younger men, would undoubtedly welcome some sort of a restrictive rule by which the use of the Academy library and building should not be so freely extended to non-members, and by which the exclusiveness of a club should, to some extent, be enforced.

Apparently the only alternative to this which is fair is to reduce the dues and increase the membership to a great extent. Under the present régime there is a feeling of dissatisfaction which will break out from time to time.

A Dissatisfied Member.

TREATMENT OF DELIRIUM TREMENS.

To the Editor of the Medical Record:

Sir: Dr. Crother's most excellent article in a recent issue of the Medical Record, on the treatment of delirium tremens, contains many grains of truth and practical suggestions gained through years of experience. As one who has also had experience in the management of these cases, I must protest against the emphatic manner in which he excludes the use of nourishment in the initial stage of delirium. To withdraw the alcohol, thus lessening one source of toxæmia, is wise, but absolutely to prohibit food in one who is already physically weakened is taking away the only staff the system has to lean upon.

Many of these alcoholics have taken little or no food for days, frequently weeks, before the delirium manifests itself; further, to exhaust the physical condition only tends to prolong the convalescent period, and increases the difficulty in toning the patient. To say, "beef tea, milk, and all liquid foods are actually culture mediums for the production of toxins and the perpetuation of old ones," may be a witty solecism, but it is not borne out by fact. Eliminative processes should be pushed quickly to restore normal metabolism, but constructive metabolism must be a factor while excretion of toxins goes on, and "cell metabolism" is maintained rather than "deranged." Again, "restraint depends largely on the patient;" and that cerebral sedatives, to quiet and induce sleep, are "dangerous both in theory and practice." To this statement I also take exception. The writer has never yet observed a case but which derived benefit from sleep.

When the delirium borders on suicidal mania to escape hallucinatory persecution, sleep is the first essential. Far better to quiet, far better to sleep, than permit physical injury in a strong room (with the added danger of pneumonia by exposure) or at the hands of strong nurses. It has been said, "One who endeavors to quiet a delirium-tremens ward fattens a graveyard." Even at such a risk it is preferable to endeavor to restore an already shattered and disorganized brain by hypnotics, judiciously used, than assist in further debilitating the patient.

F. R. Searles, M.D.

Hampton Hall Sanatorium,
Springfield, Mass.

Exhibition at Glasgow.—Glasgow, says the *Sanitary Record*, is to be congratulated on the success of its International Exhibition, which closed its doors on November 9th. On that day, the attendance was a record one of 173,266, bringing the grand total for the six months up to 11,496,220. Financially, it is said, that the venture will benefit the city to the extent of £100,000 ($500,000)—a most welcome sum, considering the exceptional expenditure Glasgow has had to bear lately fighting both plague and smallpox.

Progress of Medical Science.

The Boston Medical and Surgical Journal, January 9, 1902.

A Case of Probable Dislocation of the Cervical Vertebra, with Spontaneous Replacement and Recovery.—J. E. Goldthwaite reports the case of a child of seven years who had received some injury while turning somersaults, which displaced the head to one side. Very little motion was possible, but the obstruction was evidently not muscular. A diagnosis was made of a partial dislocation of the cervical vertebra. The second day after admission to the hospital, just previous to the time appointed for taking an *x*-ray, in some movement of the head with a distinct slip, the normal condition was restored. After that the head could be moved almost normally in every direction with but little discomfort. It seemed probable that there had been a partial dislocation. Simple muscular strain or any other condition would hardly have been relieved with the suddenness that occurred in this case.

Unnoticed Fractures in Children.—F. J. Cotton states that the systematic use of the *x*-ray has confirmed the suspicion that fractures not infrequently exist with but slight symptoms, that mere cracks may readily be overlooked, that incomplete fractures or complete fractures without displacement are commoner than was formerly supposed, and may exist without being suspected by the patient. Eighteen cases are reported, ten of fracture of the clavicle, three of the bones of the forearm, two of the tibia, and three of a metatarsal bone, which illustrate the author's point, that we all tend to underestimate the tolerance of children to fractures. In small children, where there is a history of a fall or other trauma, and especially where the arm or shoulder girdle may be involved, the only safe way seems to be to assume a fracture as probable, till every inch of bone has been gone over carefully. Only in this way can we be safe from occasional oversights and from ignominious explanations later on.

Remarks on the Diagnosis Between Acute Appendicitis and Some Atypical Cases of Typhoid Fever.—Maurice H. Richardson says that when during an attack of typhoid fever a normal appendix is removed under the mistaken diagnosis of appendicitis, both patient and surgeon are indeed to be congratulated if recovery follows. Various cases are cited to show the frequent difficulty of diagnosis. The main point to be emphasized is that when local signs, especially tenderness and rigidity, are absent, fever strongly suggests typhoid. Without pain at some time during the course of the disease, there can be no acute surgical lesion of the abdomen; high temperature with pain, but without rigidity or tenderness, means typhoid fever, or simple continued fever; very high temperature should excite suspicion if pain and tenderness are present, but not marked, for acute appendicitis has usually a moderate temperature; a soft abdomen with a high temperature is a suspicious combination, even if there is pain and tenderness; when typhoid is suspected, the pain and tenderness must be distinctly localized in the appendix and confirmed by rigidity, resistance, or tumor, before operation for appendicitis is justifiable. When the abdominal symptoms call loudly for operation, the abdomen must be opened in spite of the possibilities of typhoid; but cases suggesting typhoid as strongly as appendicitis should, until the diagnosis is perfectly clear, be carefully observed.

Journal of the American Medical Association, Jan. 11, 1902.

The Influence of Some of the Commoner Drugs Upon the Gastric Functions.—Boardman Reed presents the following conclusions: (1) Perfectly normal stomachs are probably in the minority in large cities, especially among persons employed indoors. (2) In stomachs which are normal, or approximately so, the digestion may be injured by a simple bitter tonic, taken even for a short time. (3) Quite moderate doses of HCl, administered as a medicine, may prove effective in hypochlorhydria, but are likely to do harm to normal stomachs, and certain to aggravate hyperchlorhydria. (4) Pepsin rarely produces any good result when given alone, even to persons with weak digestive power, and often then retards the digestion of albuminoids. (5) Pepsin and HCl, given together, much more frequently do good than either administered singly.

Gastric Hyperæsthesia and Its Management.—C. G. Stockton defines this condition as one presenting painful sensations, not so intense as gastralgia, but causing more or less discomfort. The HCl is not above the normal—indeed, often below—yet it is apparently the HCl and the activity of the gastric digestion that cause the trouble. As a diet, it is best to select, in the beginning, one that is very bland; for instance, milk or some milk preparation. To this should be added, first, the digestible farinaceous foods, then eggs; finally, meat juice at certain meals, and later scraped meat, meat powder; and next, tender steak or chop, to which may be added some of the more easily digested vegetables. Thus the diet may be gradually increased from step to step, always being careful not to go beyond the point of toleration. When found that the allowance has been too liberal (or in case it is found necessary even with a very restricted diet), and the stomach reacts unpleasantly, it is advisable in order to relieve symptoms to give after meals antacids as soon as evidences of irritation arise. Mixtures containing sodium bicarbonate, magnesium carbonate, and the bismuth and strontium salts are commonly employed. In long continued cases the continuous current may be used with benefit. The negative electrode should be placed in the stomach, and a current of from 5 to 10 m.a. of a low voltage used for five minutes two or three times weekly. Hydrotherapy is also of service.

Treatment of Chronic Myocarditis.—J. H. Musser says that as regards the medicinal treatment, if we can settle upon a cause for the endarteritis or coronary artery disease, such as syphilis, this will indicate the course to be followed. Otherwise the arterial condition must decide the question. With a low arterial tension, we should give digitalis, sparteine, strychnine, and other direct stimulants. If the tension is high, it is the custom to give remedies which lower blood pressure, and those who give such remedies see delightful results from nitroglycerin, strontia salts, and other agents which lower blood pressure. The fact is too often overlooked that some general measures also reduce blood pressure, such as purgatives. Many of these cases are benefited by salines given early in the morning, every day or two. There are cases of chronic myocarditis, secondary to coronary artery disease, where we cannot satisfy ourselves, or determine by ordinary physical signs the exact state of the heart muscle—cases in which the condition may only be inferred from reduplication of the second sound of the heart and the state of the veins, where there is no dilatation of the heart walls. Nor, on the other hand, can we determine the existence of any hypertrophy, particularly that occurring with high arterial tension. There are cases of this kind in which the dyspnœa is marked, with considerable arhythmia, in which we cannot obtain any special evidence from the condition of the vessels that would indicate high arterial tension. These form a class of cases in which digitalis will be of benefit. Other concomitant states requiring attention are angina pectoris, calling for the customary remedies, and dyspnœa. The latter occurs in two forms. In one case it is almost constant, increasing into paroxysms in times of special excitement or exercise. The second form is that which occurs only in paroxysms, in attacks which take the form of sudden œdema of the lungs, with chest oppression, and all the appearances of shock—pallor of surface, cold extremities, more or less anxiety, the expectoration of frothy material. Upon auscultation of the chest, the bronchial tubes are found filled with râles, and on auscultation of the heart the most interesting conditions are found—arhythmia and asystole. It is often impossible to recognize any murmur on account of the râles in the chest. These cases are frequently mistaken for pulmonary conditions. Such a case must be treated, first, as a case of shock. We must relieve the pulmonary œdema that has taken place; we must actively stimulate the heart and improve the circulation. Dry cupping of the chest and external hot applications bring the most speedy relief. There is no better remedy than morphine, administered hypodermically, in small doses, for the relief of the patient. Together with strychnine and nitroglycerin, where there is apparently a condition of high arterial tension; where this is not present, morphine and strychnine alone will tide over the difficulty until the danger is past. Where there is venous stasis and lowered blood pressure, the use of digitalis and ordinary stimulants will be sufficient to overcome the condition.

New York Medical Journal, January 11, 1902.

The Operative Treatment of Traumatic Intracranial Lesions.—Charles Phelps expresses the view that even a rational suspicion of the existence of a simple fracture, as in case of hæmatoma with a history of considerable violence inflicted upon the head, with or without concurrent symptoms of intracranial lesion, demands explorative incision. He has frequently done this, and when nothing beyond incision has proved necessary, has never failed of primary union. He presupposes recovery from immediate shock, a fair constitutional condition, aseptic precautions, and restriction of the wound to the limits required for its purpose.

The Plastic Use of the Uterus in Cystocele Operations.—Joseph Brettauer reports three cases in which the ideas of Freund and Wertheim were followed, the object being to fasten the uterus to the denuded anterior vaginal wall and stitching the fundus as near the external urethral orifice as possible. The uterus then acts as a truss and relieves the anterior vaginal wall from the pressure of the bladder. It also serves as a support for the vagina. Brettauer thus describes the plan followed in his three cases: After the usual preparatory measures, an incision is made through the anterior vaginal wall, from the urethra near its orifice to the cervix; two flaps are bluntly dissected, the bladder loosened and pushed upward as far as possible; the vesico-uterine fold of the peritoneum is then opened, and the fundus of the uterus dislocated through it. This may be done by means of a sound. The posterior surface of the uterus is now fastened with three sutures of chromic gut to the flaps of the anterior wall of the vagina, about one-half inch from their edges. In the first case the flaps were not resected, but sewn together with a running suture, and a colpoperineorrhaphy added in the usual way; in the second and third cases, the flaps were united after resecting a strip about one-quarter of an inch in width. The vagina was then packed with gauze and the patient put in bed.

Inflammation and Sclerosis.—C. L. Kilbourn calls attention to prevalent carelessness in the use of medical terms, stating that the ending "itis" as referring to inflammations is applied to many conditions which are in nowise inflammatory. Inflammation, in the true surgical sense, refers to a condition following infection. Perhaps the word sclerosis is the right one for most of the instances of incorrect expression. Sclerosis is often confounded with inflammation, and while it is true that a long-continued infection, or repeated infection, leads to hypertrophy and subsequent atrophy, sclerosis pure and simple is the result of a long period of overwork. The viscera are particularly prone to the condition. Overeating is followed by sclerosis of the stomach wall; high tension of the circulatory and nervous systems gives rise to sclerosis of the heart, kidneys, and arteries. There is no infective process connected with these instances, yet we have in our onomatology such names as "chronic interstitial nephritis" and "chronic myocarditis." The kidney is subject to acute disturbances of an infective or toxic nature, as in scarlet fever, and the condition is correctly named "acute nephritis." In the small, contracted kidney, however, is an atrophic change due to overwork or strain caused by high arterial tension, and perhaps by extreme nervous tension. It is called "chronic interstitial nephritis," but there are no evidences of inflammatory action, and it is really a "sclerosis of the kidney."

Medical News, January 11, 1902.

Bacteriological Diagnosis of Typhoid Fever.—Henry A. Higley speaks of the methods available in the bacteriological laboratory for the establishment of the existence of any disease produced by a given microorganism, as the following: (1) The isolation and identification of the microorganism producing the disease; (2) The application of certain staining reactions to the microorganisms, which reactions are peculiar to these microorganisms and differentiate them from all others; (3) The effect or reaction produced by certain body fluids of persons suffering from bacterial diseases, when these fluids in certain dilution are brought into contact with microorganisms of the same species with which the person is infected, which microorganisms have been artificially cultivated in the laboratory—for example, the Widal reaction. This reaction will, naturally, be either absent or present. Its absence does not prove anything against a positive diagnosis. It may be present in cases which are clinically typical or atypical of typhoid. As to the staining method, no stain has as yet been discovered which is able to differentiate the typhoid bacillus from other organisms. The first method mentioned above is by far the most positive and absolute. The chances of an error in the isolation and cultivation of the microorganism are reduced to a minimum. The author concludes by saying that there is no one method by means of which a man can sit down in the laboratory and with ease and positiveness make a diagnosis for or against typhoid fever in all cases. The resources of the laboratory must be combined with a most careful clinical examination of the case.

Heart Strain; Its Result and Treatment.—J. M. G. Carter states that the study of heart strain is of comparatively recent date. The effect of heart strain is seen in two ways: (1) By overwhelming disturbance, causing immediate faintness, possible paralysis, and death; (2) A more gradual dilatation from lighter and daily strain. When the shock does not terminate in the death of the individual at once, the normal irritability of the heart is in a great measure lost. The heart muscles are in the condition of any other muscles which are unduly strained; the rhythmic action becomes feeble, tremulous, and imperfect. In the case of the heart the condition is one of profound asthenia. There are two periods of greatest danger: one is at night, during the hours when the periodic distress returns and when respiratory movements are most sluggish; the other is when, upon arising from a recumbent position, the column of blood in the upper part of the body is suddenly thrown back upon the enfeebled ventricles, thus diminishing brain pressure. Persons leading sedentary lives are more liable to heart strain than those in more active life. The treatment should be prophylactic, hygienic, dietetic, and medicinal. The first two classes include a well-ordered life free from all excesses. There should be freedom from all pressure over the heart from dress. All forms of food which have a tendency to form gas should be avoided. Complete digestion should be accomplished before taking a second meal into the stomach. Where the work of the heart is extreme, liquids should be limited. If blood-pressure is low, liquids should be administered. In cardiac asthenia with dilatation, a dry diet is indicated. Supper should be the lightest meal of the day. Before medicinal treatment is instituted, the cause should be removed if possible. In asthenia, digitalis and strychnine are the most important remedies. For hypertrophic over-action, aconite is useful; but caution should be observed. Valuable remedies for distress at night are belladonna, hyoscyamus, and cannabis indica.

American Medicine, January 11, 1902.

Dystocia Following Ventrofixation.—Fred. H. Bloomhardt reports three of these cases. In the first, just when operation—that of cæsarian section—had been deemed necessary, as the cervix could be felt only under anæsthesia, the breech was found to be presenting. The only explanation seemed to be that in the period between the two examinations, there had been a rupture of some of the adhesions, allowing the uterus to sink down in the pelvis. In the second case a Porro operation was performed. In the third case a Porro operation was also performed, but the mother died from exhaustion and shock.

A Plea for the More General Use of the Active Principles of Vegetable Drugs.—George E. Blackhan sums up the advantages of the active principles of drugs or their salts as follows: (1) Precision; being definite chemic compounds, their composition must always be the same and their action uniform. (2) Portability; being active principles, stripped of gum, coloring matter, and other extraneous matters, the dose is necessarily comparatively small, and a larger number of doses can be carried in the same space. (3) Safety; this is a result of their definite composition and uniform strength. (4) Effectiveness; the smaller dose is more readily absorbed, and therefore more quickly and certainly effective. (5) Palatability; this is perhaps a matter of minor importance, yet not to be disregarded. On account of the smallness of the dose it can be effectually concealed in a tiny granule which can be readily swallowed by the most fastidious.

Silver Wire Smoothly Brazed to the Butt of a Steel Needle a Convenient Suture for Certain Plastic Operations.—J. Rilus Eastman mentions some of the well-known difficulties in the use of the needle threaded with silver wire and describes his method of overcoming them as follows: In hare-lip and such operations, he uses a No. 24 standard-gauge silver-wire suture, eighteen inches in length, to one end of which is attached with silver solder, after annealing of both metals, a full or half-curved steel needle. In this way a perfectly smooth joint is formed, which will not unnecessarily injure delicate tissues. It has often been proved that metallic silver has an inhibitory effect on the growth of bacteria; silver wire is unirritating and strong, and it may be easily shotted. Silver wire is, however, perhaps not the most suitable material for buried sutures, for it is non-absorbable and may lead to sinus formation. However, the tolerance of tissues for this wire is greater than is generally supposed.

The Effects of Ventrofixation and of Ventral Suspension on Subsequent Pregnancy and Labor, with Report of a Case.—Arthur C. Jacobson reports a case in point in which labor was terminated by a medium forceps operation, as nature was incompetent to deliver. The writer states that the status of these operations has not yet been definitely determined. He gives some conclusions from his consideration of the subject. Apparently these operations reduce fertility. There is no special tendency to produce abortion. The greatest obstetric difficulty consists in the obstructing mass of tissue formed by the anterior uterine wall. Serious or insuperable obstruction to labor may be produced if the fundus and anterior wall of the uterus are imprisoned below the point of attachment between the uterus and the abdominal wall. According to Noble, the most serious difficulties could be obviated if labor were induced at the eighth month, if the anterior uterine wall constitutes a tumor at the brim. From an obstetric standpoint, ventrofixation may be considered as occupying an intermediate plane between vaginal fixation and ventral suspension. The writer concludes that pregnancy and labor are, as a rule, uncomplicated. Erroneous ideas should not be derived from the gravity of some of the reported cases. Excluding ventrofixation, the results of labor after suspensio uteri compare favorably with those under ordinary conditions. And although, when including ventrofixation, the results compare fairly well, still there are certainly some good obstetric reasons for distrusting the operation of ventrofixation in child-bearing women.

Philadelphia Medical Journal, January 11, 1902.

Duration of Immunity by Diphtheria Antitoxin.—Henry D. Jump concludes that: (1) As diphtheria antitoxin is practically harmless, all exposed persons should receive an immunizing dose in proportion to age; (2) Two hundred and fifty units should be given to children under two years and five hundred to all others; (3) The immunity will last for at least three weeks, provided a reliable antitoxin is used; (4) All exposed persons should be removed from infected surroundings, either by thorough disinfection of their own quarters or by removal to other places. If this is impossible, the immunizing doses must be repeated every third week.

Acquired Pulmonary Lues.—Otto Lerch reports this case. The patient was a man of forty-eight years, giving a definite history of syphilis twenty years before. His occupation was that of cotton sampler. The present trouble commenced with a tickling sensation in the throat. Dyspnœa became severe, the face wearing an expression of air-hunger. The arteries were pulsating. It was decided that there was no aneurysm from the absence of thrill and bruit over the dull areas in the chest, absence of characteristic pain in chest and back, absence of a downward displacement of the heart and of murmurs which would be probably found in a case in which aneurysm had long existed. There was no tracheal tugging. There were no symptoms of tuberculosis. The patient was a cigarette smoker. He was put on iodide of potassium and inunctions of mercury, and his improvement has continued from the beginning of the treatment, although it is not now so rapid as it was at first. The determining cause of this attack was probably the inhalation of dust and fibers which set up an inflammatory condition of the lungs. The prognosis, as in all cases of this disease, is grave as to recovery.

The Treatment of Inoperable Tumors.—Conrad George, Jr., considers the results of the use of pyoktanin, or methylene blue, and Coley's mixture in the case of certain inoperable tumors which have come under his observation. In the two cases treated by the first method, there was a marked diminution in the size of the tumor, with some relief from pressure symptoms, but there was an excessive stimulation to the growth of tumor cells in the neighborhood. It is extremely doubtful, says the writer, whether a cure could have been effected if the cases could have been placed under this treatment earlier in the course of the disease. He then describes two cases treated with Coley's mixture. The first was a case of granuloma of the right upper jaw, and although the tumor disappeared until there was only a very small amount of soft granulation tissue left on the outer side of the jaw, the tumor returned later and the upper jaw was removed. The second case was one of large spindle-cell sarcoma of the right fore-arm. The tumor continued to increase under the treatment. Two other cases which were treated by the same method showed no benefit. He concludes that his experience with Coley's mixture has been very unfavorable to its use in inoperable tumors.

The Lancet, December 28, 1901.

Tuberculosis of the Heart.—H. N. Heineman says that tuberculosis may affect the endocardium alone, the myocardium may be generalized in both or may involve the pericardium. The paper is largely a review of the literature of the general subject, and also contains the clinical histories of two cases of tuberculous pericardium. Directions are given for the staining of sections for microscopic examination. Concerning the general involvement of the muscle and endocardium, Heineman says that while the favorite seat in acute general miliary tuberculosis is the conus arteriosus of the right side, the great papillary muscle, and less frequently the endocardium of the ventricles, it is different in the small nodular form, which is not general, in which the ventricles are the favorite seat, and different again in the larger masses (caseous form), in which the auricles or the junction of auricles and ventricles and the ventricles (often near the septum) are the seat of predilection. As to the mode of infection, it is believed to be most commonly through the blood vessels. The large percentage of cases in which tuberculous nodules are found in the myocardium in connection with acute general miliary tuberculosis, and in which the blood vessels are the avenues of infection, would certainly lead us to infer the same avenue in the less frequent cases. Again, the fact that the two varieties occur in different situations, or because in the one case we deal with minute, almost invisible, tumors, is no argument against the probable identical source of infection in all.

The Differential Diagnosis of Smallpox.—J. MacCombie says that in the diagnosis of this disease the following rules should be observed: (1) It should never be forgotten that the initial symptoms of smallpox are most constant both in vaccinated and unvaccinated subjects. (2) When called to a case, the practitioner should never take for granted that the eruption on the trunk is like the eruption on the face and extremities, but in every case he should examine the whole eruption. Disregard of this precaution leads to many mistakes. (3) It should not be assumed that because a case of smallpox has occurred in a house, therefore a vesicular eruption appearing on another inmate of the same house about the same time is smallpox. He has known cases of chickenpox and smallpox occurring simultaneously in the same house, and smallpox and enteric-fever cases in the same family at the same time. (4) It should be remembered that in a very large number of vaccinated subjects, smallpox is so mild that as soon as the eruption—consisting sometimes of not more than half-a-dozen spots—has appeared, the patient feels well. (5) Care should be taken to avoid ascribing the spots on the face in a mild case to digestive disturbances, and sending the patient to the seaside for a little change of air. The author passes in review the diagnostic points between the disease and erythema multiforme, typhus, influenza, ptomain poisoning, roetheln, drug rashes, varicella, measles, syphilis eruptions, herpes, impetigo, eczema, urticaria papulosa, acne, rheumatic sudamina, glanders, and pyæmic skin eruptions.

Some Points in the Prognosis of Mental Disturbance.—W. J. Haslett calls special attention to acute delirious mania, puerperal mania, insanity of adolescence, and melancholia. He says that the principal pros and cons of prognosis are the following: As the disease is not so acute, hallucinations are more serious, especially those of hearing. Imperfect bodily nutrition, such as loss of weight and trophic changes in hair and skin, the latter becoming earthy and greasy in appearance, are of ill omen. Degeneration of habits and inattention to the calls of nature, a constant desire to pick and rub the skin and pull out the hair are also of unfavorable augury. Certain delusions seem more liable to become fixed and permanent than others. For instance, visceral misinterpretations, such as the belief that the bowels never move properly, that the food does not enter the stomach, or that foreign substances are fixed in the body and require a surgical operation for removal, also delusions of persecution, plots, or unseen agency do not readily pass away. Again, sexual delusions, such as those respecting impotence, are of grave significance, and masturbation or fits are serious complications. The prognosis in climacteric melancholia is rendered very unfavorable by secret indulgence in alcohol or drugs, and he has noticed that the growth of facial hair in women has always been an indication that recovery will not take place. Prolonged suicidal promptings are of unfavorable import, and we must be on our guard in this respect, because the tendency often remains dormant for months, only to reappear when least expected. Adipose tissue and melancholia seem to be almost incompatibles, and an extra layer of fat is a very effective armor against a return of depression. Hence in treatment we do all that we can to encourage increased weight. An interest in her personal appearance is one of the primitive instincts of woman, and when we see her natural vanity re-awakening, we begin to feel very hopeful.

The Lancet, January 4, 1902.

A Note on Three Cases Illustrating the Value of Suprarenal Extract.—The cases reported by W. H. Brown are: (1) Profuse sweating following an attack of nephritis and cured by the remedy; (2) Bleeding in hemorrhoids; (3) Uterine hemorrhage from a myoma.

Beef-Worm in the Orbital Cavity.—T. W. F. Gann reports a case of this nature and gives an illustrated description of the worm. It is found especially in Central and South America. The native plan of treatment is to apply wet tobacco over the site of implantation and then to express the worm by pressure.

The Disappearance of the Addiment from Antimicrobic Sera.—E. W. Ainley Walker directs attention to the fact that the bacteriolytic power of a fresh serum rapidly diminishes both in the immune and in normal sera, and ceases to be recognizable within a few days from the time of bleeding. Hence it appears that as regards experiments in bacteriolysis the age of the serum which supplies the addiment is a factor of the first importance, and that observations on bacteriolytic action with an addiment-containing serum cannot be properly compared unless they are performed at the same time, since the bacteriolytic action depends upon the variable factors above mentioned.

Etiology and Pathology of Scurvy.—G. Lamb gives the details of an outbreak of the disease occurring in one of the India prisons. He could not accept the theory that the disease was entirely due to dietetic errors, that is, to acid intoxication resulting from a deficiency in alkaline foodstuffs, for the following reasons: (1) There was no marked deficiency in the alkaline foodstuffs of the dietary before the onset of the symptoms. The diet was common to about 1,095 prisoners, and of these only six men developed scorbutic symptoms; (2) There was no diminution of the alkalinity of the blood serum observed when the symptoms were well marked; (3) There was no improvement in the symptoms either as a result of the giving of a diet consisting of abundant alkaline foodstuffs or on the administration of large doses of lactate of soda. Nor could the ptomain theory of causation be accepted, because the patients had been receiving meat only once a week, and besides in India the animals are eaten the same day they are killed. Lamb therefore comes to the opinion that scorbutic symptoms, although associated in some cases with a condition of acid intoxication, in other cases develop quite independently of this condition. There would seem, in fact, more than one etiological factor and pathological condition underlying the symptoms which are clinically known as scurvy. He also suggests that scurvy symptoms may merely be an expression of ankylostomiasis.

Causes and Significance of Phantom Tumors.—Sir W. H. Bennett divides phantom tumors into three classes according to causation as follows: (1) Irritation.—(*a*) Irritation of the skin or of other superficial parts either immediately over the muscle or muscles concerned or over the course of the nerves which supply them; (*b*) the existence of underlying disease or abnormality—for an example, supposing the tumor to be in the abdominal wall, some disease in the abdominal cavity which, by reason of its situation or relation, causes nerve irritation leading to contraction of a corresponding muscular area (such tumors, when occurring immediately over the underlying disease, are usually "protective"); (2) Occupation.—In a certain number of cases in which the occupation of the individual entails the use of a particular muscle or group of muscles for a long period continuously, the muscles concerned come, as it were, into permanent action, and remain hard and enlarged, although the occupation has been temporarily discontinued. These are "occupation" phantoms; (3) Imitation.—In a certain type of neurotic people the tendency to imitate the diseases or deformities of others is very strong. "Nervous mimicry of disease" was the admirable term applied to these cases by Sir James Paget. The nervous mimicry of hip-disease is, perhaps, one of the commonest examples with which we meet of this curious tendency. Tumors are sometimes imitated in the same way, although the scope for the deception is necessarily very limited. These are "imitative phantoms." Illustrative cases are described under each class. As to treatment the obvious indication is the removal of the cause.

British Medical Journal, December 28, 1901.

Direct Introduction of Purgatives into the Large Intestine in Cases of Operation for Septic Peritonitis.—A. Marmaduke Sheild describes this method. The nozzle of a small syringe is introduced into the "stump" of the appendix, and the solution directly thrown into the cæcum. Three drachms of magnesium sulphate, with 10 drops of tincture of nux vomica, and 1 drachm of glycerin in an ounce of water is the formula generally used by the writer. Two hours afterward a turpentine enema is given, and the result has been excellent.

Suicide by Incision of the Neck Posteriorly.—Henry Alston describes this case. The patient was dead when the writer examined him. There was an incised wound in the front of the neck opening into the pharynx, but the air passage was not touched, and the large vessels were intact. The wound in the back of the neck was 6¼ inches long, almost on a level with the lowest edges of the lobes of the ears. It passed slightly into the spinal cord itself. Death was due to hemorrhage. Chronic ill-health was supposed to be the cause of the crime. The instrument used was a razor.

Theories of Inheritance.—G. Archdall Reid says that the main object of his paper is an endeavor to place heredity on a scientific basis. Heredity ought to be a science. The fact that offspring take origin not from the whole of the parent's body, but only from the microscopic germs, renders the transmission of acquirements exceedingly improbable. In no case has the transmission of an acquirement been proved. This line of argument is simple and conclusive, but it has been quite ignored. The writer believes that while inborn traits are transmissible, acquirements are not transmissible.

An Address on Localization in the Motor Cerebral Cortex.—C. S. Sherrington and A. S. F. Grünbaum have recently had the opportunity of making experiments on all the known species of anthropoid apes. In the chimpanzee the so-called motor area occupies unbrokenly the whole length of the precentral convolution, and in most places the greater part or the whole of its width. It extends into the depth of the Rolandic fissure. As to localization in the cortex, the sequence, broadly speaking, runs—tongue, mouth, nose, ear, eyelids, neck, hand, wrist, elbow, shoulder, chest, abdomen, hip, knee, ankle, toes, perineal muscles, anus, and vagina. As to the extent of the motor area, the writers think it probable that perhaps as much of that area lies hidden from the surface in the sulci as actually lies at the free surface on the convolutions. In the majority of the individuals upon which the writers have experimented, cortical epilepsy has been easily provoked.

British Medical Journal, January 4, 1902.

Carcinoma and Malaria.—John H. Spitzly believes from his experience in Dutch Guiana that there can be very little antagonism between malaria and carcinoma. He cites various instances in which patients who were thoroughly inoculated with malaria were afflicted with carcinoma or epithelioma.

Retrogression in Mammary Carcinoma.—James Pearse reports the case of recurrent cancer in a woman of forty-four years. The condition was so bad that the writer thought that she had only about three months to live. But then came a change. The first nodules have completely disappeared; the enlargement of glands is less marked; the aphonia has improved. Menstruation, which, before, had been regular, has ceased for several months. The writer adds that it would be hazardous to say that the abatement of the disease is to be associated with this fact.

Accidental Removal of Auricle by Midwifery Forceps, and Successful Application of Artificial Auricle.—James Erskine notes this case. The patient was a little boy whose ear at birth had been severed by forceps. No attempt had been made to suture the member in place. An artificial ear was made of·Vela rubber vulcanized. It is kept in place mainly by the insertion of the process into the external meatus of which it is a cast. For the admission of air it is perforated right through. The application of seccotine is sufficient for the adhesion of the internal surface of the artificial auricle to the corresponding parts remaining.

A Clinical Lecture on Oophorectomy in the Treatment of Cancer of the Breast.—H. T. Butlin states that he does not know of a single case of cancer of the breast in which a patient can be claimed to have been cured by oophorectomy. When the disease comes back again, as it generally does within six months to a year, and sometimes more quickly, it does so exactly in the same form and with all the same troubles which were present at the time of the operation, and the patient grows slowly worse and dies. The manner of death and distress of it are not changed by the operation. A large number of women upon whom it has been performed, and who have been soaked in thyroid extract, have not received the smallest benefit in the world. It is true that this method has for the most part been used in very bad cases of cancer. The writer adds, however, that he has not the courage or the faith to use this method in cases where the cancer is very limited in extent, and where the lymphatic glands are not obviously affected. This would be the only way to prove the status of this method.

Berliner klinische Wochenschrift, December 23, 1901.

Symptomatology and Therapy of Cervical Ribs.—M. Borchardt says that the symptomatology of cervical ribs may be divided into (1) Local deformities; (2) Circulatory disturbances, and (3) Characteristic nervous appearances. The local signs consist in a marked fulness in the supraclavicular fossa and a visible pulsation of the subclavian artery; the latter, however, is not present when the abnormal rib is but slightly developed. The circulatory disturbances are dependent upon aneurysm or thrombosis of the subclavian artery or its branches, and consist principally of cyanosis of the affected extremity and a reduction in the force or absence (in extreme cases) of the radial pulse. The nervous disturbances are limited to the territory supplied by the brachial plexus, and consist of hyper- or hypo-æsthesias and paralyses. In the vast majority of cases, however, the presence of cervical ribs gives rise to no symptoms. This is because in most cases such ribs are not sufficiently developed to produce pressure upon the structures above mentioned. When subclavian aneurysms are present, operations for rectification of the deformity should be resorted to only when serious symptoms arise and life is endangered thereby. If nervous symptoms are present and electrical treatment is not followed by good results, operative procedures should be instituted before atrophy has taken place. In this class of cases uniformly good results are obtained thereby. This statement applies only to those instances in which the nervous disturbances are directly resultant from pressure upon the brachial plexus, and careful examination should always be made to ascertain whether or not such is the case. Four cases are reported which illustrate the application of the principles above laid down.

What Cases of So-called Surgical Tuberculosis Are Suitable for Climatic Treatment?—Dr. Sprengel reviews the statistics of the climatic treatment of surgical tuberculosis, and shows that so far as Germany is concerned all forms of surgical tuberculosis without discrimination and without regard for fundamental surgical principles have been treated in climatic sanatoria with extraordinarily poor results. When we consider the excellent results obtained by many, especially Cazin and Scheimpflug, in the exclusive utilization of operative procedures in the treatment of the surgical tuberculosis of children, it is very evident that on the whole surgical treatment is of much greater value than climatic. It seems probable, however, that the best results are to be obtained by a proper combination of both of these methods. To this end surgical tuberculous diseases should be classified as follows: (1) Those without deformities and which in all stages are surgically curable. Such include gland tuberculosis, the open and closed tuberculosis of the long bones, metacarpus, and phalanges, the open and closed tuberculosis of the knee joint in children and young adults, the open and closed tuberculosis of the ribs and sternum, and tuberculosis of the cranial bones. (2) Cases in which surgical treatment is followed by unsatisfactory results and marked deformity. Here we have closed spondylitis, closed tuberculosis of the hip joint in children, and closed tuberculosis of the joints of the upper extremity. (3) Cases which are only curable by operations which involve the removal of a large amount of tissue. Such are bone and joint tuberculosis of adults, the open forms of bone and joint tuberculosis in young adults, and genital tuberculosis. (4) Incurable cases, as hip-joint tuberculosis in persons over 25 years of age, open spondylitis, and the majority of the cases of multiple tuberculosis. According to this classification, in groups one and three the preference is to be given to surgical treatment. As soon as possible, however, after the operation the patient is to be placed under the proper climatic conditions, and should so remain until complete healing has taken place. In groups two and four, climatic measures are preferable, although ultimately a few cases may become suitable for operative interference. It is of course apparent that these rules cannot be indiscriminately followed, and that certain variations will be necessary in individual cases; but it is thought that their general application will be followed by much better results than have hitherto been obtained.

Symptomatology and Therapy of Chronic Pulmonary Distention or Inflation (Vagus Neurosis).—G. Zuelzer says that peripheral irritation of the vagus not only gives rise to true asthma, but in certain instances to a condition of which he treats under the above title. He describes two clinical forms. In both, the lungs are unduly distended and periodical attacks of moderate dyspnœa are present. In the first form, the heart is weakened and the pulse rate increased, while in the second form the pulse is markedly reduced in frequency, often as low as 42 to 64 beats per minute. It is the second form to which Zuelzer draws special attention. The patients are generally males from eighteen to forty-five years of age. They complain of vague uneasy sensations in the chest which are often burning in character. Slight dyspnœa is present, especially on exercise, but cough and expectoration are not observed. The general condition is fair. Various nervous symptoms may be present and there is usually great apprehension of tuberculosis or organic heart disease. Physical examination shows that the lungs are distended, the lower border being considerably depressed, and the area of cardiac dulness encroached upon. The power of pulmonary expansion is markedly reduced, as shown by the slight variation in the position of the lower border of the lungs in inspiration and expiration. Auscultation in simple cases gives normal vesicular breathing. The respiratory frequency during rest is normal or only slightly accelerated. No cardiac valvular lesions are present. Many facts go to show that peripheral vagus irritation is the fundamental factor in the causation of both of these classes of cases. Experimentation has shown that in animals whose vagi are irritated, the fibers of this nerve which supply the lung become exhausted before those which supply the heart.

Occasionally, however, the reverse is true. In man, Beer's observations have shown that peripheral vagus irritation leads to stimulation of the pulmonary fibers of the vagus and paralysis of the cardiac fibers of that nerve. Accordingly, as a rule, the symptom-complex of this condition corresponds to that described in the first class of cases. Occasionally, however, the cardiac vagus fibers respond to the irritation and we get pronounced retardation of the heart, as described in the second class of cases. The diagnosis of this disease rests upon the establishment of three facts: (1) The absence of chronic emphysema and asthma. (2) The establishment of the direct relation between the pulmonary and cardiac symptoms. (3) The demonstration that irritation of the vagus is responsible for the condition. This may be ascertained by direct pressure upon the vagus, as it lies behind the posterior border of the sternocleidomastoid muscle. The treatment is the internal or subcutaneous administration of atropine. This drug here possesses a specific action. It should be given in daily doses of 1 to 1¼ mgm. (gr. $\frac{1}{75}$, $\frac{1}{50}$) preferably by the mouth, as subcutaneous administration is not always well borne. Eight to ten days of this treatment generally suffice to bring about a complete cure.

French Journals.

Uterine Fibroma and Cancer.—Jacobs reports the case of a woman aged forty-eight years. Her family history was negative. She had suffered from metrorrhagia for several months. She had not menstruated for two or three years. She suffered intense and continuous suprapubic pain, vesical tenesmus, difficult and painful defecation. There was a continuous bloody discharge. She was emaciated. Abdominal palpation revealed a pelvic tumor, round and slightly movable. By vaginal touch the cervix was found to be enormous, greatly dilated, and bleeding at the slightest touch. The diagnosis lay between a polypoid fibroma and a cancer of the body. Laparotomy was performed, and disclosed a fibroma of the size of a child's head which had developed in the posterior uterine wall. The body mucosa was normal, but beginning with the internal orifice, the uterine tissue was in a state of carcinomatous degeneration. Here, then, is an example of the existence in the same organ of two neoplasms of different nature: fibroma and carcinoma, a benign and a malignant growth.—*Le Progrès Médical Belge*, January 1, 1902.

The Early Diagnosis of a Relapse in the Course of Typhoid Fever.—G. Lemoine speaks of the symptoms indicative of relapse in typhoid: During the course of the primary attack, there is to be noted constipation, anomalies of the rose spots, either an excess or want of them, the irregularities of the temperature curve and the predominance of adynamic symptoms. Signs during the period of defervescence are irregularities of temperature and the persistence of the intensity of the diazo-reaction. Signs in the period preceding the relapse are numerous; the leaden color of the face, an appetite greatly exaggerated in comparison with the temperature and the appearance of the tongue, the persistence of the enlargement of the spleen, the persistence or reappearance of the diazo-reaction of Ehrlich, the feebleness of the agglutinating power, and the absence of diuresis. The negative signs, first noted by Hanot, are: hypothermia, slowing of the pulse, and polyuria. These mark the beginning of convalescence. The writer concludes by saying that if at the beginning of convalescence the persistence or reappearance of tachycardia, the disassociation of pulse and temperature, the persistence of enlarged spleen, and the absence of diuresis and hyperhidrosis are observed, he believes that there is sufficient ground for making the early diagnosis of relapse.—*Le Bulletin Médical*, January 4, 1902.

American Journal of the Medical Sciences, January, 1902.

Report of a Case of Dementia Præcox.—William Rush Dunton, Jr., states that the majority of authors agree that this disease is a degenerative psychosis. He describes the case of a Norwegian woman, thirty-one years of age, and sums up the symptoms of the case which he reports as follows: Mental depression, exaggerated tendon reflexes, a weakening of the heart's action, cyanosis, and a decrease of weight while taking nourishment well. Simple perception of external ideas was not interfered with, but there was fallacious sense perception. Negativism was present, but not very marked. Disturbance of the emotional life was shown by periods of depression and attacks of boisterousness. Stereotypy and verbigeration were shown on several occasions. Katatonic rigidity was present. This case seems to illustrate the katatonic form of dementia præcox.

Recent Views of the Origin and Nature of Herpes Zoster.—Arthur Van Harlingen concludes that: Under the term herpes zoster is to be understood a specific infectious and possibly contagious exanthem, characterized in its invasion by lassitude, general malaise, chills, increased temperature, and more or less digestive disturbance. After this there are usually neuralgic pains along certain nerve paths or metameric areas, together with the development of enlarged lymphatic glands. After a few days the exanthum appears. Rarely, various visceral complications develop. The infection attacks chiefly the posterior (sensory) ganglia of the cord and the Gasserian ganglion. The nature of the disease is not yet clear. Zosteroid eruptions are often observed in cases of poisoning from coal gas, after the ingestion of arsenic, after injuries of the nerves, or a moral shock, and also under other conditions. These must be distinguished from the true herpes zoster.

Some Experiments on the Intermediary Circulation of the Bile Acids; A Contribution to Our Knowledge of Icterus.—Alfred C. Croftan after careful study of this subject believes that we are justified in assuming that aside from their intraintestinal functions the bile acids are concerned in the normal destruction of cells, chiefly red blood corpuscles; that they exercise an influence on the flow of bile; that they aid coagulation and play a rôle in vaso-dilatation; in pathological states, when large quantities of the bile acids enter the blood, their other powers are developed and become clinically manifest. All arguments that are based on their " presence " or " absence " from the blood are essentially fictitious and invalid. From the bile-acid findings in any given case we are no longer justified in categorically asserting or denying the existence of pure hæmatogenous icterus, nor are we aided by these findings in formulating any definite diagnostic conclusions in regard to the participation of the liver or its ducts in any disease-process complicated by icterus.

Cause of Death in Aneurysms of the Thoracic Aorta Which Do Not Rupture; Report of Five Cases.—H. D. Arnold divides these cases into three classes: (1) Cases in which an aneurysm of the arch of the aorta exists, but in which it is not the important factor in the fatal result. (2) Cases in which death ensued from disease or disturbance of the circulatory system not caused by direct pressure of the aneurysmal tumor; (3) Cases in which death was due, directly or indirectly, to pressure of the aneurysmal tumor upon organs of vital importance. In the first class are those cases which die from some intercurrent disease whose origin cannot properly be ascribed to the aneurysm. Class two includes those cases of death from circulatory disturbance not caused by direct pressure on the blood vessels. In these cases the chief doubt will arise in deciding what part arteriosclerosis—when it is associated—played in the fatal termination. Arteriosclerosis may cause death by the changes which it works in the nutrition of the vital organs, by rupture of the arteries affected, by thrombosis or embolism. As to the third class, pressure on the trachea or the primary bronchi frequently causes death in aneurysm of the arch. Sometimes pressure is exerted on the pulmonary tissue. The œsophagus may receive the brunt of the pressure, so that there is insufficient ingestion of food. A very rare cause of death results from pressure on the thoracic duct. This interferes with nutrition.

A Case of Chronic Lymphatic Leukæmia in an Infant.—J. Allison Scott reports this case of an Italian boy aged nine months. When the child was one month old he was noticed to be unnaturally pale. Ever since that time he was subject to attacks of intestinal catarrh, with green stools containing much mucus. There was no evidence of rickets. When first examined, the spleen was found to extend four inches below the costal margin. There was no marked enlargement of either the liver or the external lymphatic glands. The urine contained no albumin, but there was an excess of urates. Blood smears showed a marked poikilocytosis, with many microcytes and macrocytes, and a decided leucocytosis in which the lymphocytes were proportionally high. There was a considerable number of nucleated red cells (normoblasts). After the early winter months, the child grew worse. He had a clayish pallor, there was little emaciation, the abdomen was protuberant, the spleen hard and much enlarged. The edge of the liver was just palpable, but the superficial lymphatics were not enlarged. The child died a few days after this examination from asthenia. This case showed a typical picture of chronic splenomegaly, with a leucocytosis of a slowly increasing lymphatic type; there were nucleated reds of all sizes and ages, degenerated cells, a few myelocytes and death from asthenia. The writer cites two cases that came to autopsy in which there was no leukæmic infiltration of tissues. He is inclined to the view that splenic anæmia and pseudoleukæmia anæmia infantum have their proper place in the secondary anæmias.

Society Reports.

THE PRACTITIONERS' SOCIETY.

Regular Meeting, Held on Friday, December 6, 1901.

JOSEPH B. BRYANT, M.D., PRESIDENT, IN THE CHAIR.

A Case of Splenic Anæmia.—Presented by Dr. BEVERLEY ROBINSON. This case was shown to illustrate the brilliant results of a surgical operation for splenic anæmia. The patient was a schoolboy, of Russian birth, whose spleen was removed by Dr. Francis H. Markoe, at St. Luke's Hospital, on December 1, 1893, that is, over eight years ago. He was then fourteen years old. The cause of the enlarged spleen in this case was first thought to be malarial poisoning, but this was never proven, in spite of repeated blood examinations. Prior to the operation, all rational medication was tried without avail. Immediately preceding the operation, a blood examination made by Dr. T. T. Southworth gave the following results: Red cells, 4,604,000 per c.mm.; white cells, 3,125 per c.mm.; hæmoglobin, 77 per cent.; lymphocytes, 22 per cent.; large mononuclear leucocytes and transition forms, 6 per cent.; polynuclear leucocytes, 70 per cent.; eosinophile cells, 2 per cent. Summary: White cells reduced in number, with normal relations in the proportion of the different forms of white cells. Red cells fairly normal in number and structure, and some reduction in the percentage of hæmoglobin. Thirty days later (that is, one month after the operation), Dr. Southworth reported that the red cells had improved somewhat in number, color, and resistance. The white cells, which were below the normal count previous to the operation, had increased to 17,180 per c.mm., showing a leucocytosis. The eosinophiles had also increased to slightly beyond the normal limit.

On March 3, 1898, fifty-one months after the performance of splenectomy, a blood examination showed 4,560,000 red corpuscles, 9,000 leucocytes, and 90 per cent. of hæmoglobin. At the time of the operation, the boy's weight was ninety-five pounds. The operation itself was without accident, but on the day following it, and for several days subsequently, the patient had threatening attacks of œdema of the lungs, and during this period his life was apparently saved by frequently repeated doses of nitroglycerin. The patient is now a young man of twenty-three years, and is enjoying excellent health. His spleen is in the museum of the College of Physicians and Surgeons.

Dr. Robinson said the case illustrated the fact that, whatever the function of the spleen may be, it is not essential to life, health, and, he presumed, happiness.

A Case of Splenic Anæmia, Showing Marked Improvement Under Treatment was presented by Dr. J. W. BRANNAN as follows: "This case is presented partly because there has been some doubt as to the diagnosis, but mainly because of the improvement which has followed the use of remedies which often prove useless in cases of similar nature. Samuel West, in Allbutt's 'System of Medicine,' defines splenic anæmia as 'a form of profound anæmia, progressive in character, ending fatally, generally of no long duration, associated with great enlargement of the spleen, but without leucocytosis or enlarged glands.' This description fits our case, except that, up to the present time, progress has been steadily toward recovery, though the spleen remains of about the same size as when first observed.

"The patient is a schoolgirl, thirteen years of age. The family history is negative. The mother has given birth to eight healthy children, with one miscarriage. This child has shown no symptoms of syphilis, nor any tendency to hæmophilia. She has had the usual diseases of children, and at the age of four years had 'yellow jaundice,' with gastric disturbance and clay stools, and was said by a physician to have an enlarged liver. She recovered completely from this attack. She has had no other ailments, but has always been a pale and delicate child. During the past year the mother has noticed a moderate fulness in the epigastric region, and the patient has complained of pain and tenderness in the region of the liver. For several years she has had a tendency to epistaxis.

"The present illness began in June last, when she had a slight hemorrhage from the stomach. The blood was dark, clotted, and mixed with gastric contents. There were no other symptoms, and the patient was up and about the same day. In the latter part of July she vomited a large quantity of clotted blood, fully one quart in amount. Since then she has been very weak and ailing, and has remained in the house most of the time. In August her abdomen began to swell, and the face looked 'bloated,' and on September 3 she was brought to Bellevue Hospital.

"On admission, the patient appeared fairly well nourished, but was extremely pale, with a somewhat yellowish tinge to the skin. The features had a puffy, bloated look. The temperature was 101°; pulse, 128; respirations, 22. On physical examination, the lungs and heart were normal, except for a soft systolic murmur, heard most loudly in the pulmonary area. The abdomen was symmetrically distended, the umbilicus protuberant, and the veins prominent. There was some tenderness on palpation over the hepatic and splenic regions. The liver dulness began at the upper border of the fifth rib, and ended at the costal margin. The splenic dulness extended from the eighth to the eleventh rib. The lower border of the spleen could not be made out because of the abdominal distention, but there was marked resistance in the left hypochondriac and umbilical regions. A fluid wave was obtained, with movable flatness in both flanks. There was no enlargement of the glands anywhere in the body. The urine had a specific gravity of 1,013, was free from albumin, sugar, and casts, but contained only .7 per cent. of urea. Throughout the stay of the patient in the hospital, the urine has been very moderate in quantity, with low specific gravity, and a very small percentage of urea.

"Examination of the blood gave the following results: Hæmoglobin, 18 per cent.; red corpuscles, 1,640,000, and white cells, 4,000 to the cubic millimeter. There was no poikilocytosis. There were no hæmatoblasts, nor nucleated red cells. The differential count of the leucocytes was normal, except for a slight increase of the eosinophiles.

"The patient was at once put upon full doses of the syrup of the iodine of iron, Fowler's solution of arsenic, whiskey, and acetate of potassium. Saline rectal irrigations were also given daily. Under these measures, she soon began to improve. At the end of a week, the distention of the abdomen had decreased sufficiently to permit palpation of the abdominal organs. The borders of the spleen could be felt extending downward to about an inch below the level of the umbilicus and anteriorly to within two inches of the median line. Its surface was hard and smooth, and not tender to the touch. The edge of the liver was felt one-half inch below the costal margin. The ascites continued to diminish, and in two or three weeks more had disappeared. The child's condition steadily improved, and for the past two months she has been up and about the ward. The most marked gain has been shown by the blood count. On October 17, the hæmoglobin had increased to 45 per cent., and the red cells to 3,600,000. At this time bone-marrow was added to the medication. The last examination, made to-day, gives, hæmoglobin, 75 per cent.; and red cells, 4,350,000. It will be seen by the chart that the number of the red cells fell from 4,350,000 on November 4 to 3,600,000 on November 16. This was apparently due to a moderately severe epistaxis on the 13th. The hæmoglobin was unaffected by the hemorrhage. The temperature, which was elevated on admission, has remained constantly above normal, and on one occasion was as high as 103.6°. At present the daily range is from 99° to 100°.

"In spite of the great improvement in the child's condition, there has been no reduction in the size of the spleen. The liver, however, can no longer be felt below the costal margin. When the case was first observed, it was thought that it might possibly be an instance of the disease recently described by Banti, that is, cirrhosis of the liver accompanied by splenomegaly. With the disappearance of the ascites and the return of the liver to its normal size, this hypothesis was abandoned, and the diagnosis of splenic anæmia seemed to be sustained by all the features of the case."

Dr. E. G. JANEWAY said that while we must recognize the existence of such a disease as splenic anæmia, the conditions present in many of those cases are no doubt due to some particular cause, although we may not be able to discover it. We do not know why they exist as such. We may have a large spleen, and hemorrhages from the stomach and bowels, but the true cause of the conditions may not even be disclosed by a careful autopsy.

Dr. ROBERT ABBE said the surgical statistics of splenectomy in leucocythæmia showed a mortality of about 90 per cent., but in cases of enlarged spleen, from other causes, even with leukæmia, the mortality was only about 20 per cent., and, according to a recent review of the subject, the normal leucocytosis is usually recovered within five months after operation.

Dr. ROBINSON said that in the case he had shown the primary effect of the operation was to produce an increased leucocytosis, but ultimately the constituents of the blood resumed their normal proportion.

The President, Dr. BRYANT, said that in pseudoleukæmia the rate of recovery was not far from 23 or 24 per cent., so far as the operative outcome was concerned, and the restoration to health has been so very uniform and complete that an operation is regarded as the proper method of treatment. Of the leukæmia cases, however, scarcely 10 per cent. have recovered.

Operation for Old Posterior Dislocation of the Forearm.—Presented by Dr. CHAS. MCBURNEY: "This patient, who is seventeen years old, fell downstairs nine weeks before she came under my observation, and injured her left elbow. The injury was regarded by those who had charge of the case as a fracture, and was treated as such, the arm being placed in the extended position with long anterior splints. When the patient was brought to me, it was quite evident that a posterior dislocation of the forearm existed, and the *x*-ray photograph confirmed this diagnosis, and proved the non-existence of fracture at any point. Very slight motion could be made at the elbow.

"On January 19, 1901, the patient was etherized, and vigorous efforts made to reduce the dislocation. This attempt failed completely, and I therefore did the following operation: An incision five inches long, parallel with the long axis of the arm, was made, the center of the incision crossing the internal condyle. All the soft parts down to the bones were divided, and all of the tissues posterior to the internal condyle, including the ulnar nerve, were pushed backward. The internal lateral ligament was separated from the condyle, the joint opened, the tissues in front of and behind the lower end of the humerus were loosened, and the greater sigmoid cavity of the olecranon was freed from new tissue. It was still found impossible to produce reduction. A similar, though shorter, incision was then made on the outer side of the elbow, and the soft part and lateral ligament were freely separated. Complete reduction could now be made. The wounds were sutured, the arm was flexed to considerably less than a right angle, and immobilized with plaster-of-Paris.

"The dressing was changed for the first time on the seventh day. Complete healing of the wounds had occurred. Cursive motion was made at first every other day, then every day, and finally several times daily. At the present time, voluntary flexion, promotion, and supination are entirely complete and normal. Voluntary extension does not quite reach the straight line. The circumference of the upper arm and of the forearm is less than a quarter of an inch below that of the opposite limb.

"The obstacles to reduction of old posterior dislocations at the elbow have been clearly pointed out by Dr. L. A. Stimson. They consist chiefly in the displacement of the lateral ligaments which form new and powerful attachments, in the filling of the greater sigmoid cavity with new tissue, and the formation of new tissue and bands at various parts about the joint."

Dr. ABBE said that in the one or two instances where he had to resort to operative interference in elbow dislocations, he found the cases very difficult to manipulate. He did not find it necessary, however, to make both an inner and an outer incision. Reduction was successfully accomplished through an outer incision.

A Case of Aneurysmal Dilatation of the Aorta.—Reported by Dr. EDWARD G. JANEWAY. The patient was a man, forty-six years old, who gave no positive history of specific trouble. In March last, while at an elevation of 4,000 feet above the sea level, he had a severe fit of coughing. After an ascent of 2,000 feet more, he had repeated attacks of coughing; they were explosive in character, and so severe that at times they produced unconsciousness. He was obliged to return to a lower level, and his health remained comparatively good until August 10, when he began to complain of shortness of breath on exertion; the breathing was stridulous in character, and gradually increasing in difficulty. When Dr. Janeway first saw the patient, this symptom was very pronounced. The right radial and brachial pulses could not be detected. There was no swelling of the veins of the neck. There was no pulsation, either visible or palpable, on the anterior chest wall, but there was a well-defined line of dulness extending from the base of the heart up to a little below the manubrium sterni, and both to right and left of sternum. When the patient was in the recumbent position, air entered the left upper lung with considerable difficulty. Upon one occasion a very faint murmur was heard at the right of the sternum, from the second rib to the sterno-clavicular junction. There was no tracheal tug. The fluoroscope showed a body of large size in the region outlined by the area of dulness. The diagnosis rested between aneurysm and tumor. In favor of the former was the absence of pulsation in the radial and brachial arteries on the right side; also the age of the patient and the faint pulsation of the tumor that could be detected with the fluoroscope. Against that diagnosis was the absence of a murmur and of any visible or palpable pulsation on the anterior chest wall.

The patient gradually died of exhaustion, and the autopsy showed an aneurysmal dilatation of the aorta, involving both the ascending and transverse arch, and pressing upon the trachea.

Prognosis; Its Therapeutic Value.—Dr. HENRY F. WALKER read a paper with this title (*vide* page 81).

Aneurysm of the Aorta Perforating Into the Superior Vena Cava.—Reported by Dr. WALTER B. JAMES. The patient was a man, fifty years of age, a mason. He had always enjoyed absolutely good health until three months ago. At that time he began to suffer from slight shortness of breath on exertion, a moderate dry cough, and a little pain beneath the sternum. These symptoms have gradually increased somewhat in severity.

Two weeks ago, on waking in the morning, these symptoms were more marked, and there was moderate cyanosis of the face. Four days later the pain in the face became worse, and the face and neck and arms rapidly became enormously swollen. The dyspnœa was worse, and he was unable to lie down.

When he first came under observation, there was well-marked dyspnœa. The face, neck, and upper extremities were enormously swollen and deeply cyanosed, being of a purple color; this was especially marked in the ears. There was slight œdema of the lower part of the body, the legs, and the genitals.

The apex impulse of the heart was displaced one and three-quarter inches to the left of its normal position; the left limit of dulness corresponds to this point. The pulse was rapid, regular, feeble. In the first and second intercostal spaces at the right border of the sternum, there was a heaving impulse and a systolic thrill. Over this area was heard a peculiar and very unusual murmur. It was loud, high-pitched, of rather musical quality, suggesting that of a venous hum. It is absolutely continuous, there being no intermission at any time. The intensity varies markedly, however, being greatest during systole, and least during diastole. The murmur is not transmitted in any direction more than two inches from the point of its maximum intensity. There were physical signs of double hydrothorax.

The above symptoms and physical signs continued, the cyanosis and œdema of the upper extremities gradually becoming more and more marked. The patient's condition grew worse, and nineteen days after he was first seen he died of exhaustion.

Dr. James said that he believed that in spite of the fact that no autopsy was obtained, that it was possible in this case to make an absolute diagnosis of an aneurysm of the artery of the aorta perforating into the superior cava, the striking symptoms that have been detailed allowing of no other conclusion.

A number of similar cases have been reported by Stengl, Pepper, and others.

The physical signs pointed positively to aneurysm of the arch of the aorta, the cyanosis and continuous murmur pointed to an obstruction of the superior cava. This could only have been brought about by pressure of a distended aneurysmal sac or a thrombosis of the vessel, or a perforation of the aneurysm into the vessel. The suddenness of the onset of the symptoms, the great intensity of the murmur, and the fact that the patient lived nineteen days, all make it seem certain that it was a case of perforation.

THE NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, December 11, 1901.

EDWARD K. DUNHAM, M.D., PRESIDENT.

Primary Carcinoma of the Liver.—Dr. L. T. LEWALD presented this specimen which had been taken from an alcoholic subject. Since July, 1900, the man had had attacks of jaundice at intervals of two or three months, and lasting two weeks at a time. The attack of jaundice which had come on in July had persisted. On admission to hospital in September he was still markedly jaundiced and was suffering from diarrhœa and vomiting. The abdomen was distended and tympanitic, and there was a marked prominence in the right hypochondriac region. The area of liver dulness on the right side extended from the fourth interspace to three fingers' breadth below the free border of the ribs. The surface of the liver was very hard. The man died about three weeks after coming to hospital. At the autopsy, there were marked jaundice and emaciation. The liver was enormously enlarged, and practically the whole of its right lobe was occupied by a whitish mass, dense near the periphery and soft and necrotic near the center. The gall-bladder was not distended, and was involved in the growth. The excessive weight and size of the liver had apparently caused an excessive growth of the duodenum. It was thought the jaundice had been largely due to the pressure of the liver on the bile ducts as they entered the duodenum. The kidney showed parenchymatous degeneration and very marked bile staining. There were some old scars noticed at the autopsy over the anterior surface of the tibia. The gross appearance of the growth in the liver was that of a carcinoma, but microscopical examination showed it to be made up of fibrous tissue and compressed liver tissue. The diagnosis was somewhat in doubt, for the microscopical appearance was not typical of carcinoma. If the growth were smaller, it might be taken for a gumma. Sections were exhibited under the microscope.

Thrombosis of the Pulmonary Artery.—Dr. LEWALD presented a specimen of thrombosis of the pulmonary artery. This artery, as well as the aorta, showed well-marked patches of endarteritis. The thrombosis was a large one, and formed in a branch leading to the lower lobe, thus shutting off the blood supply to nearly all of this lobe. At the time of the autopsy this lobe was the seat of extensive hemorrhagic infarctions. There was also a thrombus in the left ventricle of the heart. The case was interesting because of the occurrence of thrombosis in the two blood systems.

Dr. F. C. WOOD said that in three cases of primary carcinoma of the liver that he had seen, the growth in both instances had been very soft and friable, and the edges hardly distinguishable from the rest of the liver substance. Under the microscope the tumor cells contained irregular mitotic figures, and giant cells were very abundant. The cells quite closely resembled those of the liver.

Dr. WARREN COLEMAN asked if there was any evidence of dilatation of the right heart in the last case.

Dr. LeWald replied that the right side of the heart showed no marked change, although there was some hypertrophy of the wall of the right ventricle, and moderate mitral stenosis was present.

A Case of Phlegmonous Gastritis.—Dr. GEORGE P. BIGGS presented the following report of this case:

History on Admission to New York Hospital.—C. E., forty-two years old, German, female, tailoress. Always in good health. Menstruation ceased five months ago, but for the past three weeks the patient has been flowing most of the time. No history pointing to an abortion.

She was taken sick eight days before admission, and has been in bed ever since. The chief symptom was vomiting, which, however, was not very frequent the last few days before admission. The sickness began with a chill, followed by fever and pains all over the body, which later became limited to the epigastric region. From a physician who saw her twice prior to admission it was learned that her temperature had been 100° F., respirations 20, and pulse 90; that she was slightly jaundiced, vomited frequently, and that her bowels were loose. Abdominal pain has been cramp-like and intermittent.

The following notes were made at time of entrance into the hospital: Anxious expression; respirations rapid; thighs flexed; tongue dry, coated and fissured; breath fœtid; abdomen markedly distended and tympanitic; tenderness in epigastric, umbilical, and right hypochondriac regions; temperature 100 2-5° F., respirations 44, pulse 144; urine, 1,013, acid, reddish yellow, turbid, fair amount albumen, no sugar, uric acid, crystals, granular casts. High enemata ineffectual. Condition too critical to warrant operation. She died the following morning, temperature in the meantime having risen to 102 3-5°.

Autopsy.—Body well nourished. Rigor mortis marked. Abdomen distended and tense. Peritoneal cavity contained 1,000 c.c. of moderately thick yellow pus, without distinct fibrinous element. The pus was very generally distributed, though rather more abundant in the upper portion of the abdominal cavity. There was no offensive odor to the pus and no gas was present. The stomach measured 25x11 cm., and contained a small amount of bile-stained fluid. It was of yellowish color, covered with pus, and showed a few distinct foci of pus 1 to 2 mm. in diameter, just beneath the peritoneum. Purulent infiltration had caused great thickening of the wall every where, except in a narrow strip 4 cm. in width, along the greater curvature in its cardiac two-fifths.

In the infiltrated parts the wall measured ¾ to 1¼ cm. in thickness, the greatest thickening being in the pyloric portion, where the submucous coat alone was ¾ cm. in thickness. The mucous membrane was slightly thickened, congested, and in many parts hemorrhagic. Over the anterior wall of the pylorus it was completely destroyed over an area measuring 1 by ½ cm., the base of the ulcer being formed by infiltrated submucosa. A larger ulcer, also in the anterior wall of the stomach, about 2½ cm. from the pylorus, was of similar appearance, but irregular in outline. Its main part measured 3 cm. vertically and ¾ cm. transversely, and a branch extending from it at a right angle toward the pylorus measured ¾ x ½ cm. The mucous membrane near the ulcers and forming their borders was quite thin, suggesting that the ulceration was secondary to the purulent infiltration of the submucosa. The pus from the peritoneal cavity contained myriads of streptococci, and the same organisms were obtained in pure growth from it.

Spleen was twice its normal size, congested, and soft.

Kidneys showed a moderate degree of acute diffuse nephritis, and slight chronic interstitial nephritis. Lungs were much congested and œdematous. Uterus was moderately enlarged, wall thick and firm, endometrium roughened, and cavity contained a small amount of clotted blood. Microscopical examination showed a chronic endometritis. All other organs were normal except for parenchymatous changes incidental to any infectious process. So far as could be determined the infection of the stomach was primary.

Syphilitic Stenosis of Bronchi.—Dr. Biggs also reported this case, and presented the specimen. The latter had been taken from a woman, thirty-five years of age, who, according to the history, had been well up to the night preceding her admission. At that time she had been seized with what was said to have been an attack of asthma. When admitted to the hospital the dyspnœa was of a peculiar type, being entirely inspiratory and suggesting laryngeal stenosis. The larynx was normal, and it was assumed that the dyspnœa was due to the pressure of a thoracic aneurysm. Because of the high temperature, pneumonia had been suspected, but the physical examination was inconclusive. The patient died the following day. At autopsy, the trachea was found thickened and slightly flattened laterally. The bronchi generally on the right side were thickened to a marked degree, and there was such stenosis of the main branch going to the lower lobe that it would admit a probe only 2½ mm. in diameter in its first centimeter. Beyond this region it was dilated again to a diameter of 1 cm. The left primary bronchus also was thickened, and in its first centimeter was so stenosed as to admit a probe only 1½ mm. in diameter. The balance of this primary bronchus was dilated to a diameter of 1½ cm. The smaller bronchi of the left side were not materially altered. These marked stenoses explained the dyspnœa and the absence of the usual signs of consolidation. There was lobar pneumonia of the whole right middle lobe, the anterior half of the left lower lobe, and a small portion of the left upper lobe. The liver was moderately enlarged and contained much amyloid material. Though not greatly enlarged, the spleen presented the typical "sago" type of amyloid deposit. There was marked chronic diffuse nephritis, but no distinct amyloid reaction was obtained. The aorta showed extreme chronic arteritis with slight calcification.

In addition to the peculiar appearances of the lesion itself, the syphilitic character of the bronchial stenosis was thought to be clearly isolated by the amyloid deposits and chronic arteritis.

Request was made for expression of opinion as to the explanation of the marked dilatation of the bronchi beyond the seat of obstruction.

Dr. T. C. Janeway asked if there had been a very large accumulation of secretion back of the stenosis, as he had seen such a condition in connection with dilatation of the bronchi.

Dr. Biggs said that there had been no accumulation of secretion back of the stenosis.

Dr. James Ewing thought that the dilatation back of the obstruction could be explained on mechanical principles. As the air gradually made its way through this constriction, the pressure under which it entered the cavity would be limited by the suction force of inspiration. In reality the pressure of the air in the bronchus during expiration would be greater than during inspiration, and this might lead to dilatation of the bronchus beyond the point of constriction. The blocking of the constriction by mucus would tend to still further increase the pressure by obstructing the outflow of air.

A Case of Biliary and Pancreatic Stasis Due to Atresia of the Papilla.—Dr. A. E. Thayer reported this case. The patient was a man who several years ago had been taken ill with loss of flesh and strength and vomiting of blood. At that time he had been treated at Bellevue Hospital by some surgical procedure, the nature of which could not be determined. He had lived in apparent health for three or four years, and had then re-entered the hospital three months ago with jaundice. He was emaciating rapidly. The stools were typically acholic. There was a temperature of from 100° to 101° F. in the afternoon, with occasional higher degrees. The blood count showed leucocytosis of 18,000. Under the free border of the ribs was a large, fluctuating gall-bladder. This was aspirated, and about one pint of thin, clear fluid withdrawn. A suspicion of malignant disease of the liver or bile ducts had arisen, and an exploratory incision had been made, but the patient had died shortly afterward. The anterior thin margin of the liver showed some recent extravasation of blood and lymph. The liver showed a marked increase of fibrous tissue confined almost wholly to the distribution of the biliary passages. There was, however, no disseminated cirrhosis. The common bile duct and its main branches, and the pancreatic duct were enormously dilated, and the cystic duct was moderately dilated. On gross examination there was also a well-marked interstitial pancreatitis and interstitial fibrosis in the heart and kidneys. Microscopically the pancreas showed marked dilatation of its ducts, some bile staining, and a very well developed interstitial pancreatitis with atrophy of the parenchyma, the islands of Langerhans having been almost entirely spared. In the middle portions of some hepatic acini there were deeply pigmented cells. Many of the small biliary radicles were plugged with polynuclear leucocytes, a fact which agreed with the clinical symptoms of fever and leucocytosis. The papilla of the duodenum had been converted into a tough mass without any lumen. The gall-bladder had been found at autopsy filled with a recent clot, probably the result of the puncture of the aspirating needle. The case was of interest because of its bearing on the etiology of biliary cirrhosis. If biliary cirrhosis (Charcot-Hanot) arises from irritants conveyed through the biliary passages, why was it not present in this case? A most marked proliferation had occurred about the bile passages, but in the tissue between there was no "unilobular" or "unicellular" cirrhosis. Another aspect of the case was bile staining in some of the pancreatic cells adjacent to the dilated ducts, which is of interest in relation to interstitial pancreatitis, experimental injection of bile into the duct of Wirsung being a cause of this lesion in animals. There was no evidence of duodenal ulcer or of duodenal hemorrhage.

Specimen Showing Result of a Gastro-Enterostomy for Carcinoma of the Pylorus.—Dr. Thayer exhibited this specimen. The operation of gastro-enterostomy had been performed one year ago with the aid of a Murphy button. Since then the man had been able to eat freely, and had done well. At the post mortem the pylorus was found absolutely without lumen, while just back of it was the artificial opening formed at the operation, leading into the jejunum about half a meter from its upper end.

Sections from a Case of Dermatitis Exfoliativa.—Dr. Thayer presented sections from this case. He said that no clinical history had been obtainable; only a diagnosis of pulmonary tuberculosis and of dermatitis exfoliativa in a woman of thirty. Most cases have been observed in adult males. At the autopsy, there were some scattered submucous hemorrhages in the stomach. The colon showed tubercular ulcers, and the mesenteric nodes were enlarged and caseous. There was also atresia of the vagina. On microscopical examination, the kidney showed some chronic parenchymatous degeneration without much interstitial change. The spleen showed marked interstitial increase and proliferation of the endothelia in the small vessels. The liver showed fatty infiltration of the peripheries of the acini and young connective tissue about the vessels. The mucosa of the stomach was œdematous and the outer epithelia degenerated. In the mesenteric nodes many giant cells were found. The lungs were the seat of chronic tubercular and recent lobar pneumonia. In the adrenals the nuclei of the cortex showed hyperchromatosis, and the epithelia of the medulla were deeply pigmented. There was a well-marked corneous desquamation of the upper layers of the skin. The supra-papillary layers were very thin in some places and absent in others. The lymph spaces were dilated, and there was a proliferation of the epithelia in the sweat glands. There was a recent round-cell infiltration about the cutaneous blood vessels. In the outer portion of nearly every papilla there were from one to half-a-dozen large chromatophores containing yellow-brown pigment in coarse granules. The sciatic nerve and the breasts were the seat of fibrous hyperplasia. In other words, there was connective-tissue increase in kidneys, spleen, liver, lungs, breast, sciatic, and skin. This skin lesion might be a part of a general fibrosis, the result of the circulation in the blood of the toxins of tuberculosis. The coincidence of dermatitis exfoliativa and tuberculosis of the viscera had been noted in many cases.

Dr. C. A. Herter said that he had seen the patient from whom this liver had been taken along with Dr. Draper, in whose hospital service the case had occurred. According to his recollection, the man stated that he had not been jaundiced at the first attack. He had suffered from gastric symptoms, which had finally culminated in hemorrhages from the stomach. These had been the only striking symptoms. The patient stated that after an operation done at Bellevue Hospital he had been greatly relieved. He had gained in weight and strength rapidly, and the pain had left him. He had remained well up to three months before admission, when he had begun to suffer from sharp lancinating pains in the right hypochondriac region, and had become jaundiced. During the last month of his illness the jaundice had become very deep. It had been very difficult to say whether there was any relation between the first seizure and the final illness, but his own feeling had been that it could hardly be a malignant disease if the process had extended over all this time. There was a history of syphilitic infection eight years before. It had been thought not unlikely that there had been gallstones, and that the operation had been done for the relief of this condition. The condition seemed to him one of unusual interest, because the changes in the liver and pancreas seemed to be due to the atresic condition of the papilla. He regretted that the urine had not been examined for sugar, for injury of the pancreas was apt to be associated with glycosuria. Where there was slight jaundice and slight temporary glycosuria, it was probable that the pancreas had been injured.

Dr. T. C. Janeway said that he had seen several cases bearing on this point. In one case of catarrhal jaundice, after four weeks, sugar had appeared, and had persisted until sugar, but not starch, had been eliminated from the diet. Since the disappearance of the jaundice the glycosuria had not returned, no matter what the diet. In another case, that of a man who had been troubled with gallstones ten years previously, and who had more recently had frequent attacks of chills, fever, and sweating with emaciation, examination of the blood had failed to show the malarial plasmodium, but had revealed a leucocytosis. There was slight jaundice, and the urine contained 4½ per cent. sugar. In two months the sugar had disappeared from the urine, except after errors in diet, and the jaundice and fever had also disappeared. These cases, he thought, pointed strongly to some subinfection of the pancreas associated with stoppage of the bile duct. The case reported by Dr. Thayer suggested to him the possibility of there having been a duodenal ulcer, with a profuse duodenal hemorrhage, at the time of the man's earlier illness.

A New Animal Holder.—Dr. Robert J. Wilson demonstrated an animal holder he had been using for the last five years that can be used without the aid of an assistant, and which is so easily constructed that it can be made by any good laboratory attendant. It consists of a box with a sliding lid. The lid having a slit in the anterior end that engages the head of the animal, and on its under side a dam, which represents the posterior wall of the box and prevents the animal from backing out. The lid has on its posterior end two small slits just large enough to accommodate single links of small dog chains, which are used for holding the animals' legs in abdominal operations.

For operations about the head or ear-vein inoculations, the lid having been previously removed, the animal is placed in the box, the lid is slipped in, the slit in its forward end catching the animal's neck while at the same time the buttock dam on the under side of the lid pushes the animal's chest up against the anterior wall of the box, where it is held firmly and practically immovable in place without being tied in any way or made to suffer by restricting strings.

In securing the animal for abdominal operations, it is allowed to stand on the table or the floor, the lid of the box is held above its neck with the buttock dam pointing in the same direction as the animal's head. The lid is then lowered so that the slit in its anterior end embraces the animal's neck. The animal is then grasped firmly by its hind legs and drawn up so that it lies with its back on the board, with its hind legs completely extended.

These are secured in place by two small dog chains which are fastened about the legs just above the knees by slipping loops, and secured to the lid by having the links of the chains held in the slits at the posterior end of the lid provided for that purpose. The lid is then slipped into place with the animal's head in the box, and body lying exposed on the top. The small dog chains are particularly desirable, because they do not constrict and hurt the animal, and they do not require knots of any kind.

The following dimensions are for rabbits of 1,500 grams weight, but the holders can be made suitable for almost any sized animal.

Box.—Inside dimensions, length 14½ inches, heights of side walls, 4¼ inches; height of front wall, 3¼ inches. The front wall is also 2 inches thick. The posterior wall is represented by the buttock dam on the lid. *The Dimensions of Lid.*—Length 28 inches, width 4 inches, thickness ½ inch. Slit in anterior end of lid is 4¼ inches long, 1½ inches wide at its anterior end, and ¾ inch wide at posterior end. The buttock dam is fastened to the under side of the lid 10½ inches from its anterior end, and is 3½ inches long, 2¾ inches wide, and ¾ inch thick. The dog chain links should not be more than ⅜ inch long, and of the open-link variety.

Observations on the Iso-Agglutinating Action of Human Blood Serum.—Dr. C. A. Herter briefly described this reaction. He defined iso-agglutination as the close clumping or agglutination of human red cells by serum from another human being. Two cubic centimeters of the serum to be tested are mixed with 1 c.c. of cells separated by means of a centrifuge. When the serum of a normal or of a pathological individual is mixed with the cells of the same individual, in the proportions named or in other proportions, the cells show no peculiarities, but lie in rouleaux or as individual cells. When iso-agglutination occurs, the serum is brought in contact with cells of another human individual. The reaction sets in in from two to five minutes. The serum and cells, after being well stirred with a glass rod, soon show signs of the beginning of the characteristic phenomenon, when the mixture runs from side to side in a watch glass. Instead of appearing homogeneous, the mixture shows many small, light spots, in which there is serum, but no cells. These spots increase in number and size, and it is soon evident that the cells are separating from the serum in the form of a comparatively coarsely meshed network. The red cells are found to be closely packed together in large masses, and to have lost their rouleaux form. The red cells appear to have undergone a change in consistence, rendering them more plastic than normal, as shown by the distortion of cells which have been subjected to the pressure of the cover glass. The reaction can be observed with the unaided eye, when the test is made on a watch glass or cover glass. Dr. Herter said that this gross phenomenon was new to him, and he had been unable to find any description of it. The reaction had been obtained in nearly one-third of all the cases in the hospital in which the blood had been subjected to this test. Notes of twelve cases were read. Most of these patients were alcoholic. It had been found possible to expose the serum to a temperature of 56° F., for one hour, without affecting the reaction in the least. In two instances he had exposed the serum to a temperature of 60° F., in one case for half an hour, and in the other for one hour; and while the serum did not give the reaction so strongly as before, it was still very distinct. Ordinarily human serum is capable of agglutinating normally the red blood cells of the dog and rabbit. There is no relation between this reaction and the hæmolytic action of serum. It had not yet been determined whether or not an intermediary body is necessary for the production of this reaction. He was not yet prepared to say anything concerning the clinical significance of this phenomenon.

Dr. T. C. JANEWAY asked whether the serum from these cases agglutinates the red cells of the other patients, giving the same reaction with the normal red cells; also, whether the serum from a normal person not giving the reaction would agglutinate red cells from these patients—in other words, was there a mutual reaction?

Dr. Herter replied in the affirmative.

Dr. EWING said that this contribution reminded him of some remarks made by Richardson of Boston on the interaction of specimens of normal human blood on one another and on the typhoid bacillus. Richardson had found that in some cases of typhoid fever not giving the Widal reaction, if some normal blood were added, the Widal reaction would be at once obtained. Richardson had found that when the typhoid serum and the normal serum were mixed in a certain order, a complete reaction was obtained; but that this reaction was not obtained at all when a different order was observed. The subject was entirely new to him, and deserved careful study. He should personally be interested in studying the morphology of the red cells in connection with this reaction. It seemed possible that the effect noticed was upon the so-called fatty envelope.

Blood Slides from Two Cases of Pernicious Malarial Fever.—Dr. CHARLES BOLDUAN presented these slides with a brief clinical history. One case was of the algid type, and the other of the comatose variety. The first patient was twenty-two years of age, had come from Cuba, and had not been ill previously. Five days before coming under observation he had felt dizzy, had had muscular pains, and had vomited some black material. There had been no chills and the bowels were regular. Physical examination showed no enlargement of the spleen and no typhoid eruption. The temperature followed the regular quotidian type, but there were no chills. Examination of the blood showed a large number of signet rings. On the fourth day the patient had felt exceedingly well and had desired to go home. A few hours later his pulse had suddenly become weak, and he had died the same evening. The other case was that of a Spanish fireman on a ship. He had been admitted to the hospital with a temperature of 105° F. Eight days previously he had been taken ill with fever and chill, and on the day before admission had been found in his bunk unconscious. The blood count gave 19,000 leucocytes, and the Widal and diazo reactions were negative. There was some albuminuria. Examination of the blood showed severe infection with malaria. Quinine was given hypodermically, but he died on the third day. No autopsy was permitted. As the leucocyte count had been taken immediately after an ice bath, it was probable that this explained the high count. Reference was made by the speaker to the case of a domestic, who had been living in Mamaroneck since last June. She had had chill, fever, and sweating at intervals of about one week. The spleen was palpable. Quite a number of crescents were found in the blood. As far as could be ascertained, the woman had not been away from the place where she had been taken sick.

Dr. F. C. WOOD presented card specimens of blood sera illustrating the hæmolytic action of serum from one animal upon the blood corpuscles of another species. The specimens also demonstrated that the hæmolysis could be prevented by heating the serum to 56° C. for half an hour, and then the hæmolytic action could be revived in this heated serum by the addition of fresh serum from another animal.

Dissecting Aneurysm of the Arch of the Aorta.—Dr. E. L. Dow presented a specimen of an acute dissecting aneurysm of the thoracic aorta, produced by a severe muscular strain. It occurred in a man of forty, who had previously felt perfectly well. He denied syphilis and alcoholism, and the previous occurrence of attacks of dyspnœa. He said that while subjecting himself to a severe strain in repairing an engine, he suddenly felt that he was losing consciousness, but experienced no pain, and afterward remembered no other accompanying sensation. He fell to the floor. The ambulance surgeon found the man unconscious and suffering from extreme dyspnœa. The heart's action was irregular and rapid, and there was a long, loud, medium-pitched blowing systolic murmur heard over the entire præcordium. Its maximum intensity was at the apex, and it was transmitted to the left. The right radial pulse was much smaller than the left. On reaching the hospital the pulse was imperceptible, and the skin cold and clammy; the heart's action was extremely irregular; the lungs were filled with the râles of pulmonary œdema. He rallied somewhat under the use of oxygen inhalations and stimulants, and in six hours had sufficiently recovered to give the foregoing history. He rested comfortably through the day, but in the evening complained of inability to use his right arm. Early the next morning, or thirty hours after the onset of the illness, he was suddenly seized with severe dyspnœa, and became unconscious. Examination showed an acutely dilated heart and marked pulmonary œdema. He died in a few minutes. The autopsy was performed eight hours after death. Between the aorta and the pulmonary artery an extravasation of blood could be seen. The heart muscle was flabby, and the cavities moderately dilated and filled with a large amount of post-mortem clot, and a small amount of white blood clot. The mitral orifice admitted the tips of five fingers, and its cusps were normal. The aortic orifice was large, but its cusps approximated perfectly. A rent was discovered in the floor of the aorta about four inches from the aortic valve. This rent was transverse, measured three-quarters of an inch in length, and was situated in the floor of a small patch of fatty degeneration of the intima and media, through which it extended. The adventitia was not involved From this rupture the coats of the aorta had been dissected up to within half an inch of the aortic valves. The aneurysm completely encircled the aorta for a distance of one and one-half inches near the heart, and also extended up the inner half of the right common carotid for an undetermined distance, and completely encircled the innominate and left subclavian. At one and one-half inches from the aortic valve was another completely encircling transverse tear of the inner aortic coats. The cavity produced by the dissection contained about three ounces of dark blood clot. In other respects the aorta was normal, except for a few patches of fatty degeneration of the intima. The liver, spleen, and kidneys showed nothing but acute congestion. The adrenals were unusually fatty. The stomach and intestines were filled with gas, and the contents of the ileum and colon were soft and green. The brain and its coverings were apparently normal. There was no atheroma of the cerebral arteries, and no thrombosis or embolism could be made out, and the aneurysm did not enter the skull. There was no evidence of syphilis.

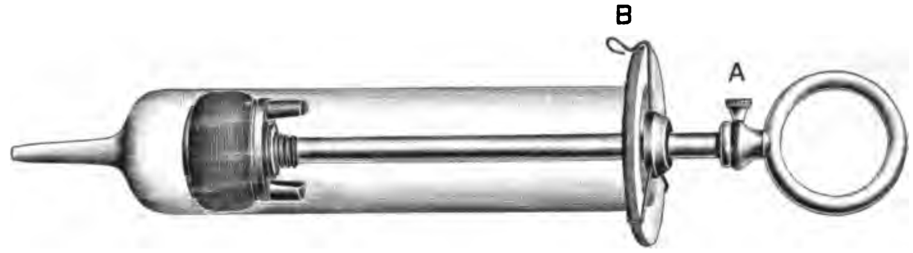
New Instruments.

A NEW ASEPTIC SYRINGE.

By GEORGE L. BRODHEAD, M.D.,
NEW YORK.

Some months ago, in the attempt to find a syringe which could be made sterile, for use in injecting the bags of Champetier de Ribes, I found that there was practically but one instrument which seemed to meet the requirements, this being the Frank modification of Janet's syringe. There are, however, several serious objections to this instrument, aside from the question of the original cost, which is considerable, and, in fact, almost prohibitive to many would-be purchasers.

The glas barrel upon which the metal extremities are cemented is often broken in the process of boiling, and the cement in some instances softened, thus rendering the instrument useless.



With the kind assistance of the Kny-Scheerer Company, of this city, I have devised a syringe which has many advantages, among which are the following:

First, it can be thoroughly sterilized by boiling; second, the barrel is of glass, and one can readily observe whether the instrument is working properly or not; third, the instrument is simple in construction, and the various parts can be easily replaced; fourth, its field of usefulness is wide, and, fifth, the cost is less than half that of the imported syringe.

The barrel of the syringe is made of heavy glass, is five inches in length, one and one-fourth inches in diameter, with a tip, one and one-fourth inches in length. The upper end of the barrel is flange-shaped, which enables one to seize it firmly with the first two fingers. The plunger consists of a rubber disk (especially prepared to withstand boiling), which is so placed between the broad, flat lower end of the solid steel piston rod and the nut just above it, that, by turning the nut, the disk may be flattened, its diameter thereby increased, and its circumference thus made to fit the barrel perfectly. The piston is held in position in the center of the barrel by a simple device, consisting of three arms of metal which grasp the flanged end of the tube. By releasing one of these arms, the piston can be readily removed from the barrel.

The piston is surmounted by a ring of steel, one and one-fourth inches in diameter, for the introduction of the thumb in operating the syringe. This ring can readily be removed, as it is screwed on the end of the piston and held in place with a small bolt. When it is desired to replace the rubber plunger the bolt is removed, the ring unscrewed, and the nut with the disk taken off. A washer is placed between the rubber disk and the nut, in order that the ring and piston rod may be moved in any direction without in the least altering the shape of the disk. The latter can be flattened by turning the piston to the right, while the nut is fixed within the arms of the device above mentioned, thus enabling one to adjust the plunger without removing it from the glass barrel.

The syringes are of two sizes—the smaller with a capacity of two and one-half ounces, the larger holding about four and a half ounces.

60 West Fifty-eighth Street.

Medical Items.

Diet in Bright's Disease.—Dr. William Hale White says: "Much has been written about the diet in chronic Bright's disease, and frequently the importance of it has been much exaggerated. The dietary for Bright's disease has even been fastidiously determined by the color of the meat ordered. If any method at all underlies many of the dietetic directions given to patients with Bright's disease, it is that those who order the diets try by means of dieting to diminish the risk of uræmia. But we have no certain knowledge what is the poison which leads to uræmia, and therefore, we can hardly hope to influence it by diet, and, indeed, there is no series of cases published showing that any particular diet is more likely than others to lead to uræmia. The great guiding principle in dieting patients suffering from chronic Bright's disease is that, as we do not know what is the cause of uræmia, the best way to avoid it is to give such diet as will keep the patient in the best general health.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending January 11, 1902.

	Cases.	Deaths.
Measles	872	28
Diphtheria and croup	310	49
Scarlet fever	277	26
Smallpox	30	3
Chickenpox	96	1
Tuberculosis	239	140
Typhoid fever	27	16
Cerebrospinal meningitis	..	3

Epidemic of Diphtheria at the Boston Navy Yard.—Referring in the report of the Surgeon-General of the Navy to the above epidemic, Passed Assistant-Surgeon Dudley N. Carpenter says the treatment depended almost entirely on antitoxin. Three kinds were tried and all equally efficacious, apparently.¶ A glass antitoxin syringe with asbestos packing was used, and the antitoxin injected, with antiseptic precautions, into the lumbar region. No abscess occurred in any case from this infection. The dose of antitoxin necessary for the individual case varied. The degree of toxæmia as shown by the clinical symptoms, the amount of membrane, the time elapsed since the onset, and the age of the patient—all were considered in gauging the number of units to be given. ¶ In cases of moderate severity, among male adults with a natural immunity, relatively, only from 1,000 to 14,000 units were given during the course of an individual case. From 6,000 to 10,000 units was the average amount.

A Manila Military Hospital.—In the Journal of the Association of Military Surgeons of the United States, November, Captain John S. Kulp, contributes a memoir of one of these institutions.

The bed capacity of the hospital in question was 297, with 57.5 square feet of floor space, and 1,035 cubic feet of air space per bed.

The personnel consisted of 6 officers, 10 non-commissioned officers, 60 privates, 11 native laborers—a total of 87.

The work of the hospital was done by soldiers of the hospital corps, no male or female civilians being employed in the buildings.

The administration of the hospital seems to have been very successful throughout, and to have reflected much credit upon its organizers.

Captain Kulp reaches the following conclusions with regard to such establishments:

That the military hospital differs from the civil in almost every particular of patient, administration, and personnel. Its commanding officer possesses greater authority and graver responsibilities than those of a mere medical superintendent. The technical knowledge of decisions, regulations and papers, which is required to protect the interests of the government on the one hand, and to prevent injustice to the soldier patient on the other, can be learned from neither book nor school. In no country can there be obtained a higher class of purely professional talent than in our own, but those trained in the specialty of military medicine must be provided in time of peace. This is the work which the gentlemen composing the association of Military Surgeons are doing, and the reward will come not only in the saving of life and the prevention of suffering, but by assistance of no mean value when the time comes for the final object for which all armies exist —the test of battle.

Restoring Effects of Paraffin.—*The Revue* (Paris, November, 1901) gives an account transcribed by the *Literary Digest* of a remedy for the correction of disfigurements caused by burns, wounds, or of even those of a congenital nature. The method was introduced by M. de Gersuny. If it is a collapsed nose which it is desired to raise, beneath this organ two or three cubic centimeters of melted paraffin are introduced. The injected mass raises and stretches the skin of the nose, and as paraffin becomes solid at a temperature of 37 degrees C. (98 F.)—that is, at the temperature of the body—it is only necessary to mold it into the desired shape before it cools. The results are said to be very satisfactory. Experiments made upon animals tend to prove that paraffin is not absorbed, but that it remains in place, and that in every direction, around and across it, is developed a web of conjunctive tissue. When the animal experimented upon is killed or dies, there is thus found at the place where the injection was made a sort of conjunctive network, the interstices of which are filled with paraffin. The formation of so characteristic a tissue, remarks *The Revue*, permits the hope that the results of the Gersuny method may be durable, and, as a matter of fact, in cases where operations were performed so long ago as two years, there has been no reappearance of the disfigurement.

Casualties During the China Expedition.—Gunshot wounds furnished the largest number of admissions to hospitals for any one cause among the United States soldiers and marines engaged in the Chinese expedition.

The total number was ninety-seven, slightly exceeding the combined number of admissions for diarrhœa and dysentery, the two most common diseases in the force during hostilities.

During the Spanish-American war there was a total of eighty-four gunshot wounds, with sixteen deaths. Injuries of this class during that period were not only fewer in number, but also decidedly less fatal, the percentage of deaths having been nineteen in the former instance as compared with a mortality of nearly 25 per cent. during the recent hostilities.—*Report of Surgeon-General U. S. Navy.*

Koplik's Sign in Measles.—Koplik's sign in measles does not seem to be always a sure symptom of this disease. This sign consists in red spots on the mucous membrane of the mouth, the center of which is slightly prominent. Widowitcz, a physician at Gratz, has found it in 140 cases out of 158—that is to say, in 88.6 per cent. of the cases. He has, however, seen it ten times in German measles, once in a case of follicular tonsillitis, and once in a case of stridulous laryngitis. Rolly has found it in twenty-four cases out of seventy-eight, and has never seen it in other diseases.—Paris letter, *Therapeutic Gazette.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended January 11, 1902:

		CASES.	DEATHS.
SMALLPOX—UNITED STATES.			
California, San Francisco	Dec. 22–29	2	
Indiana, Evansville	Dec. 22–Jan. 4	3	
Iowa, Clinton	Dec. 27–Jan. 4	1	
Louisiana, New Orleans	Dec. 27–Jan. 4	1	
Massachusetts, Blackstone	Jan. 1–8	2	
Boston	Dec 27–Jan. 4	24	6
Brockton	Dec. 27–Jan. 4	1	
Cambridge	Dec. 27–Jan. 4	2	
Chelsea	Dec. 27–Jan 4	1	
Lowell	Dec. 27–Jan. 4	4	
Medford	Dec. 27–Jan. 4	2	
Newton	Dec. 27–Jan. 4	1	
Quincy	Dec. 27–Jan. 4	1	
Somerville	Dec. 27–Jan. 4	1	
Nebraska, Omaha	Dec. 27–Jan. 4	29	
New Hampshire, Nashua	Dec. 27–Jan. 4	2	
New Jersey, Camden	Dec. 27–Jan. 4	19	
Jersey City	Dec. 22–29		1
Newark	Dec. 27–Jan. 4	31	1
New York, New York	Dec. 27–Jan. 4	8	2
Ohio Cincinnati	Dec 28–Jan 3	9	
Cleveland	Dec. 27–Jan. 4	1	
Youngstown	Dec. 21–28	1	
Pennsylvania Allegheny	Dec. 27–Jan. 4	2	
Norristown	Dec. 27–Jan 4	1	1
Philadelphia	Dec. 27–Jan. 4	90	16
South Carolina, Greenville	Dec. 27–Jan. 4	1	
Tennessee, Memphis	Dec. 27–Jan. 4	2	
Vermont, Burlington	Dec 21–28	30	
Virginia, Roanoke	Dec. 24–31	41	
Washington, Tacoma	Dec. 22–29	2	
Wisconsin, Green Bay	Dec. 29–Jan. 5	5	1
Milwaukee	Dec. 29–Jan 4	1	
SMALLPOX—FOREIGN.			
Argentina, Buenos Ayres	Oct. 1–31		61
Austria, Prague	Dec. 7–14	16	
Belgium, Antwerp	Dec. 7–21	4	1
Ghent	Dec. 14–21	4	
Brazil, Rio de Janeiro	Nov. 28–Dec. 8		83
Canada, Halifax	Nov. 22–Jan. 4	15	
Quebec	Dec. 28–Jan. 4	21	
Colombia, Cartagena	Dec. 16–22		3
France, Paris	Dec. 14–21		6
Great Britain, Liverpool	Dec. 7–21	3	
London	Dec. 14–21	538	32
India, Calcutta	Nov. 23–Dec. 7		2
Madras	Nov. 23–Dec. 6		3
Italy, Naples	Dec. 7–14	16	1
Russia, Odessa	Dec. 7–14	3	1
St. Petersburg	Dec. 7–14	5	1
Spain, Corunna	Dec. 14–21		2
Uruguay, Montevideo	Oct. 25–Dec. 9	108	5
YELLOW FEVER.			
Brazil, Bahia	Nov. 30–Dec. 7	1	1
Rio de Janeiro	Nov. 25–Dec. 8		4
Mexico, Vera Cruz	Dec. 21–28	6	2
West Indies, St. Lucia	Dec. 9—Prevalent.		
CHOLERA			
India, Bombay	Nov. 26–Dec. 3		5
Calcutta	Nov. 23–Dec. 7		79
Java, Batavia	Nov. 8–30	40	28
PLAGUE—FOREIGN.			
Brazil, Rio de Janeiro	Nov. 23–Dec. 5		11
India, Bombay	Nov. 23–Dec. 10		238
Calcutta	Nov. 23–Dec. 7		50
Karachi	Nov. 23–Dec. 8	169	155
Mauritius	Dec. 5–12	42	25
Russia. Batoum	Dec. 12—1 case.	Suspect	
South Africa, Port Elizabeth	Nov. 30–Dec. 7	1	
Massell Bay	Nov. 30–Dec. 7	2	

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Original Articles.

THE FOOD FACTOR AS A CAUSE OF HEALTH AND DISEASE DURING CHILDHOOD, OR THE ADAPTATION OF FOOD TO THE NECESSITIES OF THE GROWING ORGANISM.*

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AT what age should a child be given food other than milk? Milk contains from seven to fourteen times less iron than the other articles of food. Although the other mineral constituents of the milk are present in the same proportion in which they are contained in the tissues of the child at birth, iron is present in mere traces only. The infant enters the world with a supply of iron in the liver and to a smaller extent elsewhere, which has been stored during intra-uterine life. The child gradually draws upon such store for the manufacture of the blood-coloring matter, which lasts until its digestive organs are prepared to digest food other than milk. The small amount of iron in milk is insufficient for the growth of the child, hence the high percentage of iron in the organism at birth. Late weaning, or the too prolonged use of milk as the exclusive food of a child artificially fed, causes anæmia. This is the first pathological condition which we mark as arising from failure to modify the diet of a child at the proper time. The chemistry of milk, the physiological chemistry of the child, and the physiology of the digestive organs denote that such change should be made at a fairly definite time.

From the seventh to the tenth month, according to the degree of development of the child and the advancement of dentition, the ferments which digest farinaceous substances are present in sufficient quantity to indicate that a change of food should be made. The rapid development and the functional activity at this time of the glands which secrete the diastasic ferments make it wholly manifest that nature intended that milk should be supplemented first by farinaceous food. The chemical composition of the various farinaceous foods determines at once which one of these has the highest physiological value. Oatmeal is rich in all the constituents which are essential for the growth and development of the child at this age, and is peculiarly rich in proteid, fat, and mineral matters. Oatmeal is amongst the richest in iron of the vegetable foods, and contains more iron per 100 dried parts than beef. Proteid is present to the extent of about 14½ per cent.; fat 10 per cent.; mineral matters 2 per cent.; starch 30 per cent. Of the total nitrogenous matter, 94 per cent. is in the form of proteid, and therefore available for tissue-building. Owing to the large amount of cellulose or woody fiber in oatmeal it is indigestible unless this is removed by straining. By careful cooking and straining it is one of the most digestible foods there is. A tablespoonful of oatmeal jelly may be added to every second bottle at first, then every bottle, and later the amount may be gradually increased to two ounces in every bottle. In the summer months it is sometimes necessary to use barley gruel (from the whole or pearl barley) instead of oatmeal. Barley is poor in fat, proteid, and iron, as compared with oats. It is seldom wise to *begin* the use of farinaceous food with a child during the warm months, as it is prone to cause fermentation and diarrhœa.

Milk, supplemented by cereal gruels, should, with exceptional instances, constitute the child's food until the end of the first year. Soft boiled or poached egg mixed with bread crumbs from stale bread may be added to the diet at the beginning of the second year. Egg contains much proteid, fat, and mineral matter, especially salts of lime, phosphoric acid, and iron. The nuclein of the yolk of egg contains phosphorus and iron in organic combination. As mineral matters are most easily absorbed where they form part of an organic compound, the iron and phosphorus in the yolk of egg easily enter the blood. The fats in the yolk of egg are the same as in butter, and have the same nutritive value as these. Their presence in the form of an emulsion in the yolk makes them very easily digested. The great richness of yolk of egg in fat, in lime salts, and in organic compounds of phosphorus and iron makes it a peculiarly valuable food for a young child. The nutritive value of egg is due almost entirely to proteid and fat. Of these there are of proteid 14.8 per cent., and fat 10.5 per cent. To begin with, only a small portion of one egg should be given twice a week, gradually increasing the amount until the entire egg, soft boiled, is taken at a feeding. Later this may be given two or even three times a week.

During this period the child may be allowed a dry crust of stale bread twice a day. A hard crust is highly digestible, and is a good thing for a child as soon as it has the teeth with which to chew it. The labor of the jaws which is involved in eating a piece of hard crust develops the masticatory organs, and especially the jaw bone. If the jaw is imperfectly developed, the teeth are crowded and imperfectly developed, and dental caries is inevitable. Decayed first teeth cause septic conditions of the mouth, and frequently lead to enlargement of the cervical lymphatics, which may become tubercular, and the whole system may thus become infected. Much digestive disturbance is unquestionably due to the same cause.

Disuse of the jaws starves the areas supplied by the maxillary arteries, as these vessels are not fully developed. The mechanical stimulation of chewing leads to the outpouring of a salivary secretion richer in amylolytic power than the secretion coming without stimulation. These several matters should not be overlooked, it seems to me, in the feeding of children, particularly in these days, when it is customary for the medical profession to direct that all food should be scraped, minced, chopped, strained, etc.

The child may also be given stale bread broken in milk, by way of furnishing variety to its food. Bread is one of the most nutritious of foods. Three-fifths of it consists of solid nutriment, and but two-fifths of it water. There are but few foods of which the same can be said, and it is not true of any animal food.

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At the end of fifteen months, a child (when normally developed) is getting whole milk, oatmeal or barley, a soft-boiled or poached egg twice or sometimes three times a week, a dry crust of stale bread twice a day, and perhaps a little bread and milk.

For the best results and the least disturbance of digestion, cereals should be given without sugar. Sugar has a strong affinity for water, and a large amount of water is required to hold it in solution. Water for this purpose is extracted from the capillaries of the mucous membrane of the stomach, thus interfering with the blood supply for the gastric secretions, causing a retardation of the digestive functions. This is the reason why digestion is delayed and deranged by sugar and all sweet desserts. The large amount of water that is required to hold sugar in solution is the explanation of its causing constipation, and of its interfering with all the secretions; just as in diabetes there are unrelievable constipation, dry, eczematous skin, and more or less diminution of the secretory functions, so in children in whom sugar is a large factor in their diet are all these perversions of the vital functions met.

Fruit may be given now, and sometimes much earlier. Orange juice and prune pulp are the first fruits for a child. When there is constipation, these are allowable very early in infancy. Every means, however, should first be tried to overcome this by adjustment of the diet, before resorting to fruit juices. Fruit juice should be independent of and about an hour before a meal.

You must have become impressed with the fact that I have been directing foods rich in proteids, fat, carbohydrates, and mineral matters. It is on physiological grounds solely that such foods are recommended. Feeding of children comprises the nursing period (breast or bottle), a transition stage, just spoken of, and a third or final period, which we are about to consider. It is this final stage which is found most perplexing. Just here the physician finds himself utterly rudderless in the feeding of a child. What has been written about it is diametrically opposed to the teachings of chemical physiology. Experience proves it to be erroneous.

Choice of food adapted to the wants of the growing organism necessitates a clear understanding of metabolism.

Many look upon metabolism in a child and an adult as identical, whereas they are quite diverse. Metabolism in an adult is using up and renewing the materials of which the body is composed, and covers but a minor and comparatively unimportant part of that process in a child. In a child materials are being stored for fresh growth. Storing for future needs is the paramount desideratum in the diet of a child.

For this reason, certain constituents are required in relatively much larger proportions in a child than in an adult.

The bony framework requires little or no repair in an adult, hence earthy salts are unimportant in an adult as compared with their grave necessity in a growing child.

Fat is essential for cell growth in a child, and as we shall see later on, may be properly classed as a tissue-former during the period of rapid growth of the nervous system and of the skeleton.

Carbohydrates may be largely dispensed with or substituted for in an adult. In a child they are necessary in order to meet the large demand for heat and energy, and thus to protect and shield from oxidation the proteids and fats that these may be stored for future needs. Muscular deposit and growth are not possible without an abundance of the shielding carbohydrates in the diet of a child.

At this age, too, food must be selected with reference to its influence on the development and functions of the digestive organs.

The excessive fear of indigestible food which prevails so extensively often leads to actual debility of the intestinal muscular walls. The muscular wall of the intestines becomes atrophied like every other muscle, if it has not work to do. We must see, therefore, that the diet of a child does not lack bulk for the mechanical stimulation its presence gives to the intestinal movements. The intestinal secretions exert no chemical action on the proteid constituents of the food, but play a great part in the digestion of the carbohydrates. During the period when the intestinal follicles are developing and increasing in functional activity, these functions should be stimulated that they may attain their full development. For the complete development of this function and of the muscular walls of the intestine, carbohydrates and vegetable food should enter largely into the diet during growth and development.

In an adult, food serves two great purposes in the body, the supply of materials for the repair of the tissues, and, secondly, as a source of energy which can be converted into heat and nervous and muscular work. In a child there is necessity for materials for another supreme purpose, viz., the structure and development of new parts.

If we are to proceed in complete accord and follow out readily and clearly what we have before us for consideration, we must start with the proper groundwork. I beg to remind you, therefore, that the essential elements of food are of five chief classes, viz.:

(1) The nitrogenous, the chief of which are the proteids found in animal food, cereals, and certain vegetables; (2) The fats; (3) The carbohydrates; (4) Mineral elements, of which the salts of lime, potash, soda, and iron are the chief; (5) Water. The repairing of the structures in an adult can be performed by the proteids and the mineral constituents, and by these alone; all the classes can and do supply energy and heat.

For the perfect development of the growing structures in a child, proteids, mineral elements, fat, and carbohydrates are required in relatively larger proportions than in an adult. These will be considered seriatim.

Nitrogenous Matter.—No formation of tissue can occur without proteid. An animal fed only on non-nitrogenous food, such as fats and carbohydrates, will inevitably starve to death in time. Protoplasm, the vital constituent of every individual cell, contains nitrogen; fats and carbohydrates contain no nitrogen; therefore, none of the tissues of the body can be made from these non-nitrogenous foods. Nitrogenous matter is essential to every vital process; no cell growth can occur without it.

The voluntary muscles in man constitute about 42 per cent. of the total body-weight; in the new-born child, 23.5 per cent. Proteids are the material from which muscles are built up, and proteid in large amount must be supplied to a child for the development and growth of muscular tissue alone. It is equally necessary for the proper development of the other structures of the growing organism. The importance of a sufficiency of proteid can hardly be exaggerated. Much of the feebleness, flabbiness, and pallor, and the stunted, ill-developed bodies one so often sees in children, are no doubt due to a lack of it.

We have thus conclusively demonstrated the essential necessity of an abundance of proteid in the diet of a child.

Mineral Ingredients.—Food must contain certain mineral or inorganic as well as organic principles. Mineral constituents are necessary for the building up of the child's body, and a lack of them will produce the same evidences of malnutrition and of imperfect development as deficiency of proteids. *The mineral portions of bone are permanent*, and require little or no repair in an adult, hence the great importance of a relatively larger supply of these elements in the body of a child.

Nitrogenous materials or albumins form the groundwork of every living cell. The phenomena of life are dependent upon and center in their presence. The nuclei of these cells are rich in phosphorus, iron, and variable amounts of mineral salts. No formation of cells for fresh growth can occur without phosphates and other mineral salts; they are necessary to every tissue: salts of lime and magnesia for the bones; phosphate of potash for the muscles; phosphates and potash salts for the corpuscles of the blood; and chlorides and soda salts for the plasma.

As physiological physicians, however, we must not regard these constituents as simple mineral elements. The mineral matters of the food, to be properly assimilated, must be in their natural condition, which is that of organic combination with the proteid substances. Animals in which milk alone is a sufficient food die of inanition if the mineral substances are extracted, and the result is the same if these elements are added to the caseine, fat, and milk-sugar, the organic combination being broken up. In the breaking up of the organic combination or destruction of the chemical union between proteids and mineral substances is to be found the sole etiological factor of scurvy in the artificial preservation of foods by heat.

In raw milk, egg, cereals, and certain fresh vegetables, mineral salts are all found in organic combination, ready to enter the blood and to be assimilated by the various constituent parts of the organism.

The inorganic tissue-builders, like the proteids, are concerned in building up the child's body, and any deficiency of them will produce much the same symptoms as deficiency of proteids. The symptoms produced by a lack of these are often mistaken for a deficiency of proteids, and meat juice, scraped beef, etc., given, with the result that disease of the nervous mechanism, and of the blood, is super-added to the existing morbid phenomena.

Fat.—Fat commands an immeasurably more exalted place in the diet of a child than in an adult. Fat serves as fuel to maintain the temperature of the body at the necessary standard, the heat being converted into force and energy for every action and function of the organism.

77.5 per cent. of the heat lost to the body is by conduction and radiation and evaporation from the cutaneous surface. The surface of a child is relatively three times as great as that of an adult. The larger the cutaneous surface relative to the size of the body, the greater is the amount of heat lost by conduction, radiation, and evaporation. This relatively large and rapid heat loss in the child makes an ample supply of the chief body fuel, fat, an absolutely indispensable condition.

Bone marrow, brain, and nerves are the tissues which are richest of all in fat.

Brain tissue contains	8	per cent. fat.
Nerves contain	22	per cent. fat.
Marrow of bone contains	96	per cent. fat.

These tissues are all increasing in weight and functional activity with marvelous rapidity, the brain doubling its weight during the first two years of life. In these structures the child is laying down a large amount of tissue rich in fat, and a child whose diet is deficient in fat rapidly loses vigor, and is extremely prone to suffer from anæmia, laryngismus stridulus, convulsions, and later, bronchitis, and a tendency to catarrhal affections of all mucous surfaces. In this connection it should be remembered that the chief seat of the formation of the red blood corpuscles is the red marrow of the bones, especially of the bones of the skull and trunk, and of the ends of the long bones of the extremities.

If a child's food is deficient in fat, the bony structures develop slowly and imperfectly, dentition is delayed, and a later manifestation is rickets with anæmia. In the diet of a child, fat plays some part in the formation of young tissue which cannot be performed by any other food constituent. Abundance of fat should be the main characteristic of the diet of infancy and early childhood. A child of five requires half as much fat as a man doing moderate work.

To provide materials for repair, for the secretions, for the generation of heat and energy, and in addition for making the new tissues of the growing structures, a child requires proteids, mineral matters, fat, and carbohydrates, in larger proportions than an adult. The mineral ingredients must be in organic combination with the proteids. Milk, farinaceous substances, especially oatmeal, bread, and egg, not only contain these food elements in eminent proportions, but they exist in organic combination. These are pre-eminently the physiological foods of early childhood.

The peculiar value of carbohydrates to a child will receive due consideration when treating of flesh foods.

Flesh Food.—At what age should a child be given animal food other than milk and egg? The time when meat should be given to a child turns on its influence upon metabolism. Meat and meat preparations are characterized by the large amount of nitrogenous matter which they contain. Nitrogenous matter markedly increases the metabolism of the body; and it increases the metabolism not only of the nitrogenous, but also of the non-nitrogenous constituents as well.

Beef contains from 20 to 21 per cent. of nitrogenous matter, therefore four times the amount that is present in milk, and about double the amount contained in the principal farinaceous substances. Of the total nitrogenous matter in meat, 15 per cent. is present in the form of extractives. Meat extractives have no nutritive value. They are not tissue-builders; they are not oxidized in the body, and therefore are useless as sources of heat and energy. These extractives excite the nervous system, and may act injuriously on the young child by overstimulating the nervous system, by taxing the organs of excretion, and by stimulating unduly metabolism.

Of the total nitrogenous matter in beef, only 5 to 6 per cent. is in the form of proteid, and therefore available for the two main purposes of food—tissue building and the production of heat and energy and work.

The proteids may be divided into those of animal and those of vegetable origin. There does not appear to be any essential difference between these two classes. Vegetable proteid is equal in nutritive value to animal proteid. Somewhat less of the proteid of vegetable food is digested and absorbed than that of animal origin. This is largely due to the envelope of indigestible cellulose, to woody fiber, and other indigestible materials, rather than to any peculiarity of the proteids themselves. This may be overcome by soaking in water overnight, careful cooking, and straining. With such care in preparation, the proteids of cereals are absorbed as perfectly as those of animal origin.

The body possesses the power of converting any vegetable or animal proteid into the proteids which are contained in its solids and liquids. Vegetable proteid is just as valuable as animal proteid for the construction and repair of the body, and for the supply of nitrogenous material as the active principle of the secretions, and is free from the crystalline extractive bodies, which exist in meat in the proportion of 15 per cent.

The excess of proteid and extractives contained in flesh foods acts as a stimulus to some reflex nervous machinery through which metabolism of all tissues is hurried on. In a child combustion is relatively greater than in an adult for two reasons—first, the smaller organism having the relatively larger surface carries on a more rapid metabolism per unit of body-weight; second, the metabolism of the growing parts of the body is from 2½ to 6$\frac{3}{10}$ greater than that of the parts already formed.

The proteids and extractives from flesh foods stimulate the normally active metabolism of a child, and prevent storing of the tissue-builders. Over-stimulation of metabolism by an excess of animal food interferes with laying on flesh—fat or muscular flesh. Carbohydrates are easily oxidized, and their oxidation serves to protect the proteids and fats from consumption. The shielding from oxidation of these requisites for the growth and development of new structures is a matter of profound value and consequence to a growing child. Carbohydrates and fats by their sparing action increase the store of proteids. A child increasing its capital of flesh tissue should have proteid-sparing food in abundance, and food which stimulates metabolism should only be given in such quantity as is necessary for the actual requirements of the system's daily needs.

The brain appears to require nitrogen, which can only be obtained in a concentrated form from animal sources. Highly nitrogenized food is a nervous food, valuable where bodily energy and intellectual capacity must be assured without taxing the digestive organs.

Muscles do their work upon carbohydrates; a child, with its unceasing, acrobatic, muscular feats, should have an abundance of that food which is regarded as the most valuable source of muscle-energy, and the sensitive nervous system should not be stimulated by a nervous food.

One of the most unfortunate, wholly unconsidered, ill consequences of an early and liberal meat diet is the disrelish it creates for the physiological foods of childhood—cereals, vegetables, milk.

A child that is allowed a generous meat diet is certain to refuse cereals and vegetables. Meat, by its stimulating effect, produces a habit as surely as does alcohol, tea, or coffee, and a distaste for less satisfying foods.

The foods which the meat-eating child eschews contain in large proportions certain mineral constituents which are essential to bodily nutrition and health, and without which the processes of fresh growth and development are stunted. This brings us to the kernel of our subject.

The chemical processes in the organism are dependent upon alkaline-reacting tissue-fluids.

In the combustion of flesh foods (proteids) in the organism, sulphuric acid is formed, and death may be caused by a lack of alkaline bases necessary to neutralize this acid product.

The function of every individual cell, the nutrition of every tissue, the perfect consummation of every chemical process in the organism is dependent upon alkaline-reacting tissue-fluids, which alkaline reaction is due to alkali-carbonates.

These alkaline bases are also of great importance as constituents of certain secretions, such as the saliva, the pancreatic and intestinal secretions, and for the transportation of carbonic acid in the blood, that it may be removed from the system.

For the processes of fresh growth, for the construction of bone, muscle, etc., mineral constituents are likewise required in large proportions.

For the supply of alkali-carbonates for the tissue-fluids; for the alkalinity of the blood and the numerous secretions which are poured forth in almost incalculable quantities during every twenty-four hours; for the transportation and elimination of carbonic acid from the system; to neutralize the sulphuric acid formed in the combustion of the proteids; for the passage of the proteids from a soluble to a coagulable state, and for the organization of the proteids; for the supply of the large amount of minerals needed for the growth of the bony framework, and for the muscles of the growing child, alkaline bases must be introduced into the system in large amount. The nutritive value of food substances is generally estimated by their proportions of proteids, fats, and carbohydrates. In a child the mineral constituents are equally important with any of these.

These mineral constituents cannot be introduced into the system in an assimilable form except in organic combination with an albuminous molecule, and are only found in organic combination in sufficient proportions to meet the large demands in a child in certain vegetables and cereals which obtain them direct from the soil as provided by nature.

A lack of these mineral constituents will not only cause all vigor and vitality to dwindle and die out, but indeterminate disease processes supervene in consequence thereof.

I have met with cases in which every tissue of the body was in a state of suffering; the capillary circulation of every organ deranged; every secretion disturbed and altered; a general disease of every part, all arising from a deficiency of the normal food constituents, chiefly the mineral elements.

In numerous cases in which all the means that our art could devise had been employed, not only with lamentable failures, but with deplorable effects, I have had the happiness of seeing this universal morbid state remedied promptly and permanently by adjustment of the diet to the necessities of the growing organism—supplying the starving tissue-cells with proper food constituents in an assimilable form.

We should, moreover, acknowledge the value of vegetable food in the construction of the coloring matter of the blood. There exists an interesting relationship between the blood-coloring matter and the vegetable-coloring matter, and vegetable food is probably the chief factor in the production of blood-coloring matter. Long ago Bunge affirmed that plants constitute the normal supply of iron to the body. Oatmeal is among the richest in iron of the vegetable foods, and, according to Boussingault, contains more iron per 100 dried parts than beef. Spinach and apples likewise contain a great deal of iron.

The urine in children is considerably richer in uric acid and ammonia than the urine of adults. The elimination of uric acid and ammonia diminishes promptly with the use of vegetable food.

Salts of the vegetable acids which are so abundant in vegetable food become oxidized in the body to carbonates, and the bases thus derived tend to alkalize the urine. From this follows the familiar fact that urine of herbivorous animals is alkaline, and that the human urine may become alkaline when a vegetarian diet is maintained.

The present drift of teaching is to direct beef or beef-juice as food in fulsome quantities to very young children. An infant of ten months is ordered half an ounce of beef-juice daily, and this is increased to three ounces a day by the twelfth month. Scraped raw beef is given with equal lavishness to a child of eighteen months. Medical writings have propagated and popularized this unfortunate error.

The evil fruit, the pathological consequence of this unphysiological and abnormal feeding, is to over-stimulate the delicate nervous organization, with undeveloped controlling centers and almost completely developed sympathetic nerves; to tax the system with incompletely burned, merely charred, excretory products; to render the urine, which in the young child is normally highly acid, abnormally so; and in its train, incontinence of urine, rheumatism, chorea, rheumatic tonsillitis and torticollis, night terrors, urticaria, angio-neurotic œdema, and finally, from poisonous excrementitious products, anæmia, acute convulsions, and petit mal.

There are more so-called nervousness, anæmia, rheumatism, valvular disease of the heart, and chorea at the present time in children from an excess of meat and its preparations in the diet than from all other causes combined.

Physiology and physiological chemistry make it unquestionably clear that meat should not be given in early childhood. Experience demonstrates and proves the accuracy and the value of physiological teaching.

The ever-active, muscle-laboring, growing child, with its rapid heat loss, should have an abundance of cereals, vegetables, and milk in its diet, to meet physiological requirements.

Children in whom meat is a large factor in their diet have not the robustness and vigor, the freedom from attacks of ill-health, witnessed in those who have meat but sparingly. A disproportion of animal food in the diet of a child, by overstimulation of metabolism, leads to imperfect tissue-nutrition, delicacy of constitution, and irritability and peevishness of disposition; the resisting powers of the organism are impaired; the susceptibility to disease heightened. Meat juice should not be given to a healthy child before two years old, and then in quantities not to exceed half an ounce to one ounce three times a week. The healthiest children are those who have meat every second day only, up to the age of five and six years.

Suitable adaptation of the different food constituents to cover the large demand for heat and energy, and for the storing of proteids, minerals, and fat for *future needs*, is the paramount consideration in the diet of a child.

An abundance of carbohydrates is essential to the growing child, as the stored energy which is thus supplied protects the circulating albumins from undue destruction. There must be sufficient fat and carbohyhrates in the food to cover the large demand for heat energy, and nervous and muscular work, that the proteids may be protected and stored. Muscular flesh deposited during growth is permanent, and lasts as long as life itself; whereas muscular flesh built up by forced exercise in an adult is lost as soon as the exercise is discontinued.

Foods rich in carbohydrates and fat, along with a moderate proportion of meat, will be the ones on which the most abundant and most lasting deposition of flesh—fat and muscular flesh—is to be assured for future and far-distant needs. Such foods are to be found in oatmeal, cornmeal, cream of wheat, hominy, rice, potato, bread, and other farinaceous substances, egg, vegetables, and milk, with a minimum of flesh food. These foodstuffs are at the same time rich in potassium and other salts, which latter resemble those of the blood, muscles, and bone, and which are essential to health; and to the normal reaction of the secretions, while flesh food contains only mere traces of potassium.

Conclusions.—Nature, or, to be specific, chemistry, physiology, and chemical physiology, have furnished unerring guides for the feeding of children.

The time when and what farinaceous substances should be given is wholly evident.

Meat juice is contraindicated in very young children, owing to its exciting effect on the nervous centers, and the loading of the system with extractives which tax the excretory organs.

During all the years of early childhood, meat and its preparations should be given only sparingly on account of their overstimulating metabolism, but chiefly for the reason that they create a distaste for cereals, fats, and fresh vegetables, thus depriving the system of materials needed to shield the proteids from oxidation that they may be stored for future needs, and of the necessary mineral salts which vegetables obtain direct from the soil.

In a child, with its relatively large cutaneous surface and correspondingly rapid heat loss, the large demand for calories must not be covered by proteid to any considerable extent, otherwise there is a lack of deposition of proteid—or of muscle growth. Increasing quantities of carbohydrates and fats in the food decrease proteid metabolism; a more lasting deposition of proteids for future needs is thus brought about.

To provide the mineral constituents necessary to maintain the normal reaction of the fluids of the body when these elements are being appropriated in large proportions for the growth of bone, muscle, etc., vegetables which obtain these elements direct from the soil must be consumed in fairly liberal proportions.

25 WEST THIRTY-SEVENTH STREET.

THE NATURE OF CUTANEOUS EPITHELIOMA, WITH REMARKS ON TREATMENT BY THE X-RAYS.

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THE cause of cancer is a subject of such great importance that for many years scientists, laboratory investigators, and clinicians have put forth unusual effort in its attempted solution.

The nature of cancer is to-day being investigated by thousands of workers, and still little more is accomplished than for one investigator to show that another is wrong in his surmise that he is approaching the goal.

It is, however, highly proper for us to discuss these unsettled questions, for it is not an unknown thing in the history of medicine that problems in whose solutions the laboratory has failed have been fairly well settled by physicians among themselves from clinical and other considerations.

Ruskin said: "Hundreds of people can talk for one who can think; but thousands can think for one who can see." We might go a step further than this in thinking of those who discover the germs of cancer from year to year, and add that there are thousands who think they see the germ for one who proves definitely that he has made a correct observation.

While we cannot quite agree with Roswell Park's jocose remark that we are "living in the tropic of cancer," we may still claim this as an epoch in which the topic of cancer is receiving almost a full share of attention.

Among recent discoverers of microbes is Doyen of Paris, who, according to dispatches published on Christmas Day, has found one which he calls the *Micrococcus neoformans*. Dr. Doyen long ago noticed in cancerous juices certain diplococci and small chains with difficulty distinguished from cellular granulations. When examined at the end of two or three months he found these as active as when in the tumor.

Experimenting with the new microbe, he was able to reproduce cancer. Later, by subcutaneous injection of a sterilized solution of toxins derived from the new microbe, he succeeded in producing in cancerous patients a reaction resembling the effects produced in tuberculous subjects by tuberculin, and tending to prevent a return of the cancerous growth. He does not assert that his experiments are conclusive, but says that the result of trials carried on for six months has been most satisfactory.

Another recent discovery is that of Max Schüller of Berlin, who found colonies of a new parasite, having the appearance of small, grayish-white points in culture tubes. Here, too, inoculation experiments were thought to be successful. These observations have been controlled by Hauser of Erlangen, who believes that what Schüller saw were not microbes at all, but so-called "stone-cells," such as are found on cork, and that the inoculation experiments had produced masses of granulation tissue only, and not cancer.

Fortunately from the patient's side, and unfortunately from the side of science, physicians treat successfully many affections long before their exact nature has been determined. On the other hand, the discovery of the precise etiology does not always lead to any improvement in therapy. It is chiefly in the direction of prophylaxis that our hope lies, as a result of the nature of cancer being determined.

Skin cancer, from its location and relative frequency, offers a favorable field for study in both etiological and therapeutical directions. There are three clinical forms of skin cancer, which is now, for convenience, designated "epithelioma," although we all recognize the fact that all carcinoma is of epithelial structure.

We have, first, the rodent-ulcer type, which is the common, or perhaps the commonest, form familiar to us clinically, as the rather rounded ulcer upon the eyelid, side of the nose, or cheek, *i.e.* almost always occurring in the upper portion of the face, rarely on other portions of the body, and going on to deep and widespread destruction of tissue.

Second, epithelioma proper, or carcinoma of the rete Malpighii, typified in cancer of the lip.

Third, epithelioma springing from sebaceous-gland structure. This form must be considered rare, while that arising from sweat-gland structure is still more so.

Morphologically, we have the three clinical varieties:

1. Flat or superficial (nodular stage of rodent-ulcer type—epidermoid).
2. Infiltrated or nodular (imbedded or elevated).
3. Papillomatous or berry-like growths (the vegetating or fungoid cancer being an exuberant form of the deep-seated variety).

In the rodent-ulcer type, which may at times also begin as a soft-brown tubercle, the changes keep pace with one another, so to speak, the ulceration of the center being proportionate to the infiltration of new territory. The term rodent ulcer should be dropped, as tending to confuse by the impression conveyed that it differs from epithelioma. Furthermore, the ophthalmologists have used the term for an entirely distinct affection—*Ulcus rodens corneæ*. We are justified, however, in speaking of a rodent-ulcer *type* of epithelioma. We have here a very slow growth, with an ulcer of rounded form tending to crust over, and presenting a raised, ringed border of pearly tissue, which breaks down readily under mechanical pressure or the curette.

The starting point is usually a warty growth, *verruca seborrhoica*, often wrongly called senile warts because more common in the aged, an irritated mole, pressure of glasses, small skin lesions of benign nature which have been persistently picked, etc. Under the microscope a glandular type of structure is disclosed. This does not, of course, mean that the origin has been in gland-tissue. It is essentially a proliferation from the lowest layer of Malpighian cells. That which gives it its chief character is the downward growth in parallel layers of cells. The dense, connective tissue encountered in the form of bands about the cells tends to prevent the latter from branching out widely, or being thrown off to form metastases in neighboring lymph nodes, or eventually in distant organs. Histologically this type, which may assume diverse clinical forms and show great irregularity of development, never produces cell-nests, and this particularly distinguishes it from the second type, of which cancer of the lip is, as I have said, a good example.

This second variety, which is rarely found associated with the first as a mixed type, shows a tendency to form horny epithelium and nests, in both of which respects it differs from the rodent-ulcer type.

There is here, too, a greater tendency to invade nearby nodes, though, excepting in lip cancer, this is not marked. The third type, which springs from sebaceous-gland structure, may produce tumors of fair size, but does not seem to possess great tendency to metastatic action. Here, too, at the edge of the necrotic or ulcerating central portion is a pearly margin.

The rodent-ulcer type is seen in advanced middle age, while other forms of cutaneous cancer attack those somewhat older, fifty-five years being, according to Roger Williams, the average. As I have pointed out elsewhere, it may occur in quite early life. The nodular form, it must be remembered, can exist for a long time as a firm bean- or pea-sized elevated lesion of skin color, yellowish, grayish brown, or pinkish, with perhaps some telangiectatic vessels coursing over its summit. The date of onset is apt to be set down at the time this becomes scratched, denuded of its thin epiderm, or changes rapidly into an ulcer.

There is another clinical form known as the atrophic, in which the change into an ulcerating process is slight, or does not occur at all, or quickly cicatrizes, and the lesion may even shrink into insignificant proportions, at least for a time. Contrasted with this is the form called by the French *térébrante*, with rapid destructive effect upon all adjacent structures, though cartilage and bone, destroying the eye, and penetrating the skull to lay bare the brain.

The chief theories of causation are briefly:

1. Infectivity of epithelial cells (toxic cause of overgrowth).
2. Proliferative overgrowth of misplaced cells (Cohnheim's theory, predisposing).
3. Effects of microorganisms (parasitic), or specific-germ theory.

Considering the first theory we have in the infective granulomata some toxic agent actively employed to determine the overgrowth. Here, however, if the toxic agent be destroyed, the cell proliferation ceases, while in epithelioma which goes on for years with continued cell multiplication we can hardly conceive of a similar toxic agent persisting.

We may, however, fall back upon what Adami has called the "habit of growth," which persists in cell-formation and purposeless proliferation long after the originating influence has been withdrawn.

The theory of infectivity is but little strengthened by the fact that a previously healthy skin-surface, brought constantly in apposition to an ulcerating cancer, may—though rarely to be sure—become affected, just as is occasionally seen in those later lesions of lues which are supposed no longer to contain specific germs or to be heteroinoculable. The cancer patient is, however, by the fact itself a susceptible subject, while the individual with lues is presumably immune to further infection of the same nature.

Accidental inoculations upon the subject himself, as of the upper lip following cancer of the lower, or upon another—man and wife—as in Cases II and XII of the series of fifty cases on which this paper is based, and a few experiments in transmission to animals, are to be explained by the parasitic theory quite as well as by that of infectivity.

There appears to be great difficulty in voluntary transmission to animals—success following attempts with sarcomatous oftener than with epitheliomatous tissue; and reports of the latter have usually not been credited.

In a review of recent work bearing upon the infectious theory of malignant neoplasms, George Blumer* maintains that successful inoculation cannot be considered proof of an infectious theory, and in this he is upheld by Hanau and Loeb. He claims that an attempt to find a parasitic origin has failed entirely, and that work done under proper precautions has almost always led to the conclusion that new growths are sterile.

The second, which is practically Cohnheim's embryonal theory, need not detain us. It undoubtedly suffices to explain some forms of new growth, but not such as we are now considering.

The embryonic origin of certain epitheliomata springing from moles is strengthened by Unna's observation that nævi are made up of cells which have separated during fœtal life, or shortly after birth, forming "rests" which later in life, through trauma or infection, result in tumor formation. The theory applies, therefore, to predisposition rather than to the actual disease.

That epithelioma frequently develops after an injury to the part does not help us much, because we know how injury of a part produces the requisite conditions making possible the actual onset of affections of undoubted germ origin.

The theory of local irritation might therefore be defended, since all are familiar with the extreme frequency with which skin cancer develops upon surfaces previously inflamed, irritated, and altered by disease, scar-formation, etc.

Old patches of lupus, horny seborrhœa, cutaneous horns, senile, arsenical, and other warts, moles, nævi, and cicatrices from burns, are common forms of pathological change in skin tissue favoring epithelioma. Prolonged irritation elsewhere, as in stricture, fissures, fistulous passages, leucoplakia, adherent prepuce, pressure of pessaries, etc., leads often to the same unfortunate ending. Irritation is also operative in the chimney-sweeper's cancer of the scrotum, formerly so common in England. In case XXXVI of epithelioma of the tip of the nose and upper lip, referred to me by the kindness of Dr. Lyle, there was a history of occupation in which the nostrils were constantly filled with black soot.

Other instances are afforded in those cancers beginning in bronchial nodes among those who work in cobalt and arsenic ore and who inhale the dust. It would seem that, as Adami claims, when cells are over-stimulated beyond their functional activity, they tend to use up their excessive force in overgrowth.

Coming now to the parasitic theory, we find much to make the latter seem probable, aside from what has been accomplished in laboratory investigations.

New territory is invaded and involved much in the same manner as in diseases of known parasitic origin, lupus, tuberculosis, ringworm, erysipelas.

The new growth of epithelium takes place in such a manner as to suggest an irritant such as rapidly multiplying parasites in the tissues might produce. The vast majority of epitheliomata occur on exposed parts open to infection and follow injury, often of a nature to open the surface and invite infection. In a clinical study of erysipelas which I published in December, 1898, I found that 50 per cent. of the 100 cases originated in some preceding skin lesion or solution of continuity of tissue. I cite this simply as an instance of a recognized infectious process bearing by analogy upon the question in hand. In the fifty cases of epithelioma, upon which this paper is based, about the same percentage holds good. Epithelioma, I might say in passing, has been seen to disappear after an intercurrent attack of erysipelas, just as has been observed a number of times in lupus and lupus erythematosus, and might be explained by an antagonism of germs fighting for supremacy. In localized cutaneous tuberculosis we have a somewhat similar condition, and one in which secondary effects of a general nature may occur if the local affection be not radically destroyed at a sufficiently early period. Before passing from analogy which should be of some assistance, I would call your attention to molluscum contagiosum, which is so similar in growth and cellular proliferation to epithelioma and worthy of its other name, benign epithelioma; this is an auto- and heteroinoculable affection, now generally believed to depend upon parasitism. Just as in the case of epithelioma, observers are not in accord as to the identity of the parasite, still practically all agree such must be the cause. We shall not here enter upon the merits of the question as to whether epithelioma is caused by blastomycetes, protozoa, coccidiæ, bacilli, yeasts, rhizopods, or other animal or vegetable microorganism. Most observers of late have concentrated their attention upon large bodies similar to round cells, surrounded by protoplasm and encapsulated. They are formed chiefly at the extending margin of the patch, or at the waxy rolled ring which constitutes the chief clinical feature of the affection. This margin is so uniformly present and characteristic with its cartilage-like rolled border, no matter what the appearances of the entire area involved may be, that, to my mind, it points strongly to a common cause of definite nature, and not to a haphazard effect. Epithelioma differs materially from other cancer in a clinical sense only up to a certain point. There is less malignancy in all the early stages and little tendency to involve lymph nodes; but once the confines of the skin have been passed, it rapidly and malignantly invades contiguous structures, not stopping at bony barriers.

It is interesting to note that Borrel of *Annales de l'Institut Pasteur*, Vol. XV, 1901, comes practically to the conclusion that recent laboratory work has been of a non-convincing or negative character. The parasitic theory is attractive, he says, but at present there is no evidence before us to support it. As we approach the question of *x*-ray treatment, it is interesting to note that Williams of Boston in his excellent work on "The Röntgen Ray in Medicine and Surgery," just published, makes a rather strong point in support of the parasitic theory, which theory, as my preceding remarks indicate, I favor. He says, "A therapeutic measure cannot, of course, point out the cause of a disease, but it may throw suggestive light upon it. For example, in the radiation from a vacuum tube good results are produced in a disease where the cause is known to be due to a microscopic organism, tuberculosis of the skin, or lupus. . . . These facts, taken together with the microscopic appearances after treatment, suggest that cancer is produced by some living cause; and also that the radiation from a vacuum tube—probably the *x*-rays—interferes with its life." It would be strange, indeed, if after all these years of groping in the dark the *x*-ray should come in to help illuminate the diagnosis in this round-about way. And still it has happened in the history of medicine that the nature of an ailment has been agreed upon long before the laboratory has proven adequate to unraveling its mysteries.

**New York State Journal of Medicine*, p. 273, 1901.

While it is not essential that the nature of cancer more than any other disease should be known in order to treat it successfully, still it is here, as always, highly desirable.

Science demands exact knowledge, and the public is not yet in that frame of mind which will permit it to accept the Christian Science dictum that cancer, along with almost all else, is an illusion.

The nature of epithelioma being still unfortunately an *x* quantity, or rather quality, it seems not inappropriate to discuss an *x* method of treatment for its eradication.

Phototherapy cannot be considered a new method. Indeed, treatment by light is almost as old as light itself.

Still, the impetus it has received during recent years, since Finsen devised his apparatus for concentrating sunlight and electric light, and since Röntgen discovered the peculiarly penetrating rays generated in a Crooke tube, when stimulated in certain definite ways by electricity, have caused observers throughout the world to direct their attention to this form of treatment. Leaving for another time any attempt to discuss the beneficial influence upon skin diseases in general which the *x*-rays may possess, and with which I have already had some favorable experience, and without going largely into the question of apparatus for their production, I will invite your attention to the questions: (1) Should the rays be expected to prove beneficial? (2) Have they so far proven beneficial? (3) In what manner do they exert any beneficial influence or action? (4) How should they be applied? (5) What are the dangers? Seeing, as we have, that the tissue composing epithelial overgrowth, of the kind under consideration, is analogous to embryonal structure, being made up of molecules or cells of unstable nature, it is readily conceivable that strongly penetrating rays which have been shown to possess the power to alter tissue of this kind would here find a decided field of usefulness. It is interesting and instructive in this connection to trace the development of *x*-ray skin-therapy from the accidentally produced alopecia, which led Freund, in 1897, to apply the rays in hypertrichosis, and later induced Schiff to try the method in lupus. Success in the latter naturally led to a trial in cutaneous cancer, whose tissue is so analogous in structure.

Furthermore, the rays have been demonstrated to exert a marked effect upon epidemic structures of the normal skin, causing erythema, followed by scaling or pigmentation, changes in the nails, falling and blanching of hair, or atrophy, and, in rare instances, superficial ulcerations of a most persistent nature, showing decided changes in the true skin and subcutaneous structures. That the rays penetrate all structures of the body, and, if they possess any curative power, are capable of exerting it, where previous methods might fail, is likewise in their favor. Again, brought face to face with cancer which has passed beyond a certain point, we have hitherto stood powerless, and have been able only to exercise our skill in alleviating pain, and making the patient's exitus as little distressing as may be. We, therefore, hasten to take up for these cases any method which offers reasonable chances for success.

In order to answer the first question fully, we must go on to the second. It was my privilege in June, and again in September, of last year, to observe some of the results obtained by my friend, Dr. William Allen Pusey of Chicago, in several cases of carcinoma of the skin. The gratifying results in the patients seen in June led me to adopt the *x*-ray treatment upon my return to this city, and those I have observed subsequently in his practice and that of others, together with the reports scattered in medical literature, encourage me to persist, although the time has been too short for personal observations of a very convincing nature.

Besides, I have been unwilling to confine myself to exclusive *x*-ray treatment in my own cases, believing it not to have gone as yet beyond what we may call the experimental stage, and knowing, as I do, that we possess in certain caustics, properly applied, a quick and effective means of destroying many cancerous growths. I have, therefore, followed the plan of using first the methods with which I am familiar, and then giving the patient the benefit of all that the *x*-rays may possess for good in searching out germs or cells which may have escaped our efforts or been beyond the field of operation. Thus the rays act as an after-cure and prophylactic measure, and I strongly advise them after operation with the knife or caustic. In strictly inoperable cases I would not hesitate to use the rays alone, but, having at present no public service, I must depend upon my private practice and the experience of others in reaching a final conclusion. I have thus far treated six cases of epithelioma—one upon the chin, two upon the nose, one upon the finger, one upon the forehead, and one upon the cheek. Four were recurrent cases and one primary. One disappeared from observation; the others have done well, and might be considered cured, but all are still taking ray treatment, and I trust will continue to do so for some months. Besides these cases, I have observed a number of others, and have seen a number of times, in consultation, a gentleman with an extensive recurrence, in whose case the *x*-ray has been practically the only form of treatment applied. This extensive growth has decreased nearly one-half in size, and the general condition has improved, encouraging us to persevere in it.

The patient referred to, who had ceased treatment, did so, I believe, because I advised excision of a mass of nodes in the axilla, believing the cure would be more rapid if the rays were applied subsequent to operation. Another case was lost in like manner, because operation for recurrence in the lymph-nodes of the neck after lip cancer was suggested as a prelude to *x*-ray treatment. If a patient absolutely refuses operation in such cases, it is justifiable to proceed with the *x*-rays alone, just as in inoperable sarcoma.

At the meeting of the British Medical Association, in August last, an interesting discussion took place upon this new method in connection with that by the Finsen rays, and several speakers advocated an association of the two plans. The reaction after the Finsen occurs, according to Blacker, in four or five hours, while that from the *x*-rays varied from five days to several weeks. My own experience has been that there may be no reaction, strictly speaking, at all.

Sequeira had treated forty-five cases of rodent-ulcer by *x*-ray with most encouraging results. Recurrences were frequent at the margins, but these were readily dealt with. Jamieson had seen decided benefit in two cases. Stenbeck reports one success; Beck, one in melanosarcoma. Here there was apparent local cure, but in metastatic recurrence the patient died. Williams in his book gives reports of two lip cancers, one on the hand, one on the eyelid, and two rodent ulcers, which were improved and caused to heal over. Others might be mentioned. Dr. Pusey has written me of successes in sarcoma, which he will shortly publish.

The question as to how the rays act is as interesting as it is difficult to answer. I think, however, it may be definitely stated that the belief held by some that it is necessary to produce a so-called "burn" is erroneous. I have witnessed definite beneficial effects without any sign of such irritation. Pusey has demonstrated that a cure can be effected without any suspicion of this effect, and I have seen it in my own cases. If this were not so, the caustics already in successful use would scarcely warrant us in introducing another much more slowly acting cautery. Kümmell says healing is surer the less the skin is injured. Some consider that the ray has a specific action, others that it is electro-chemic or tropho-neurotic, and some, again, that the bactericidal action is the most important. As these points have not been decided, and as I am incapable of deciding them, I will leave their solution to others. Experiments so far have seemed to show that the bactericidal influence of the ray-light is slight, though Rieder has recently found that in culture-tube experiments bacterial life seems to be checked.

Effects noted upon an open ulcer are usually a lessening of exudation, if it has existed; a drying up and glazing over the parts, and desquamation about the margins, from which cicatrization takes place. Sometimes there is a suppurative breaking down of neoplastic tissue.

In an old gentleman with an epithelioma of the nose of many years' standing, which now appears to be cured, treatment has been carried out by Dr. F. N. Wilson and myself; the ulceration has healed, and the whole surface has desquamated in a manner not before seen after other treatment. In view of the tendency to multiplicity of tumor formation in his case (epitheliomatosus), I have advised the rays to be continued for some time as a prophylactic measure.

Now, as to the proper application of the rays, only general rules can be made. As we possess no satisfactory way of measuring the intensity of the light, and as we never know surely the susceptibility of the individual, it is wise to be cautious in several directions. The first sittings should be short, with the tube not too close. The parts other than those to be operated upon should in all cases be protected. I employ various devices. A band-box of pasteboard cut out to accommodate the parts and covered with extra thick tin foil, containing a large percentage of lead. Or better, perhaps, a thick lead mask put on over a gauze mask and bound to the parts. These I ground by running a wire to the chandelier to carry off the electricity. I have also suggested a funnel-shaped metallic cone, into the flare of which the active area of the tube is inserted, especially for mouth, throat, uterine and rectal work. It has been advised to cover exposed parts with vaseline. It is well after the first sitting to wait a week before proceeding with daily applications, and the time of exposure can be gradually lengthened. If signs of dermatitis or decided erythema show themselves, suspend treatment until these effects have subsided. As to the distance of the tube from the part treated, we must be governed by the patient's susceptibility, length of treatment already carried out, length of each exposure, hardness or softness of tube, nature and size of the diseased area, and the operator's confidence born of experience. Hopkins advises a distance of twelve to thirty inches, while Pusey says about two inches for skin cancer work. Between these limits, operators in general vary the distance from one or another consideration. Most of my work has been done at rather close range—three to five inches. With the glass at an inch or less from the skin, as I have at times used it, the anode is still several inches away, when a large tube is employed. The nearer the tube and the longer the exposure, the greater is supposed to be the danger of "burn." Still, in such a severe affection one might be justified in taking a certain chance, and if the "burn" affects the diseased area alone, I am not sure that the cure would be delayed in consequence. At times there seems to be a marked lessening of pain in the part after the ray treatment, and this effect has been noted in other conditions such as articular rheumatism, gall stones, etc.

The time of exposure ranges between three and thirty minutes. The usual sitting being fifteen or twenty minutes. Tubes exist in great variety. The Monnell type is a good one. It should be in perfect harmony with the kind and power of the electrical supply. Those for static machines differ somewhat in their make from those for coils.

There is a water-cooled tube, the target being the end of a receptacle projecting into the tube which can be filled with cold water. There is also a rather new tube with a funnel-shaped anode.

The characteristic of the funnel tube is the shaping of the target like a funnel, so that the rays are only given off in a comparatively restricted cone, instead of being widely diffused, as in the case of an ordinary tube. The prevailing opinion seems to be that a tube, to do the best work in skin diseases and cancer, should run low, *i. e.* that the vacuum should not be too attenuated, the tube thus running on about two or three inches of spark on the outside and giving poor penetration; *i. e.* if the hand is held before the fluoroscope, you should get a dense black shadow of the hand without differentiation of tissue and bone. To exhaust a tube so that it will do this, is a difficult matter, as, when in this condition, the tube seems to be more or less unstable, and tends either to run down altogether, or more generally to run high, and give good pictures. To hold the tube at the required point, a small offshoot is added containing some material like phosphorous pentoxide, having the property of absorbing gases and of giving out the same when heated. By arranging a spark-gap, which is adjustable, in a shunt-circuit, so that part of the discharge can be sent at will through this vapor-bulb, it is possible to drive out sufficient gas from time to time to lower the vacuum to the desired point.

Now, as to the source of electrical energy and choice of apparatus, much depends upon where the rays are to be used. If in an institution or office, my choice would be a static machine. If in a patient's house, a coil is obviously more practical, though I am inclined to believe less suited to therapeutic uses. The static machine gives a steady flow of current of high voltage, and there are no accessories to confuse.

Williams states his preference for the static machine for therapeutic uses of the rays. Others prefer the coil. Excellent coils are now made in this city. As to strength of current, Freund advises an electromotive force of 12 volts, with 1.5 ampères resistance, and a spark-length of 30 cm., or about twelve inches.

Williams has employed 220 volts, with 2 ampères and 35 cm. spark-gap, without causing dermatitis. The ray is always the same, no matter how produced, and this is a point which is not always appreciated. Whether our electrical apparatus is static, high frequency, or induction coil; whether large or small, powerful or weak, if it produces an *x*-ray that will do the work, *i.e.* if there be sufficient current and sufficient spark-gap, this ray is as good as any other ray produced in any other manner. Large machines develop more energy and are capable of exciting larger tubes, but that is all. In therapeutic work we do not want too "strong" a light, if such a term might be permissible. It should not be too penetrating.

Coming to the final question, "What are the dangers?" I may say I believe them to have been overestimated. I saw several years ago a number of severe ulcerations from skiagraphy (usually after long exposure and without a protecting shield), and have since had numerous cases of loss of hair, dermatitis, and persistent skin and nail changes brought to my notice, but almost always due to incautious exposure. I think these cases are growing fewer in spite of the much more extensive use of *x*-rays. Unquestionably much damage might be done by this method in incompetent hands, and quacks may bring it into some disrepute; but the public's present fear of the rays should be allayed, rather than intensified, by the cautions so freely given out by those without experience. Before closing, I wish to say a word about methylene-blue applications coincidently with *x*-ray treatment. It has been stated that while the rays are being used, no powders, such as aristol, iodoform, etc., should be applied, as this interferes with the rays' action.

I have applied the blue solution, which I have used so long and so successfully in a great variety of dermatological conditions, in a number of my epithelioma cases under treatment by the rays with seeming benefit. The only way, it seems to me, this could interfere with the rays' action would be by preventing their penetration. To test this point, I painted one finger of my own hand with a thick coating of blue, and examining the hand with the fluoroscope found that the bones of this finger were quite as distinct as those of the other fingers, and the shadow of the soft parts was not intensified. In placing a piece of board, one-half of which has been deeply stained with the blue, upon the screen, neither portion is visible. To my mind this disposes of the question, so far as methylene blue is concerned.

As Finsen has shown, a blue solution interposed between his light and the part operated upon shuts out or absorbs the ultra-violet or chemical rays which have the irritating or burning quality. In using concentrated sunlight and other forms of phototherapy, I have for some time been painting the pathological surface with methylene blue instead of using a blue solution at a distance from the body.

In lupus this plan I have found to act well when the *x*-rays were used, and even if the blue paint does not shut out any burning rays emanating from a vacuum tube, it does no harm; but, on the contrary, gives the patient the benefit of an added form of treatment not devoid of value. Stein made the claim in the *Electrical Review* of November 18, 1896, that burns are caused, not by the *x*-rays, but by ultra-violet light coming from the tube. If this comes to be proven, the plan I suggest ought to prevent the danger from so-called burning.

Other theories are those of Tesla, that the ozone generated upon the skin does the injury, and Trowbridge claims them to be the effect of electrification.

Whatever may be the cause of the dermatitis at times produced, it would seem that properly arranged and grounded screens, marks, etc., the use of such a funnel-shaped appliance as I have suggested for keeping the rays away from all but the parts under treatment or observation, and perhaps the application of methylene blue to the parts to be operated upon, might remove all danger.

30 East Thirty-third Street.

REPORT OF THE COMMITTEE ON SANATORIA FOR CONSUMPTIVES.

PRESENTED TO THE STATE CONFERENCE OF CHARITIES,
NEW YORK, NOVEMBER 21, 1901.

By JOHN H. PRYOR, M.D.,
BUFFALO, N. Y.,
CHAIRMAN OF THE SECTION.

There are many reasons why the report of your committee should consist of a presentation of important facts and an appeal for interest and support of somewhat new projects. During the last few years the subject of tuberculosis has been much discussed, and no question of a social, economic, medical, and charitable nature is of such vital importance to-day as the problem of the prevention and care of the victims of that disease.

The poor sufferers from so-called consumption, after years of appalling neglect, have aroused the pity of humanity, and stimulated a desire to attack a cruel wrong which ignorance and apathy have allowed to oppress a vast army of dependents. In the course of time this meeting of the State Conference of Charities and Correction may become historic, as marking a distinct epoch in the extension of its aim and work. At last, the saddest thing in the world has become the subject for serious consideration at a meeting devoted to the discussion of enlightened methods for the suppression and relief of suffering and distress.

When this body reached the decision last year that the consumptive and his woe should be recognized, as affording a new field for scientific and humane investigation, a grand stride in progress was made, and the announcement brought a feeling of deep gratitude from those who have struggled and fought in the long crusade against the greatest scourge of humanity.

About eighteen years ago Koch discovered the bacillus and the cause of tuberculosis. The facts that the disease was infectious and communicable were established. Prevention promised to be successful by simple measures, and the belief and hope that the disease could be eradicated were accepted by the progressive element of the medical profession with great enthusiasm. Sufficient time has elapsed to examine the results of a prolonged attempt to diminish the prevalency of the disease. Undoubtedly the death rate in proportion to the population has declined. In some localities a decrease of 30 per cent. is claimed. Many times this decrease is ascribed to special efforts aimed at tuberculosis, and it is offered as proof of their successful employment.

There seems to be a tendency to forget that during the last decade civilized countries have felt the results of the greatest wave of sanitary reform known in history. The general death rate declined in a marvelous way. By comparing the figures for 1880 and 1890, it will be found that many European and American cities lowered their death rate from 30 to 50 per cent. In some American cities the death rate has decreased from 22 per cent. to 30 per cent. in the last five years. The death rate from pulmonary tuberculosis shared in that decrease, which was due to improvements in sanitation and hygiene, particularly among the poor. A scrutiny of the mortality returns in this State reveals the fact that the principal decrease has occurred in New York City, chiefly among the female population. This was largely due to the work of Biggs and others in checking the spread of the disease in the tenement-house district. The best example of brilliant results attained by direct and special methods are those reported by Biggs, and the disgraceful conditions of overcrowding, lack of sunlight, and fresh air, which prevail in these compulsory homes of the poor, afford the chief opportunity for attack and triumph.

The tenement becomes infected, and herding together encourages the spread of the germs of disease, while vicious surroundings and insufficient or improper food promotes susceptibility and a tendency to succumb. To-day the chief penalty of tenement-house life is tuberculosis. Most of the poor dwellers show evidence of tuberculosis during life, or at the autopsy. Segregation, destruction of expectoration, and disinfection of contaminated homes will eliminate the foci of disease so strikingly depicted by Flick of Philadelphia and Biggs of New York. This work can be done by a board of health not poisoned by political taint.

The new tenement-house laws, if made operative, and clean machinery supplied to enforce them, will have a decided and lasting effect upon the principal cause of illness and destitution.

While prevention along general and special lines has diminished the number of deaths, in proportion to the population in this State caution must be exercised before accepting frequently repeated fallacious statements. To say that the efforts to eradicate tuberculosis have fulfilled expectations and will win in time is to approach dangerously near exaggeration and a careless promise. The present campaign in this State lacks system, uniformity, and thoroughness. Protection is at best partial or very inadequate. At present the State Board of Health is attempting to make a census of the consumptives with a view to considering what may be done in the way of prevention and care.

The prediction is fair that no more than an approximate estimate can be obtained. Each physician is requested, not compelled, to report the number of cases under his care. Compliance is optional, and should the advanced, easily recognized cases be reported, a large unknown number of incipient cases will escape.

By collecting the reports of many hospitals, it is found that about 25 per cent. of autopsies reveal evidences of healed tuberculosis. These cases, with few exceptions, are unsuspected. Again, there is a decided and growing tendency to conceal the affliction of tuberculosis, for reasons given later. We already possess a method of estimating the number of consumptives in this State, by computing the average duration of the disease, from the figures supplied in death certificates.

Each year more than 14,000 human beings perish from tuberculosis of the lungs alone in New York State. Assuming that the average period of misery is only two or three years, there must be 28,000 or 42,000 victims. The latter figure is probably more correct, because those best informed claim at least 25,000 consumptives for New York City. But what earthly or heavenly difference will it make in discussing plans for attack or care whether we have a few thousand more or less in this pitiful army marching to the grave? No mysterious, ingenious remedy has been discovered which will apply to a mere 25,000 and prove impracticable for twice the number.

For years the purpose has been to educate the public and create sentiment before remedial action can be taken. Now, what has been the result of education? An awakened interest and readiness to welcome rational procedures, which are not supplied. The public has been taught certain facts with great benefit, and some fallacies which are misleading and cruel. The cry has been: Tuberculosis is infectious and dangerously communicable. It is unnecessary and easily preventable. Note the words, "dangerously communicable," and try to measure their meaning. Are we to understand that it is highly communicable from one person to another, or only slightly so? Why not admit that it is infectious and scarcely at all communicable, if simple precautions are adopted? The danger of contracting the disease from the poor creature, who suffers through no fault or crime, has been exaggerated until we have an epidemic of hysteria or phthisiophobia. The unfortunate has had new torture added to his misery. He has been denied admission to hospitals, discharged from employment, and even lost the pleasures of friendship on his sick-bed. If it be true that prevention is easy, why add more hardships? There is no place where a person can enjoy greater immunity from tuberculosis than in a hospital or sanatorium devoted to the treatment of consumptives. The rule is that no servant, attendant, nurse, or physician develops the disease. The time has arrived for the physician and the laity to modify certain extravagant views, and learn to be kind and reasonable, not ultra-scientific and harsh. In this country a quarantine has been established against tuberculosis as a *dangerously communicable* disease. For some years the advanced consumptive has been denied admission as an undesirable citizen—an act most proper and justifiable, but the early cases will not be observed and checked, and a precedent has been established. If the threat of some Western States to follow this example should be fulfilled, a new phase of an appalling problem must be confronted. It is right that far-away States should resent the unloading of the hopeless, poor consumptive upon them, and one good result of recent protests will be the enforced provision of rational treatment near the home. This means an undertaking of such magnitude that the alleged facts, "the disease is unnecessary and easily preventable," are offered in support of a policy of gradual eradication. There can be nothing gained by hugging a delusion that fewer people die from pulmonary tuberculosis now than formerly. Remember that a smaller percentage of the population succumb, but the population has increased and continues to increase rapidly. The actual number of deaths grows slowly each year, and we have reached and will probably soon pass the mark of 14,000 per annum. Furthermore, there are several well-known causes for errors in the returns, and the number reported is beyond all doubt much too low. As the result of some persecution, the consumptive and his family beg to have the truth untold, or evaded, on account of hardships and the difficulties surrounding life, health, and industrial insurance. But the statistical evidence shows that pulmonary tuberculosis causes 11 per cent. of all deaths each year, whether the general death rate is high or low. That is greater than the mortality from all other infectious diseases combined, and about equal to the loss of a city population each year. The extent of the ravages of all other forms of tuberculosis is not known. People have become accustomed to the fearful calamity, and when aroused for a moment, shudder and shrink. The somber procession receives recruits with remarkable accuracy, and everlastingly moves on to the tomb, while a few toll the iteration, "Help the consumptive; he is neglected and can be saved." Sentiment is a strange thing. Imagine fourteen regiments of infantry marching away to battle and every one doomed to die.

The devastation of wars, though small in comparison, seems so real and tragic, while the slow, unceasing destruction of multitudes by a lingering illness fails to stir wide sympathy or public interest. So long as pulmonary tuberculosis is responsible for more than 11 per cent. of all deaths, and this rate bids fair to be continuous under present conditions, it is plain that we cannot depend upon prevention as now employed to dispel a tragedy so mighty that epidemics sink into insignificance. When the nation or the State assumes control of broad and adequate methods of protection, and system, uniformity, and co-operation are thus assured, the outlook will be brighter.

Unquestionably, the scientific plan should be to attack the cause, and one essential factor in the combat must be provision for proper care. The poor must be encouraged to leave their homes, not alone to prevent infection, but to obtain relief from suffering and a chance to improve. Special hospitals should be provided for advanced patients and the dangers of communication avoided. This is of transcendent importance in the tenement districts and the crowded small homes of the poor, where ignorance and necessity combine to make precautionary rules difficult to obey or enforce.

The desire to segregate and instruct is the chief plea for the establishment of special hospitals for advanced or incurable cases, but they should not be the only reasons given for a stern demand or strong appeal. This big class of sufferers must have a place to go and rest when they can toil no more and the struggle for existence is over.

In New York City the need for such special institutions is imperative, and co-operative endeavor along the lines pursued by societies for the prevention and care of tuberculosis should be encouraged. These societies have exerted a powerful influence elsewhere, and this city represents a large field for fruitful work. But any argument in favor of attacking causes, any appeal for rational care, or any denunciation of inaction reaches a culmination when we consider the neglect and mismanagement of the early or incipient case. That is the blot upon our civilization. That is the disgrace which brings a blush of shame for existing conditions, unequaled in the history of brutal indifference since the insane were emancipated and released from the cell and the shackle.

Then ignorance was the excuse, but to-day knowledge is the indictment. We know that incipient tuberculosis is curable, and the well-to-do can seize the opportunity to recover. The vast majority of consumptives die simply because they are poor and no provision is made for curative treatment. The pitiable conditions surrounding the consumptive make his misfortune and distress unique. And the antiquated methods of help constitute a strange anomaly in our system of charities. Any other sufferer from disease, be the malady what it may, can obtain proper medical skill and care. The consumptive alone has no chance for his life. Only one form of treatment promises anything, and that involves rest for a time, where the air is pure, with plenty of good food and special education with discipline.

The consumptive is the natural result of overlooked or neglected tuberculosis, and the very name perpetuates widespread misconceptions.

Tuberculosis is one thing, consumption or phthisis another. When tuberculosis is detected early, the tendency to recovery is greater than that of any other chronic disease. It is when the disease is not arrested that other germs appear, become active, and develop mixed infection with the manifestations grouped under the name consumption. The nomenclature must be changed, and terms employed which denote progressive ideas. What the public knows as a consumptive is the victim marked for death; but the physician can recognize the tuberculous case at a time when 70 per cent. of the victims might be saved, if he, like other human beings, could secure enlightened aid. The vital points are the early diagnosis and prompt relief. Now, there is nothing gained by telling the poor consumptive that he has a disease which sanatorium treatment would arrest, when it is known that such help is impossible. That announcement is a death sentence and a confession that all hope is denied.

Yet assistance which costs just as much is given when it is too late, and destitution drives the dependent to the last resort.

The establishment of sanatoria for those suffering from incipient pulmonary tuberculosis would prove of incalculable benefit. The infected individual could be removed before becoming a source of danger to others, and undesirable progeny prevented. Education in the way of special hygienic habits is made practical, and the idea that tuberculosis is curable can be disseminated.

Statistics show that the results are brilliant. Those who do not recover, experience improvement or temporary arrest of the disease, and return home with special and valuable instruction. The percentage of recoveries reported by any sanatorium will depend upon the care employed in selecting truly favorable cases.

At present much complaint is heard from those connected with sanatoria for consumptives because the cases sent arrive so late. When appendicitis was called inflammation of the bowels, and was usually fatal, there was little blame; but now failure to notice appendicitis until all chance for successful treatment has been lost is apt to incite criticism.

Under the present system of economic mismanagement, the tuberculous are allowed to struggle along until they, and usually others dependent upon them, need financial aid. Now, register the fact that the great proportion of consumptives die between the ages of 18 and 32 years, or at the time of life when education or training and youthful strength promise the highest degree of continued production and earning power. It is the age when others lean upon a bread-winner. Nothing is done to prevent destitution, and the sickness ends in irretrievable loss, when a few months' stay in a sanatorium would return the stricken individual to the ranks of workers.

Let us roughly estimate the loss of wealth due to consumption in this State. In Germany a human life is valued at $1,500; because, by some statistical method, it is found that it costs that amount to rear and educate a citizen. If an American is equally valuable to the State, the loss is $21,000,000 per annum. Now add the expense for illness, the amounts contributed for relief to the dependents, and the ultimate cost of degeneracy in the offspring. The whole sum is far greater than the cost of our State government. Much, very much, of this needless drain can be saved by early care. That is the surest and the kindest method for diminishing the prevalency and the death rate of tuberculosis.

The old do-nothing plan means loss and expenditure, misery and death. The new way will mean effectual help for the sufferer and possible aid for a family until health is restored.

Once more, let me reiterate the sentence which I have used for five years at Albany: "Take care of the consumptive at the right time, at the right place, in the right way, until well; not at the wrong time, at the wrong place, in the wrong way, until dead."

The hopeless, obsolete plan costs more than the scientific, successful one, which should appeal to charity workers, who are baffled by the problems of pauperism and distress which accompany and follow tuberculosis.

The incurable consumptive receives a term of hospital relief fully as long as that required in early sanatorium treatment, and the cost per week at the best sanatoria is decidedly less than the average expense in New York hospitals.

Admitting that proper care of the incipient tuberculous is a necessity, what scheme can be adopted to inaugurate and extend the reform movement? The duty falls upon the State, municipality, and private philanthropy. There are 14,000 new cases every year, and the task is stupendous. In fact, the magnitude of the effects of long-continued ignorance has been the chief obstacle to overcome. It is so natural to whimper that any attempt will only benefit a few, but if ever a good, lusty fight against big odds was worth while, the battle now on fills all requirements.

Every life saved removes one consumptive from the disgraceful total, and if, in the course of time, 1,000 people a year could be removed from the ranks, the army will disappear from lack of recruits and not continue to grow in numbers. Some years of thought, study, and patient listening to many objections have strengthened the convictions that the State should lead and stimulate supplementary action. The tuberculous poor need unusual and peculiar relief, which all cities and counties cannot supply, and by providing an institution of special character, at a suitable place, results and methods can be demonstrated, an object lesson taught, and ideal prevention attained. After a long campaign, money has been appropriated for a State hospital for incipient consumptives, to be located in the Adirondacks. It is to be built and managed by the State, but the expense of maintenance is to be borne by the counties sending patients to the institution.

In time, an opportunity will be afforded to investigate many questions of a clinical nature, and general interest will surely be awakened by an innovation which means so much to humanity. The agitation for the establishment of one State institution has had a pronounced influence everywhere. When the project first won attention and discussion had become serious in this State, Massachusetts acted quickly and built the first State sanatorium in this country. Connecticut has followed, and at present similar legislation has been urged or is contemplated in twelve States.

There is no good reason why certain counties or municipalities should not follow the example, and establish sanatoria in localities where excellent results can be obtained. In 1889 the Henry law was enacted, authorizing cities of the first class to establish hospitals for consumptives beyond their city limits. The purpose of this measure was to enable New York City to establish such institutions, but thus far nothing decisive has been accomplished in this direction. Progress may be slow, but the time will come when people will wonder that the introduction of common-sense management involved years of strenuous labor. Why the attention of philanthropists is not directed to this opportunity for accomplishing lasting good seems most mysterious. Gifts and bequests reach all classes of the afflicted poor, except the consumptive. Yet no unfortunate is more worthy, no form of help more practical, and no known results more far-reaching. The grim fact that thousands of unnecessary deaths occur every year among the poor in a State rich beyond comparison must be due to a lack of appreciation or ignorance of the hideous truth. In European countries, and especially in Germany, great progress has been made. There are more than sixty sanatoria for poor consumptives in Germany, and the number is increasing at the rate of five a year. Next year, accommodations will have been provided for over 12,000 patients. The results are uniformly encouraging, and the decrease in prevalency is remarkable. Most of these institutions are supported by government insurance companies, and the investment pays because the patient recovers or improves, and the duration of his earning capacity is lengthened.

While the introduction of this form of insurance against illness might not be advisable in this country, it is worthy of study as a prevention of pauperism and a lesson in economy. Germany has initiated and developed a practical plan for accomplishing a reform which remains almost untouched in America. Perhaps some beneficent and profitable change will be brought about by the industrial insurance companies. Now, the undertaking seems improbable, because discouraging financial questions arise under the present rate, but some kind of health insurance will surely be supplied. The development and growth of health insurance in this country have been surprising during the last three years. Protection against illness has been extended until now a large class dependent upon moderate incomes can obtain full opportunity for regaining health, and consumption has finally been included as a risk.

We must propagate the belief that pulmonary tuberculosis is curable during the early stage of the disease. We must teach the people to desire and demand a chance to get well. Let it be known that the hopeless consumptive, emaciated, feeble, and gasping for breath, with the horrid death rattle clogging his throat, might have been saved by science and a little charity. Simply emphasize a few plain truths, and protest against the lack of common sense which characterizes the treatment of pulmonary tuberculosis. The establishment of sanatoria, as an example, is necessary now; but the time is not far distant when the American will awaken from his slumber, and perceive that his country lags so far behind Europe in its appreciation of this one phase of modern thought that it will soon compare with Asia in stubborn, stupid disregard of the greatest question concerning public health. Then prevention and intelligent care will be inaugurated and pushed with zeal and energy which will astonish the world, and a reputation for unparalleled philanthropy will be sustained.

TWO CASES OF GASTROENTEROSTOMY WITH ENTEROENTEROSTOMY DONE WITH THE AID OF THE ELASTIC LIGATURE (McGRAW'S METHOD).

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In the New York *Medical Journal* of January 26, 1901, Dr. Theodore A. McGraw of Detroit published a most interesting article on gastroenterostomy by means of the elastic ligature.

He had conceived the original idea of using this means more than ten years ago. He had then experimented on dogs and tried the method twice also on the human subject. He soon abandoned further investigations, giving preference to Murphy's button, which then had just been introduced. The number of disadvantages connected with this otherwise so ingenious service, however, made him again take up the method of his own invention.

His method is briefly as follows:

That part of the gut which is to be anastomosed is stitched to the anterior or posterior wall of the stomach, as the case may be, by a number of interrupted sutures. A fold of the gastric wall is then at its base pierced with a needle, threaded with an elastic ligature, two or three millimeters in diameter, and the needle with the elastic cord returned through the attached coil of intestine at points corresponding with the entrance and exit of the ligature in the wall of the stomach. The cord is passed through the bowel always in the direction of the longitudinal axis of the latter. In putting it through, it is stretched as much as possible. This renders it thin and small, so that it may be easily drawn after the needle. Its subsequent contraction will then largely increase its size, and cause it more than to fill the orifice. It will even distend the holes so as to prevent any extravasation of fæculent fluid. The ligature is tightened as much as possible, and the crossed ends secured by a stout silk thread passed underneath and tied on top. This field of operation is then buried by uniting gut and stomach in front of the ligature by another row of interrupted sutures. It is evident that we have it thus entirely in our hands to arrange the length of the opening.

In his experiments upon dogs, Dr. McGraw observed that the puckering of gastric and intestinal wall that necessarily follows the tightening of the ligature flattens out after a few days. In some way the intestine accommodates itself to the new conditions, and becomes speedily smooth and shapely. On the third day the ligature commences to cut through. Consequently, feeding by the mouth may be begun at that time.

This plan of operation impressed me as eminently simple, comprehensive, and safe, so much so that, although having been greatly in favor of the use of the Murphy button in this class of operations for the last eight years, I concluded to try it in my next case of gastroenterostomy.

Case I.—The first chance that presented itself was the following: S. F., a man fifty-two years of age, entered the German Hospital in July last, with all the clinical symptoms of a far-advanced malignant stricture of the pylorus. He was extremely emaciated, having been unable to retain any food for the last two weeks, so that rectal alimentation had to be resorted to. The stomach was greatly distended, the large curvature reaching almost down to the symphysis, and a movable tumor, the size of a hen's egg, was palpable to the right of the median line in the region of the pylorus. The process of washing the stomach took nearly one hour and a half, as the water did not return clear any sooner. In view of the reduced condition of the patient, pylorectomy was contraindicated and gastroenterostomy decided upon. Operation was done on July 17. A large infiltrating carcinoma, involving the pyloric region, but still comparatively movable, was found; the glands of larger and lesser omentum were diffusely infiltrated. Omentum and transverse colon were, therefore, lifted out of the abdomen; the transverse meso-colon was bluntly divided, its borders being stitched by means of a few interrupted silk sutures to the posterior gastric wall. The upper portion of the jejunum was quickly found, and a coil some seven to eight inches distant from the plica duodeno-jejunalis was attached to the stomach by a number of interrupted silk sutures. Care was taken to place the sutures in such a way as to allow the ligature to pass through the bowel at a point most distant from the mesenteric attachment. A straight Hagedorn needle threaded with the elastic ligature (No. 2 = 2 mm. in diameter) was then pushed through the basis of a fold of the posterior wall of the stomach, which had been raised and drawn forward, with thumb and forefinger of the left hand, at a place about one-half to three-quarters of an inch from the line of sutures. While the first assistant stretched the ligature, I pulled the needle forward with a jerk, after which it followed with the greatest ease. The same was done on the return way at corresponding points in the wall of the jejunum; here, however, I did not dare raise a fold, fearing to injure the posterior (opposite) wall of the gut. Hence, I pushed the straight needle into the lumen of the gut, moving it laterally to make sure that it was in the lumen, and then made it pass out again at the proper distance. Again, the assistant stretched the elastic band, when I was ready to pull it forward. Fully five to six centimeters of tissue in length were included in the ligature. Then it was tightened as much as possible, the first assistant having a piece of braided silk, in a direction parallel with the longitudinal axis of the stomach, ready below the crossed ends of the ligature, in order to secure them properly. At the moment that he tightened the knot, the one end of the elastic ligature tore, fortunately distal, but close, to the silk knot. There was some discussion later on among those participating in the operation whether the ligature tore immediately before or after the tying of the silk knot. At any rate, it seemed to me sufficiently tight to leave it in place. A second knot was placed on top of the first, with some difficulty on account of the shortness of that one end and the anterior row of interrupted silk sutures added, thus entirely burying from view the field of operation.

The work had appealed to me as so extremely simple, and the patient had stood the operation so nicely, that, notwithstanding the great necessity of speed in this case, I nevertheless decided to add enteroenterostomy, to avoid the much-dreaded "vicious circle." I therefore repeated the same procedure on the afferent and efferent parts of the gut, the only variation being that a continuous instead of an interrupted silk suture was employed to unite the two parts of the intestine behind and in front of the ligature. The same silk thread was used for the continuous suture all around the anastomosis. I regret that this additional anastomosis had not been prearranged. The distance between gastroenterostomosis and enteroanastomosis was, therefore, shorter than it ought to have been. According to Miculicz, this distance should be at least 15 cm., while in my case it thus happened to be but 5 to 6 cm. After the two anastomoses were completed, the parts were returned into the abdomen and the wound closed by silk sutures, which embraced the entire thickness of the abdominal wall. During the first eight days the patient made an excellent recovery; he was put on nutrient enemata and repeatedly received 500 to 1,000 c.c. of saline solution in the shape of hypodermoclysis. On the third day feeding by the mouth in very small doses was begun. He seemed to relish the food and absorb it, as was demonstrated by the amount of urine voided, which almost regularly was above 1,000 c.c. within twenty-four hours. On the fifth day larger doses were allowed, from two to three quarts of liquid being given. The new anastomotic opening evidently worked very well, inasmuch as the patient before operation had regularly vomited large masses of the liquid diet that had been allowed him. Convalescence went on undisturbed until on the ninth day he vomited at least a quart of liquid at one time, and this he repeated on the eleventh day after operation. On the fourteenth and fifteenth days his general condition became rather alarming, so much so that I was almost sure the much-dreaded "vicious circle" had been established in spite of the entero-enterostomosis, or rather, as I tried to explain it, owing to the undue proximity of the two anastomotic openings. We then performed very thorough lavage of the stomach, a measure which I have often employed in cases of severe vomiting after gastroenterostomy and the result of which has almost invariably been very gratifying. Although the patient vomited again three times on the same day and almost continuously two days later, the turning point of his trouble, nevertheless, appeared to have been reached, for, commencing with August 6, or the twentieth day after the operation, emesis ceased entirely, and thereafter the patient made an uninterrupted recovery. As the patient had to expect rather unsatisfactory attendance at his home, he remained at the hospital longer than was necessary. On leaving, in the early part of September, he had gained twenty pounds. When weighed again two months later, he had gained another ten pounds. He still complains of occasional pain in the epigastrium, and on this account his family will not let him resume his former vocation, that of a shoemaker, since it necessitates his bending over his work. Otherwise the patient is able to eat everything, and as much as he wants, without the slightest discomfort. He was presented before the New York Surgical Society November 13, 1901.

In reviewing this case, it must be regretted that there are two points that tend to make the immediate result of this operation appear less successful than one generally may have a right to expect. The first is the breaking of the elastic ligature at the most important moment during the entire operation, viz., the tying of the silk knot; and the second, the close proximity of the two anastomotic openings unavoidable in this case.

The possibility of a recurrence of these accidents was successfully guarded against in the second patient who was soon presented.

Case II.—This was the case of a gentleman under the care of Dr. Max Einhorn of this city at the Post-Graduate Hospital, a syphilitic who had recently developed all the symptoms of a serious gastric disease. Although the presence of gastrectasis could not be proved, chemical analysis clearly pointed to ischochymia. Gastrodiaphany showed a dark area in the upper part of the stomach, the illuminated zone extending principally to the left side of the linea alba in the region of the umbilicus. At times the stomach appeared rather bloated, and then a mass corresponding to the dark area just mentioned could be palpated. Anti-specific treatment having given no result, it was concluded that the trouble must be of malignant character, requiring laparotomy. I was invited to perform the operation and did so on August 24, 1901. The stomach appeared very small and contracted. The pylorus underneath the liver presented a large hard infiltrating neoplasm which extended over the entire lesser curvature. Total extirpation of this mass seemed impossible, since not even the larger curvature of the stomach could be conveniently pulled into the abdominal wound. Posterior gastroenterostomy had to be abandoned on account of the shortness of the mesocolon transversum. I therefore did anterior gastroenterostomy again with the help of the elastic ligature. This time I selected a portion of the jejunum fully 30 to 40 cm. distant from the plica duodeno-jejunalis. Same as in the first case, the coil selected for approximation, having been shut off tightly at either end with intestinal clamps, was attached to the stomach with a number of interrupted silk sutures; then an elastic ligature, three millimeters in diameter, was pulled through in exactly the same manner as before described. A double knot was tied, and each time secured with a silk ligature. This time it did not break, though it had been stretched as thoroughly as possible. Then the field of operation was buried by uniting the two parts in front of the anastomotic opening with interrupted silk sutures. Thereupon enteroenterostomy was done, at least 15 cm. from the field of operation, with the same size ligature. It was barely made one-half the length of the other anastomosis; continuous silk suture was used in front and behind. The parts were dropped back and the abdomen closed. The patient made a most satisfactory and uninterrupted recovery. He was kept on nutrient enemata for three days, small doses of water by mouth being begun on the third day. He did not vomit once after the operation; the wound closed by primary union, and he left the hospital in the early part of September, much improved in body and mind. Since then the patient has steadily gained in weight and strength, and now weighs within ten pounds of his normal weight.

In the course of this second operation, I was again much impressed with the simplicity and safety of the method.

In regard to the ligature itself, I shall continue to use that 3 mm. in diameter, if I do not change to one 4 mm. thick. If a straight Hagedorn needle with a large, or, better still, split, eye is employed, the ligature is easily threaded. If a needle with closed eye is used, threading will be facilitated by trimming one end of the ligature with a pair of straight scissors so as to make it taper; as long as the mere tip passes the eye, it can be easily grasped by means of a pair of forceps, stretched and pulled forward. McGraw has since had molds made for the manufacture of ligatures with a tapering end. This, of course, as he states, "facilitates the insertion of the cord in the needle and enables the surgeon to draw it through a very small aperture without injuring the tissues." Yet, I consider it a slight drawback to the otherwise highly commendable procedure to have the elastic bands especially prepare. I certainly have seen no difficulty, as just explained, in threading as well as in pulling the ordinary ligature through the gastric or intestinal wall so long as the assistant thoroughly put it on the stretch.

In the Medical Record of October 5, 1901, McGraw publishes a second also very interesting article on this subject, entitled, "The Use and Limitations of the Elastic Ligature in Intestinal Surgery." In it he replies to the objection made to his method, namely, that the anastomosis is not an immediate one, but ensues three to four days after the operation. He states that he considers it highly probable that in cases where the stomach has been the subject of operation, more nutriment is absorbed from high enemata than from any food that could be introduced into the upper portion of the bowels. He also shows that the fear often expressed, "that the ligature will not certainly accomplish its work, is absolutely without foundation if the operation is properly performed," that is to say, if first a firm, hard, round rubber cord of the necessary size is used; second, not too small an amount of tissue of the wall of the bowel is included in the loop—"the larger the amount . . . the quicker and more certainly will the ligature perform its work;" third, if the rubber cord is drawn as firmly and tightly together as possible, and fastened by a silk thread, which is tied around them. In a large number of operations on dogs, in whom the intestine is much thicker than in man, McGraw never has met with a failure.

Up to the time of publication of his first article (January, 1901), McGraw had made use of the elastic ligature in gastroenterostomy on the human subject five times, twice in 1891 and three times in 1900. Two of the patients were extremely weak, when operated upon, and died a few hours after the completion of the operation. Two died fourteen and fifteen days later, respectively. Death, however, being independent from the method employed. Post mortem showed a perfect anastomosis in both cases.

With regard to the immediate effect of the elastic ligature, McGraw states that the part of the bowel which is in its grasp does not slough, but undergoes a process of absorption. For, when examined at the end of the fourth day after the operation, the edges of the orifice, including the mucous membrane, are found closely united, without any raw surfaces whatever. The result is a "smoothed, healed edge all along the opening."

"When it accomplishes its purpose, the small contracted rubber cord passes away unremarked in the fæces."

Whether subsequent contraction with partial obliteration of the orifice, such as has happened after other methods of producing anastomosis, will follow in course of time, is as yet uncertain. There surely is no reason, with reference to the procedure as such, to expect contraction to any great extent. No doubt, we will soon be in possession of specimens which will demonstrate also in the human being the condition of the anastomosis, made with the help of the elastic ligature, in all its phases.

In conclusion, I hardly think I could do better than quote McGraw's own words in his last article referred to. He says the operation, done with the elastic ligature, "is the quickest of all operations for the production of intestinal anastomosis." A few Lembert stitches, the passage of the ligature through the adjacent viscera, the tying of a knot, a few more Lembert stitches, and the operation on the intestine is completed. There is no incision of the bowel, no loss of blood, no escape of fæces, and no exposure to peritoneal infection from the bowel contents. The operation is followed by a minimum of shock and pain, and at the end of three to four days there is an anastomosis with a union by first intention." . . . "The superiority of the elastic ligature over all other methods when an enteroenterostomy is added to a gastroenterostomy cannot be doubted by any one who has used the procedure. The quickness of its application, its freedom from danger, of sepsis, and absence of all complications are in brilliant contrast to the defects of other methods."

On basis of my own, though limited, experience, I can but indorse every one of these words. I shall surely continue to use the method wherever possible.

REPORT OF A CASE OF PENETRATING WOUND OF THE ABDOMEN WITH PROTRUSION OF VISCERA AND INJURY TO THE STOMACH—OPERATION—WITH A LATER DEVELOPMENT OF RENAL SYMPTOMS—RECOVERY.

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Howard Mac F——, aged twelve years, was admitted to St. Mary's Hospital at 5 P.M., September 23, 1901.

Previous History.—Had scarlatina several years ago, without renal complications or sequelæ.

Present History.—While bathing in a shallow pond, about forty-five minutes before admission, the patient threw himself, face foremost, into the water. His left umbilical region, striking forcibly upon a jagged, rusty piece of old iron, produced a penetrating wound of the abdominal wall, through which the viscera protruded. He was brought in by the ambulance.

Examination on Admission.—The patient was in a state of moderate shock, semi-conscious, with skin pallid and cold, pulse rapid, but regular, and of fairly good quality. There was a penetrating wound of the abdominal wall on the left side, beginning at a point midway between the ensiform cartilage and the umbilicus, and at the middle of the rectus muscle, extending obliquely downward and outward for a distance of six inches. The wound involved the entire thickness of the abdominal wall, the rectus being severed transversely through its outer half and the oblique muscles the full length of the skin wound. Protruding through this opening were almost the entire stomach, the transverse colon, all of the greater omentum, and about three feet of the small intestine. The only injury to these organs was a laceration completely through the peritoneum of the anterior wall of stomach, the muscular layer being bruised, but not perforated. This laceration of peritoneum was linear, one and one-half inches in length, and at right angle to the central point of the greater curvature.

Operation.—The patient was taken to the operating room immediately and etherized. The exposed parts were protected with hot towels, while the skin about the wound was rendered as clean as possible. After the exposed viscera had been thoroughly washed with hot decinormal salt solution, the wound of the stomach was closed with a continuous Lembert suture of fine silk. After careful examination for further injuries, the viscera were returned to the abdominal cavity, and a careful search was made to determine any other internal injury. The abdomen was then thoroughly flushed with the saline solution (about 10½ gallons being used), and the abdominal wound was closed without drainage. The peritoneum and muscular layers were sewed separately with catgut and chromicized catgut, respectively—the severed rectus muscle also being united—the fascia was sewed with continuous catgut sutures and the skin with interrupted silkworm-gut sutures. A few strands of silkworm gut were inserted under the skin at the lower end of the wound, for purpose of drainage in case suppuration should develop in the abdominal wall. I might add that the wound had been slightly enlarged at its upper end to allow more room for examination of the viscera.

The boy reacted well after the operation and made an uneventful recovery from the injury and operation. No untoward symptoms developed, the bowels moved within twenty-four hours after operation; the temperature, which was 100° after operation, gradually returned to normal, the pulse was good throughout, and stimulation was entirely cut off after thirty-six hours. The wound healed by primary union. The patient first took nourishment by mouth forty-eight hours after the operation; this consisted of broth and liquid peptonoids. Fluid diet was continued and gradually increased in quantity and variety until the twelfth day after operation, when a semi-solid diet of milk toast and custard was allowed.

On October 5, thirteen days after the operation, the patient became quite restless and vomited twice. Up to this time he had been doing very well; in fact, his general condition was excellent, the wound was entirely healed, and the urine was normal. On October 6, he was somewhat languid and vomited four times a greenish watery fluid; the bowels moved slightly. October 7 the condition was about the same; he vomited three times; nothing was given by mouth, nourishment being given per rectum. There were marked pain and tenderness over the right side of the abdomen—at first markedly over the appendix—later, more marked higher up. At this stage, a consultation resulted in a provisional diagnosis of a partial intestinal obstruction high up—there was no tympanites, no perceptible tumor, no rise of temperature, no change in the character of the pulse. October 8, during the night, the bowels moved twice, but only one ounce of urine was voided; this, for the first time, showed presence of albumin and hyaline casts. During the morning the boy became blind and had three slight uræmic convulsions involving the facial and cervical muscles. A condition of acute uræmia being evident, treatment by hot packs, rectal irrigations, nitroglycerin (contraction of the arteries being present), and small doses of bromide of potassium and chloral was instistuted, and with prompt and effectual response. The boy had five more convulsions on the same day, but after treatment began to have effect, they ceased. October 9, there was slight improvement, the pulse was more rapid, 100, but of better quality; the temperature rose to 101⅗° from normal; the mental condition was better, there being only stupor —no convulsions; the urine was entirely suppressed, the bowels moving freely. During the succeeding days the patient improved gradually, especially as to mental condition; he became less stupid, vision returned, vomiting ceased, the bowels moved, but the urine was suppressed totally, and subcutaneous œdema developed. This condition continued for five days (120 hours since the last urination), during which time the temperature ranged between 102° and 99°, and the pulse between 90 and 100, while there was marked and steady improvement in all the other symptoms. During this time the bladder was always empty, but the patient voided a thin bloody fluid in quantities of ℥ ss. to ℥ j. —in all ℥ vss. being voided in five days. The patient was getting diuretics, such as acetate of potassium and infusion of digitalis, and had had counterirritation applied over the kidneys. On October 12, after a total suppression of urine had existed for five days, the boy began to urinate and during the next ten hours passed 114 ounces, the following 12 hours 87 ounces of urine. The first was somewhat bloody, later it became clear; the specific gravity was 1,010; there was a marked trace of albumin, and the urine contained many red and white blood cells and granular casts. The urine gradually diminished in quantity until it became normal and its abnormal constituents diminished. Œdema disappeared, vision was normal, and the patient became bright and cheerful. When he was discharged, October 24, there was still a trace of albumin in the urine and a few finely granular casts; the sp. gr. was 1,010.

At the present writing, the patient is up and about and is gradually regaining strength, but the urine still shows a faint trace of albumin and some casts.

A Case of Nutmeg Poisoning.—E. E. Hinman reports the case of a woman of thirty-six years who was in the habit of eating nutmegs, of which she was very fond. On one occasion she ate four or five whole nutmegs. In a few hours she began to feel queerly, weak, dizzy, and hardly able to walk. When seen several hours later, she was in a condition of collapse. She was extremely pallid, the pulse was 150, feeble and irregular; the pupils were about three-quarters dilated, and refusing to respond to light or accommodation; respirations about 23, and shallow. She complained of an intense dryness of the mouth and throat, a feeling of constriction, amounting almost to pain, across the frontal region, vertigo on the least exertion, and numbness of the legs and hands. All objects appeared to be very distant, and as she looked at those near by, they quickly receded. Objects in the left half of the field of vision appeared to be a chocolate-brown color, while those on the opposite side were normal in color. Sounds also were all apparently distant. She was too weak to turn in bed, and when she was raised, everything became black before her eyes. The most peculiar symptom present was a tendency to pass into a dreamy sleep with the eyes wide open. Even while talking, she would suddenly stop speaking for a moment or two and lie perfectly still, looking directly at me, winking occasionally, and then resume her conversation, remarking that she had been asleep, and been dreaming of doing various things. Treatment consisted in clearing out the intestinal tract and of mild stimulation. Under these measures, recovery was prompt and without incident.—*Albany Medical Annals.*

Administration of Quinine by Hypodermoclysis.—J. W. Gray, Jr., says that the principal objections to giving quinine by intravenous injection are the difficulty of the technique and the danger of paralysis of the heart, if the solution be thrown too rapidly into the circulation. However, if slowly and carefully done, it is safe and very effective. He advises the method of hypodermoclysis, or the administration of a weak, hot solution, one-fourth to one-half of 1 per cent. of quinine in deci-normal salt solution, by hypodermoclysis. The most dangerous manifestations in all malarial paroxysms are characterized by the stasis of the circulation and imperfect elimination of toxins and waste products, and the author says that he knows of no better method of combating that tendency than the ingestion of a large quantity of deci-normal salt solution. The addition of the small percentage of quinine in nowise detracts from its value, nor does it add to the irritation, so that we are able to meet two therapeutic indications at once. The solution that he prefers is 30 gr. of bimuriate of quinine and iron in a pint of deci-normal salt solution. He uses a medium-sized aspirating needle. The solution may be injected, with due aseptic precautions, into the loose subcutaneous tissue in any part of the body, or in urgent cases it may be thrown directly into a vein. The injection is not very painful, the absorption is rapid, cinchonism is prompt, and induration or local necrosis has never been produced.—*Memphis Medical Monthly.*

The Antiseptic and Eliminative Treatment of Typhoid Fever.—J. Virgil Hubbard begins by giving the patient a capsule of calomel ½ grain, guaiacol carbonate 2 grains, podophyllin 1/40 grain, every two hours for twenty-four to forty-eight hours, depending upon the condition of the bowels. When there have been four or five evacuations for two successive days, ½ grain menthol is substituted for the calomel. Should inactivity of the bowels follow, a dose of salts or Hunyádi water may be given in the morning. Two or more evacuations should be secured daily, depending upon the temperature and the condition of the bowels. If after three or four days of treatment the temperature remains high, or rises after having remained stationary, the author again resorts to calomel for twenty-four hours or less, as necessary, and it invariably reduces the temperature and results in general improvement. Guaiacol and menthol are given throughout the disease. Guaiacol carbonate, aside from its antiseptic effect in preventing intestinal putrefaction, seems to have some favorable influence over the disease. The author has treated thirty-five cases in this way without a death, and in every case the temperature reached normal by the morning of the fourteenth day without the use of antipyretics.—*Georgia Journal of Medicine and Surgery.*

Climate for Consumptives.—Chauvain says that the afebrile consumptive should seek a high altitude, while the feverish patient should seek the seashore.

Types of the two climates are Davos in the Alps and the Riviera on the Mediterranean. In the mountains the season is the entire year, save when the snow is melting. At the seashore (in warm countries) from October to May.

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BOVINE AND HUMAN TUBERCULOSIS.

CERTAINLY the most interesting, and at least one of the most important, phases of the tuberculosis question is the relation of bovine tuberculosis to the public health. Is it indeed a fact that the disease as it affects cattle differs materially from human tuberculosis and that man is insusceptible to bovine tuberculosis?

Many have thought for a long time, and still think, that the menace of tuberculous meat and of milk infected with tubercle bacilli has been much exaggerated. Among this number are Dr. Theobald Smith and Professor Adami, but that it is impossible to communicate the germs of the malady from beast to man has not as yet been proved or generally credited.

Evidence up to the present time rather points to the opposite conclusion. Consequently Koch's thesis is generally looked upon as premature, and founded upon experiments which were by no means convincing.

Since the British Congress on Tuberculosis, there has been a remarkable recrudescence of activity in this line of research, and eminent scientific men on this and the European Continent have set themselves the task of finally solving the problem.

Dr. Ravenal, Professors Bang, Nocard, G. Sims, Woodhead, McFaydean, Delepine, Dr. George Still, Lord Lister, and others have delivered weighty pronouncements against accepting the theory without reserve, while some of these scientists have conducted investigations which would appear to demonstrate that, under certain conditions, bovine tuberculosis may be transmitted to the human kind.

Dr. D. E. Salmon, Chief of Bureau of Animal Industry, U. S. Department of Agriculture, read a paper on the subject before the American Public Health Association in Buffalo in September last, in which the essential points are clearly presented, and the evidence collected is opposed to Koch's statements at the British Congress on Tuberculosis.

The report of the Committee of the American Public Health Association, of which Dr. Salmon was Chairman and from which he cites numerous facts bearing on the matter, provides powerful arguments in support of the possibility of man becoming infected with the germs of consumption by the agency of the bovine race.

So much solid matter and statistics in connection with the points at issue have been collected in this report that it will not be within the scope of an article to do more than touch upon its more salient features.

Reference is made to the experiments of Chauveau showing that human tuberculosis can be communicated to cattle, and attention is drawn to the fact that tuberculin made from human bacilli causes a reaction in cattle affected with bovine tuberculosis, a sufficient evidence that the germs from human sources are not specifically distinct.

The report treats of accidental inoculations of man with bovine bacilli, bringing forward numerous illustrations in support of such occurrences.

However, the most engrossing part of the report is that which deals with statistics showing frequency of abdominal tuberculosis.

There is much apparent discrepancy between statistics of this kind collected in Great Britain and in other countries of the civilized world. The late Dr. Thorne in 1898 proved statistically that while consumption on the whole had declined to a wonderful extent, both as regards mortality and incidence since 1851, that "tabes mesenterica" had decreased but slightly. The observations of many other medical men in Great Britain confirm these statistics.

In Germany, France, and America results differ widely. Koch says that among many cases of tuberculosis examined after death, he remembered having seen primary tuberculosis of the intestines only twice. Baginsky never found tuberculosis of the intestines without simultaneous disease of the lungs and bronchial glands.

The statistics of Berlin, Paris, New York, Boston. and Chicago show that, although pulmonary tuberculosis is very prevalent, the cases of disease affecting the intestines are extremely rare.

Why, then, is tabes mesenterica so common in Great Britain? Dr. Salmon is of the opinion that on the European Continent there is a stricter inspection of meat and milk, and that in the United States we have far less tuberculosis among cattle and also an efficient Federal meat inspection.

The MEDICAL RECORD has insisted both before and after Koch's speech in London that the most rigid precautions possible should be taken to protect meat and milk from contamination.

Even if the distinguished German be proved right in his views, it will still be to the best interests of the general public that meat and milk should be free from infection.

Dr. Salmon is quite as insistent on these points, and also thinks with the MEDICAL RECORD that the dramatic promulgation of Koch's doctrine will in the long run bring good to the cause of sanitation.

In the meanwhile, boards of health will do well to act as if tuberculous meat and milk were in truth as dangerous to health as formerly thought to be. Over-carefulness in like instances is not a fault, but a virtue.

SMALLPOX AND ITS PREVENTION.

SMALLPOX, on both sides of the Atlantic, has been exciting much attention recently by reason of its spread, and also on account of the seeming comparative ineffectiveness of preventive measures. There would appear to be but little doubt that this inability to cope successfully with the disease, and to sweep it away, is due to several causes, the most prominent of which are the lack of efficient vaccination, the need of more stringent means for checking its dissemination, and in a lesser degree the difficulties in the way of correctly diagnosing the malady in its primary stages.

The conditions prevailing in this country with regard to these three causes do not altogether resemble those of Great Britain; nevertheless, there is sufficient similarity between them to make any authoritative statements on the subject advanced in one land instructive in the other land.

In the *English Public Health Journal* of January, a symposium of London public health officers is presented. The first paper is by Dr. John F. J. Sikes, medical officer of health for the large and important district of St. Pancras, in which smallpox has been particularly rife for a considerable time.

Dr. Sikes reaches the following conclusions: (1) That smallpox is an imported disease, imported (*a*) from abroad, and (*b*) from town to town; (2) That smallpox is imported and spread from person to person (*a*) by unrecognized cases, (*b*) by cases delayed in recognition, and (*c*) by incubating cases probably between falling ill and development of the rash; (3) That smallpox is carried by the dirty linen and clothing (*a*) of unrecognized cases, and (*b*) occasionally of recognized cases; (4) That smallpox is also carried by persons brought into contact with infected cases, probably by the clothing, and that these contacts may also incubate, develop, and spread the disease and so reiterate the cycle.

The St. Pancras medical officer thinks that with a view to prevention, the first point for consideration is the international notification of smallpox, and points in support of his opinions to the difficulty, indeed, under the existing regulations in Great Britain, to the impossibility of preventing the importation of the disease from foreign countries, or from different parts of the country itself. Dr. Sikes holds that if international notification of smallpox should be instituted, there would be a greater opportunity for stamping out the disease than with any other infectious ailment.

The second point for consideration is extension of the instructions to be given to vaccination officials as to suspicious rashes and ailments, and observed by them in course of their duties. The writer well says that early discovery of cases is of the greatest importance. Persons having the disease mildly are extremely dangerous in spreading it widely. Individuals when smallpox is prevalent, who are suffering from an eruptive skin affection, of whose nature they are ignorant, should, without delay, consult a medical man; many, however, will not do this, so that in the interests of the public at large, wider powers might with advantage be given to vaccination officials.

Another point that Dr. Sikes believes should be insisted upon is that the law should require, in every case of vaccination, the operation should be thoroughly efficient, and that a description of the result obtained should form part of the certificate. In this manner those who seek the protection of vaccination would be reassured by more certain safety, and those who do not would realize more distinctly their danger and responsibility.

A measure which the London expert is of the opinion would be beneficial is the provision of clinical examination in doubtful cases.

In the discussion which followed the reading of Dr. Sikes the opinion of all present seemed to be unanimous in favor of a stricter quarantine of the vagrant class. It was thought that there should be power to restrict their movements when they became a source of danger, even to quarantining common lodging houses completely. Again, the members of the meeting were all agreed that in those instances in which the practitioner summoned was in the least uncertain as to diagnosis, he should, when possible, call in an expert. Attention was drawn to the fact, that there was no hardship to the ordinary consultant in doing this, for, to put it bluntly, consultants in the best practice had the least knowledge of smallpox.

The portions of Dr. Sikes' paper which will mainly interest physicians in this country, are the lack of efficient vaccination, the need of more stringent measures for preventing the spread of smallpox, and the vital importance of a correct diagnosis.

The remedies, therefore, for these deficiencies as recommended by Dr. Sikes, will, to some extent, be as applicable to cities of the United States as to those of Great Britain. Efficient vaccination is the only reliable means of prevention, and, if smallpox is to be abolished, must be strictly enforced. When, however, the disease has broken out, correct diagnosis and rigid regulations to insure the detection and isolation of those infected is necessary to check its spread.

The City of Buffalo has recognized this latter fact, its Common Council having recently decided to pay physicians to find smallpox patients who have been hidden by friends. There is no reason why, if a sound policy with regard to smallpox be carried out the disease should not be stamped out.

MEDICAL EDITORS AND "LAY PUBLISHERS."

The announcement is made by Dr. J. Duncan Emmet, the editor and proprietor, since its establishment, of the *American Gynecological and Obstetrical Journal*, that the tenth anniversary of his paper is its last, and that the right of title has been neither sold nor given away, so that any one wishing to appropriate the same when the copyright runs out is at liberty to do so. In other words, a property which, in competent hands, should have in ten years acquired considerable value is tossed aside as worthless, and the name and good will of an established journal can be had for the picking up. Thus ends one, we believe the first of this special kind, of the foolish attempts to combine business and science in the same individual, which a few would-be leaders and self-constituted mouth-pieces of the medical profession in this country have pretended to regard both feasible and desirable.

These men, with very evident ends of their own to attain, have argued plausibly enough that medical journals should be conducted in the interests of the medical profession; and did they stop here, there would be no gainsaying them. But they have gone further and hazarded the *non sequitur* that a medical journal owned by a layman must necessarily be run wholly in the interests of the publisher and against those of the readers. They, of course, know well that the interests of editor, readers, and publisher are one and cannot be divorced without injury to all; but such an admission would be fatal to their argument.

A moment's consideration of the causes of the failure of Dr. Emmet's journal will show the impracticability of the medical-publisher idea. The paper did not go under because of the editor's intellectual unfitness, for he did his work quite creditably from the start, and had in him the making of a very capable editor with a little more experience; but as a publisher, as he himself confesses, he was a lamentable failure. He tells us in his valedictory that in the ten years of his journal's life over five thousand subscribers received and contracted to pay for the paper, but never did pay, and that "over $30,000 had been lost through unpaid subscriptions on contracts freely entered into by medical men." It is the old story of a man attempting to do what he was never fitted by education or training to undertake. As well might the so-called "lay" publisher try his hand at editing, his folly and his failure would be no less conspicuous.

There are two entirely distinct, yet not antagonistic, departments in a medical journal, as in all periodicals, the professional and the commercial, or the editorial and the publishing. The business part of the journal must necessarily be conducted by a trained business man, just as the editorial part must be conducted by educated medical men who are known and trusted by their professional brethren. If the editor gives his readers a journal that meets their wants, presenting to them all that is new and good, and laying before them each week a faithful record of the progress of medical science in all its branches, his readers ought to be, and we feel sure in most cases are, content, and concern themselves little where the financial profit, if profit there be, goes. Four of the seven larger weekly journals in this country are owned by laymen, but they are edited by responsible medical men whose names are published regularly, and so are known to all the readers of these journals. These editors have a reputation to preserve, and they would not dare, assuming they were capable of such perfidy, to betray the trust reposed in them by their medical brethren. They are working faithfully for the good of their profession, untrammeled by commercial restrictions, and there is not one of them who would do violence to his conscience at the bidding of his publisher, were the latter so foolish as to attempt coercion. We have never heard of a serious attempt of this kind being made, and the only authentic instance of lay censorship over a medical journal that has come to our notice was, alas, that of a journal said to be owned and run by professional men, and nominally edited by the most vociferous of all the decriers of so-called "lay" publishers.

It is time, indeed, to put an end to this silly and disingenuous twaddle about "lay" control of medical editors. The business man is the one to conduct the purely business matter of publication, the medical man is the one to control the purely professional matter of editorial management, and any attempt to combine or to confuse the two distinct functions, is folly, and quite certain to result sooner or later in disaster, as the death of our gynecological contemporary bears witness.

Philadelphia Medical Club.—At the tenth annual meeting held January 17, the following officers were elected for the ensuing year: *President,* Dr. E. L. Duer; *Vice-Presidents,* Drs. Thomas H. Fenton, and A. McAllister; *Secretary,* Dr. Guy Hindsale; *Treasurer,* Dr. F. Savary Pearce.

THE DIAGNOSIS OF SMALLPOX.

MUCH stress has recently been laid upon the necessity, in the interest of the health of all members of the community, of smallpox being diagnosed with certainty in the first instance.

Mistaken diagnoses are responsible for the spread of the disease to some extent, and it would be well that the chances of error should be minimized as far as possible. To attain this object, physicians need to be able to distinguish between the eruption of early modified smallpox and chickenpox, the rashes of these maladies resembling each other somewhat closely in their prodromal stages. Dr. J. MacCombie read before the Hunterian Society in London on November 13 last a paper on the differential diagnosis of smallpox. Dr. MacCombie holds that the diagnostic points between chickenpox and smallpox are the following: (1) The distribution of the eruption; (2) The shape of the vesicles; (3) The unilocular character of the vesicles of chickenpox compared with the multilocular nature of the vesicles of smallpox.

In the MEDICAL RECORD, June 28, 1900, the differences between the rashes of the two diseases were editorially discussed at length, but a reiteration of the remarks quoted then with regard to the distribution of the eruption in smallpox and chickenpox—a feature of the greatest diagnostic value—will be perhaps instructive. In chickenpox the eruption is most abundant on the trunk, less so on the face, still less so on the forearms and legs, and least of all on the hands and feet. All cases of chickenpox present typical vesicles on the abdomen, chest, back, thigh, or arms.

There are some, however, who believe that an absolutely correct diagnosis of smallpox cannot be reached by an examination of the eruption, let the medical man be as experienced as he may.

MM. H. Roger and E. Weil in *La Presse Médicale,* July 30, 1901, think that the only way of making a possible diagnosis of smallpox is in most cases to examine the blood. If an excess of lymphocytes or especially of myelocytes be found present, it is possible to exclude measles, scarlet fever, and purpura, and thus arrive at a diagnosis of smallpox.

Notwithstanding this opinion, there is no doubt that, for all practical purposes the diagnosis of a physician experienced in smallpox cases will be sufficiently convincing. At the present the need is to procure the services of such persons.

MALARIA IN THE PHILIPPINES.

This disease is not only the most prevalent among the American troops in the Philippines, but is also the cause of most cases of permanent disablement. A white man in a tropical country who is attacked severely by malaria never wholly recovers his health, at any rate, not while he remains in the torrid zone.

Lieutenant R. W. Andrews, late Assistant Surgeon Forty-sixth Infantry Volunteers, writes on the subject in the January issue of the Albany *Medical Annals.* He says that all the cases he saw were of the quotidian type, the tertian form so common in the United States occurs very seldom in the Philippines. The cachectic form developed very rapidly and soon rendered the soldier unfit for service. In the dry season the disease abates. The treatment for the quotidian form was a three-grain pill of quinine every two hours. Sometimes, however, as much as thirty or forty grains per day would be administered, often in solution, and with iron and arsenic. The treatment of the pernicious cases consisted of the hypodermic injection of quinine hydrochlorate in five-grain doses into the buttock hourly after the first paroxysm, with the idea of trying to prevent a second. The bilious remittent cases were treated with quinine in solution, with arsenic and iron, and the malaria cachexia with Warburg's tincture and iron, fifteen minims of the latter after each meal, and one or two pills of Warburg's tincture four times daily.

THE MILK SUPPLY OF NEW YORK.

The objects of the Rockefeller Institute were explained in the MEDICAL RECORD June 8, 1901.

The first investigation undertaken by the experts connected with the institute was that of the New York milk supply. An exhaustive report on the matter has recently been handed in, which clearly goes to show that such an investigation was sorely needed.

The work has been done thoroughly, and occupied seven months. The report proves that a large proportion of the milk supplied to the inhabitants of New York is unwholesome, and sometimes distinctly dangerous to health.

A very large number of outbreaks of infectious disease were traced to milk.

But the part of the report which will perhaps most surprise the citizens of New York is that which tells that almost the entire milk supply is more or less open to doubt. This state of affairs is due to careless and dirty methods of conducting cow farms, and of after-handling of the milk. The farms are kept in unsanitary conditions, the animals themselves are uncleanly, and the utensils improperly cared for. The report says that legislation may effect a certain amount of improvement, but that an amelioration of the milk supply will be brought about, not by compulsion of the dealers, but by educating them up to the point of voluntarily doing better work.

The report will tend to compass reforms by arousing the people to a sense of their danger.

SANITATION OF CARS.

When the New York State Association of Railway Surgeons held their annual meeting at the New York Academy of Medicine on November 14, last, one of the chief subjects of discussion was the question of car sanitation.

Papers were read by Dr. G. P. Conn of Concord, by Dr. J. N. Hurty, by Dr. W. J. Rosenau of Washington, D. C., and Dr. William Park of New York.

Dr. Rosenau thought that one of the greatest strongholds of disease germs on railroad cars is the excessive ornamentation. There should, he says, be less of this, and the interior of the cars should be so arranged that it presents a smooth hard surface, which would greatly facilitate disinfection.

Dr. Park is of the opinion that we cannot rid ourselves of all danger of the spread of disease, in railroad and street cars, under present methods of fumigation. A thorough cleaning of such vehicles every day, a blowing out of the dust with compressed air, and the use of some disinfectant would make cars reasonably safe.

Dr. Hurty believes that consumptives should be prohibited from traveling in railroad cars. When they travel in railroad cars they spread contagion everywhere. If they are allowed to travel they should have separate compartments. Typhoid-fever convalescents and all other persons suffering from infectious diseases should be prohibited from traveling in public conveyances.

The hygiene of railroad and street cars has occupied the attention of physicians and sanitarians for many years; but there is yet room for much improvement, especially on some of the most important railroads and in the street cars of many of the largest and richest cities. Ventilation is ofttimes very defective in railway cars, and the street cars are as a rule inadequately heated, as well as badly ventilated.

With respect to excluding persons convalescing from infectious diseases from public conveyances, no one will deny that such a course is actuated by common sense.

It would, however, be a difficult matter to prohibit consumptives, as a body, from travelling in ordinary cars. Those in an advanced stage could of course be prevented, but those on whom the disease had not obtained a firm hold could not easily be excluded.

Car sanitation is a matter requiring drastic reforms.

ADOPTION OF UNITED STATES ARMY MEDICAL METHODS BY FOREIGN NATIONS.

The meeting of the troops of the various countries in China afforded the opportunity of comparison in all branches of the service. It was the first occasion on which our army medical department was subjected to a prolonged criticism by foreign experts, and it may be said without exaggeration that it came out of the test with flying colors. The army medical officers of other nations expressed surprise and warmest admiration at the high state of excellence reached, as regards organization and equipment by the United States Army Medical Department.

The ambulances and tents met with especial approval, so much so in fact that Canada has adopted the ambulance and Munson hospital tent. Great Britain, France, Spain, Mexico, and Chili have ordered specimens of the ambulance, while Great Britain has also procured complete sample sets of our medical, surgical, sterilizing, and detached service chests, folding field-service furniture, bathtubs, and brigade hospital mess chests.

In the MEDICAL RECORD, August 17, in some notes on the Pan-American Exposition, was given a brief sketch of a United States brigade field hospital, and the *Lancet* a few weeks later contained a description of the Munson hospital tent, the ambulance, and other details of equipment.

The United States Army Department has made for itself an enviable record.

INFECTIVITY OF PLAGUE.

The report of the Indian Plague Commission has been recently published. With regard to the question of direct infection the commissioners say that the danger of direct infection from plague patients is very small, under conditions such as those of hospitals in India, where attention is paid to the proper ventilation and cleanliness of the buildings, where the floors are, in a considerable number of the hospitals, periodically treated with disinfectants, and where precautions, such as the wearing of shoes, are as far as possible insisted on. It must further be noted that in the hospitals under consideration personal disinfection was entirely neglected by the large majority of the staff, and that the relatives of the sick rarely took even the most elementary precautions against infection. These facts would seem to show that little risk is incurred by direct contact with plague patients.

Pneumonic plague, however, was found by the commissioners to be infective in a high degree.

With respect to the infectivity of patients convalescing from the plague, the president of the commission gave it as his opinion that a convalescent may cause infection for from four to six weeks after all acute symptoms have disappeared.

It is curious that little more is known concerning the means of dissemination of the plague than 2,000 years ago.

OSTEOPATHY IN NEW YORK STATE.

A bill is now before the State Legislature to grant to osteopaths the same rights as those enjoyed by regularly graduated and licensed physicians. The New York *Evening Post*, January 18, aptly quotes Dr. George Helmer as to the teaching and requirements of so-called osteopathic colleges.

That gentleman boldly states that everything is taught in osteopathic colleges that all medical colleges teach, except Materia Medica. In place of that osteopathic therapeutics are substituted. There are classes in anatomy, physiology, chemistry, pathology, neurology, surgery, and in fact whatever will instruct a student in the nature of a man's body. Nothing is taught concerning drugs or medicines, except the use of antidotes and anæsthetics.

The following is the course of study, with the number of hours devoted to each subject: First term—Descriptive anatomy, five hours per week; general chemistry, five hours per week; histology, lectures, and laboratory work, three hours per week.

Second term—Descriptive anatomy, five hours per week; physiology, five hours per week; principles of osteopathy, five hours per week; physiological chemistry, urinalysis and toxicology, five hours per week; hygiene, ten lectures per term.

Third term—Regional anatomy with demonstrations on the cadaver, five hours per week; physiology, five hours per week; pathology, two hours per week; theory and practice of osteopathy, ten hours per week; clinical demonstrations, four hours per week.

Fourth term—Neurology, one hour per week; surgery, four hours per week; pathology and bacteriology in laboratory, two hours per week; gynecology, ten weeks, five hours per week; obstetrics, the same; clinical demonstrations, five hours per week; clinical practice, four afternoons; medical jurisprudence, ten lectures per term; physical diagnosis, one hour per week.

It goes without saying that a man who has undergone such a course of training as a qualified osteopath, say from Kirksville, Mo., is but poorly equipped with the medical and surgical knowledge requisite to care for the bodily health and treat the injuries of his fellow-men. We commend a perusal of the osteopathic curriculum to the intelligent and sober inhabitants of this country.

THE ESSENTIALS OF SANATORIUM TREATMENT.

In view of the probable wide extension of these institutions throughout America, it will be of interest to physicians and others concerned in the matter to hear the opinions of medical men who have a good knowledge of sanatoriums for tuberculosis as to the best methods of treating those suffering from the disease. Germany was the pioneer in founding sanatoriums, and contains more of such establishments than any other country. Perhaps, however, the most convincing paper read on sanatorium treatment at the British Congress on Tuberculosis was not by a German, but by a Scotchman.

Dr. R. W. Philip, physician to the Victoria Hospital for Consumption, Edinburgh, gave in the said paper the following useful hints.

Speaking of open air, he said: "Whatever may be stated to the contrary, or by way of qualification, hyper-aeration is the major and essential agent in the treatment—the *conditio sine qua non*. There may be differences as to diet, rest, and exercise, but the uninterrupted exposure of the patient to the influence of fresh air is applicable in every case. In early days there was some timidity about this. Efforts were made to attain a fairly constant temperature in dwelling and bedrooms, and it was an instruction to nurses that the temperature should be regulated by the thermometer placed in each room. All this, however, has been greatly modified by experience. The freest access of fresh air is to be allowed to the patient day and night at all seasons, provided he is sufficiently clad; also rest and release from disturbing influences.

"For almost all patients rest is the immediate indication when treatment is commenced, and must be retained as part treatment at least for a long time. The pulse and temperature are the chief guides."

With improvement, Dr. Philip recommends exercise, here again its amount being gauged by careful record of pulse and temperature. The alimentary disturbances which form so marked a feature of the disease must be corrected by a carefully studied dietary. The patient must be induced to take a sufficient quantity, a very different thing from the "forced feeding" of which one sometimes hears.

Dr. Philip advises close attention to skin hygiene.

The whole paper is an excellent exposition of intelligent sanatorium treatment for consumptives as distinguished from the somewhat faddist principles which prevail in some establishments.

A LAWYER'S TRUST.

In New Jersey a corporation to be known as the "Associated Attorneys" has been formed, and has obtained a charter. The incorporators are all Jersey City lawyers.

The certificate of incorporation empowers the corporation to practise law through attorneys and counselors-at-law in any part of the United States.

It is understood that the "Associated Attorneys" will advertise for business, and will make a specialty of doing law work for business houses and corporations for a stated sum per year.

The establishment of a lawyers' trust is but another sign of the commercial spirit which would seem to be invading every branch of life.

With business trusts a medical journal has no concern, and the methods now in vogue of consolidating into immense corporations the various independent trade establishments throughout the country cannot here be criticised.

But a protest may be with justice made against the introduction of like trade principles into the learned professions.

Schemes of this nature tend not only to lower the dignity of an esteemed calling, but in addition will not conduce to the pecuniary advantage of a profession as a whole.

Medical men have bitter cause to regard the dispensary system, the excessive multiplication of benefit clubs, and like means of unfairly cheapening the value of their services with deep feelings of distrust.

The action of the Jersey City lawyers is to be deprecated by members of all professions as a movement ill calculated to work for the common good.

Plague in Butter.—Plague may live a long time in butter, especially when kept cool—that is, at 17° to 19° C. The warmer the temperature, the shorter the time the organism lives. At 37° C. it remained alive but five days against seventy-two days at 17° to 19°C.

News of the Week.

Retirement of Surgeon-General Van Reypen, U. S. Navy.—Surgeon-General William K. Van Reypen, U. S. Navy, is to be placed on the retired list of the navy on January 25, with the retired pay of a senior rear admiral. The action was voluntary on Surgeon-General Van Reypen's part, and is in accordance with the law authorizing the retirement of an officer with advanced rank, after forty years of service, including service in the war of the rebellion. Surgeon-General Van Reypen will be succeeded by Dr. Presley M. Rixey, medical inspector, U. S. Navy, who is well known in connection with his duties as attending physician to the late President McKinley. Dr. Rixey is a native of Virginia, and entered the navy in 1874. His appointment to the position of Surgeon-General was made by President Roosevelt in conformity with a promise made to the friends of Dr. Rixey by President McKinley.

Plague in the Philippines.—In view of the existence of plague in the Philippines, General Chaffee has issued an order calling the attention of officers serving in the archipelago to the absolute necessity for the extermination of rats in barracks, quarters, and other buildings occupied by officers, enlisted men, and civilian employees, and for the immediate disinfection of such buildings if plague rats are discovered therein. The order says that in Manila the insular board of health finds that 1¾ per cent. of all rats now being collected are infected by plague, and gives an approved method for the destruction of these rodents by the use of poison. The order directs that the board of health be notified by the medical officer in charge of posts in which any infected rats are found, in order that a temporary evacuation and disinfection of the building may be effected. If possible, all buildings are to be made rat proof by the removal of old partitions and the obliteration of dead spaces between floors and walls. Official reports lately received at the War Department state that Contract Surgeon E. S. St. John, U. S. Army, who was killed by insurgents in the Philippines some months ago, lost his life while leading and in command of a detachment of infantry. In warfare such as has been going on in the Philippines, in which the neutrality of surgeons and hospital corps men is not respected, these frequently have had to become combatants during action, and could only resume their humanitarian duties at the conclusion of the action. During the active operations consequent upon the former organized resistance by the insurgents, hospital-corps men were armed with carbines while in the field, and at the present time are usually provided with revolvers under such circumstances.

Dental Surgeons for the Navy.—The benefit to the military service attending the appointment of dental surgeons in the army, as a result of the experience of the past year, has prompted the following bill to establish a similar corps of dental surgeons in the navy which has recently been introduced into Congress.

Sec. 2519. A bill to add dental surgeons to the medical corps of the navy. Be it enacted, etc., that to the medical corps of the navy there shall be attached a corps of dental surgeons to serve the officers, enlisted men, and boys in the naval military service and training schools, which corps shall not exceed in number the proportion of one to one thousand authorized by law for said service and schools.

The said dental corps shall consist of three grades designated assistant dental surgeon, passed assistant dental surgeon, and dental surgeon, and with respect to rank, pay, and allowances, and to promotion within said dental corps, the grades named shall correspond to the grades of the medical corps designated assistant surgeon, passed assistant surgeon, and surgeon, respectively.

Sec. 2. That original appointments shall be made to the grade of assistant dental surgeon, and the appointees must be citizens of the United States, between twenty-three and thirty-three years of age, graduates of standard dental colleges, with not less than two years' subsequent experience in practice, of good moral character, of unquestionable professional repute, and shall be required to pass a satisfactory physical and professional examination: Provided, that there shall first be selected a member of the dental profession who is a graduate of a standard dental college and whose aptitude and experience evidence fitness for conducting the professional examinations herein provided for, and for otherwise assisting in organizing, equipping, and supervising the operations of the corps, who shall be first appointed to the grade of dental surgeon.

Damages for the St. Louis Tetanus Cases.—A resident of St. Louis has brought suit against the city for $20,000 damages for the death of his daughter, aged four, who, he alleges, was killed by the administration of antitoxin furnished by the City Health Department. This is the first of a series of damage suits growing out of the death from tetanus of thirteen children, to whom diphtheria antitoxin, said to have been contaminated with tetanus virus, was administered.

The Medical Society of the State of New York.—The ninety-sixth annual meeting of this society will be held in the City Hall, Albany, on January 28, 29, and 30, 1902, under the presidency of Dr. Henry L. Elsner of Syracuse. Members of the county medical societies and the medical profession of the State generally are invited to attend the meeting. A full program has been published, and communications relating to any changes in the same should be sent to one of the business committee, Drs. Nathan Jacobson of Syracuse, George R. Fowler of Brooklyn, and William C. Krauss of Buffalo. The secretary of the society is Dr. Frederic C. Curtis of Albany. The reception and annual dinner will take place on Wednesday evening. Reduction in railroad fare can be secured by obtaining at the station, on starting, a certificate which, when endorsed at the meeting by the Secretary and the Special Agent of the Trunk Line Association (who will be present the first two days), will entitle to return at one-third fare. Members, both delegate and permanent, are requested to register early, to which end the committee on credentials will be at the Hotel Ten Eyck, Monday evening. Others are asked to register likewise, and to become members by invitation.

The Late Dr. George Bayles.—The following minute was adopted at a meeting of the medical staff of the Orange Memorial Hospital held January 6, 1902: "Dr. George Bayles died on December 20, 1901. He was born in New York in 1836, and received his medical degree from the College of Physicians and Surgeons, New York, in 1859. He served his country as a surgeon both during the War of the Rebellion and the Spanish War. He settled in Orange in 1880, and was appointed attending physician to the Orange Memorial Hospital in 1888. The doctor's interest in the work of the hospital was shown by informally accepting the position of anæsthetizer, and for several years he was uniformly present at every operation in the hospital. In this work he took great interest and adopted the latest methods in his practice, supplying the apparatus and gas at his own expense. His colleagues on the staff appreciate his faithfulness in this and in every relation which he bore to the hospital. His uniform courtesy and kindliness, his attention to the work of the wards, made him an agreeable associate and a useful member of the staff.

" We have adopted this minute to be spread upon the records of staff, and to be sent to Mrs. Bayles, as an expression of our sympathy in her great loss and as an evidence of our regard and respect for the doctor. Thos. W. Harvey,
"Secretary."

Coroners' Physicians.—The State Civil Service Commission has been asked to decide whether or not the coroners' physicians shall hold their places at the pleasure of the coroners. The President of the Board of Coroners asked the Corporation Counsel two weeks ago for an opinion as to the status of all the men under the coroners in Manhattan. Mr. Rives replied that the coroners' physicians rightly belong in civil service schedule A, which means that they can be removed at any time, and not in schedule E, men in which hold their places as long as their work is satisfactory. On the strength of this decision the coroners asked the Municipal Civil Service Board to recommend the change, and the board did. It was also approved by Mayor Low. The coroners argue that they should be able to remove their physicians at any time and put in men in whom they can have confidence, but the physicians naturally are opposed to any change. The salary of a coroners' physician is $3,000 per year.

A Physician Fined for Not Reporting a Case of Smallpox.—A Brooklyn physician pleaded guilty, one day last week, in the Court of Special Sessions to a charge of having failed to report a case of smallpox which he had attended, and was fined $50. He first diagnosed the case as one of diphtheria, but when convinced that it was smallpox, had neglected to notify the health authorities.

Trouble in a Buffalo Hospital.—One of the attending physicians of the Sisters' Hospital in Buffalo is reported to have resigned recently because the resident physicians refused to give one of his patients antitoxin on the ground that the medicine was too expensive to be given away, in view of the low state of the hospital's finances. The resignation has caused much feeling among the hospital physicians, who have taken sides, three of them indorsing the resigning man's stand, while the rest take the view that he acted too hastily. He was asked to reconsider his resignation, but refused to do so.

Site for a New Maternity Hospital.—The directors of the Manhattan Maternity Hospital and Dispensary have selected a plot of four lots on East Sixtieth street, between First and Second avenues, as a site for the Maternity Hospital which is to be built by a wealthy philanthropist as a gift to the East Side poor. The name of the donor is not mentioned, but it is believed that he is included in the list of directors. The institution was incorporated last spring with Daniel S. Lamont, Cornelius Vanderbilt, Frank L. Polk, Henry S. Thompson, William Thorne, Moses Taylor, and Percy R. Pyne as directors. It is the intention to provide a hospital, a dispensary, and a training school for nurses, housed in a building equipped with every modern appliance. There will also be an outdoor service of obstetricians and nurses. The service will, in general, be free, but there will be a few rooms for pay patients.

Transfers of Patients to City Hospitals.—It has long been alleged that the private hospitals in this city have made a practice of transferring patients who were penniless and likely to die to Bellevue, which institution has also been accused of railroading dying patients to the hospitals on the islands. In the apparent belief that this abuse does exist, and in the hope of stopping it, Mr. Homer Folks, the new Commissioner of Charities, has issued the following order: "No patient in any hospital in this department, whose condition is such as to lead the attending physician or the examining physician to believe that a fatal result must be expected within three days, shall be discharged or transferred to any other hospital unless such patient is violent and there are no facilities for safe restraint in the hospital in which he may be. In case any patient received by any hospital in this department, by transfer from some other hospital or institution within or without this department, shall die within three days after admission, a statement of the case shall be reported immediately to the commissioner."

The State Sanatorium for Consumptives.—At a meeting of the Board of Trustees of the State Hospital for the care of persons suffering from incipient tuberculosis, held this week in Albany, plans for the hospital buildings to be erected on the site at Raybrook, between Lakes Placid and Saranac, in the Adirondack region, were submitted. It is expected that work on the construction of the buildings will be begun as soon as possible, and that they will be ready for occupancy next autumn. There is an appropriation of $150,000 available to defray the cost of the buildings. After the sanatorium is open, an annual appropriation by the Legislature will be required for its maintenance.

Measles in Flushing.—Within a week 400 cases of measles have been reported to the office of the Board of Health from Flushing. It is said that in some streets there are rows of houses every one of which has one or more cases in it. The outbreak began about ten days ago and gradually increased each day since, up to the beginning of this week. In some of the schools there are rooms which contain only a skeleton of a class. The cases are said to be generally of a mild type, and no deaths have as yet resulted. The Health Board officials are doing everything in their power to check the disease.

Payment for Expert Work Enforced.—Dr. Rudolph A. Witthaus has recently won a suit against the city for $6,639.65, which he claimed was due him for making a chemical analysis of the stomach of H. Barnett, whose death was one of the significant features of the people's evidence in the Molineux murder trial. Dr. Witthaus contended that he performed the analysis at the instigation of ex-District Attorney Gardiner, and that he had put in 366 hours' work in making the analysis. His charge was $15 an hour, with $250 for consultations and $500 for incidentals. Comptroller Coler had refused to pay the bill when it was presented, contending that it was exorbitant. The verdict rendered included $459 for interest on the amount sued for.

New York City Hospital Trustees.—Mayor Low received, a short time ago, nominations for the board of trustees of Bellevue, Fordham, Harlem, Gouverneur, and the Emergency hospitals. Fourteen names were presented by the presidents of the United Hebrew Charities, the St. Vincent de Paul Society, and the New York Association for Improving the Poor, and from this list the following were appointed: Howard Townsend, for the term of one year; Theodore E. Tack, two years; Marcus Stine, three years; James K. Paulding, four years; Samuel Sachs, five years; Myles Tierney, six years; Dr. John W. Brannan, seven years. After having been sworn in and instructed in their duties by the Mayor, the trustees organized by electing Dr. Brannan, *President*, and Mr. Paulding, *Secretary*.

The Canton (Ohio) Medical Society.—The annual meeting, election of officers, and banquet of this society took place Friday evening, January 3, 1902. The address of the evening was delivered by the retiring president, Dr. E. O. Morrow, on "Treatment of Ninety-seven Cases of Typhoid Fever, with Two Deaths." Reports of cases were read by Drs. J. P. DeWitt, F. W. Gavin, and F. Da Hinden. The following officers were elected for 1902: *President*, Dr. John P. DeWitt; *Vice-President*, Dr. Robt. B. Williams; *Recording Secretary*, Dr. Wallace Foulks; *Corresponding Secretary*, Dr. Frank Kahler; *Treasurer*, Dr. Frank Da Hinden; *Board of Censors*, Drs. Harry M. Schiffell, A. B. Walker, and Edward P. Morrow.

Obituary Notes.—Dr. William Merwin Smith, who was for many years Health Officer of the Port of New York, died, on January 17, in Redlands, Cal., at the age of seventy-five years. He was formerly Surgeon-General on Governor Dix's Staff, and was Surgeon of the Third Brigade in the Civil War. He resided in Brooklyn for a number of years after retiring from Quarantine.

Dr. J. T. Eskridge of Denver died at his home in that city of Bright's disease on January 16. He was born in Sussex County, Delaware, and was a graduate of the Jefferson Medical College in 1875. For a time he was post-graduate instructor in nervous diseases in that college, but removed to Denver in 1884. He was a member of many national and local medical societies, and was a recognized authority in nervous and especially mental diseases.

Dr. Clayton Parkhill of Denver died there of Bright's disease on January 16. He was a graduate of Jefferson Medical College in 1883. His illness dated from the Spanish War, during which he served as surgeon in the army, when he was greatly prostrated by tropical diarrhœa in Porto Rico. He was Professor of Surgery at the Gross Medical College in Denver, and was a prominent member of many local, State, and national medical societies.

Rev. Dr. Richard R. Horton, for thirty-five years Chaplain of the Colored Home and Hospital in this city, died last week at the age of eighty-nine years. The cause of his death was pneumonia.

Dr. Kingston Goddard died at Philadelphia on January 17 at the age of sixty-three years. He was graduated from the medical department of the University of Pennsylvania in 1859, and shortly afterward entered the United States Army as a contract surgeon. An attack of typhoid fever interrupted his career at this stage, but after his recovery he entered the navy and served as a surgeon until the close of the Civil War. He then practised medicine for several years in Cincinnati, subsequently going to Philadelphia, where he was elected coroner in 1874. He also served as school director for several years.

Dr. Samuel Seabury Jones of this city died at his home, 712 Madison Avenue, on January 21, of pneumonia. He was born in Oyster Bay, L. I., fifty-five years ago, and was graduated from the arts and medical departments of the New York University, being admitted to practice in 1869. He was a member of the Academy of Medicine, the Medical Society of the County of New York, the Manhattan Medical and Surgical Society, and the Lenox Medical Society, and was also consulting physician at the Almshouse and Workhouse Hospitals. He leaves a wife and two daughters.

Dr. Thomas Johnson died at his home in Readington, N. J., on January 19, at the age of eighty-seven years. He was born in Somerville, N. J., and studied medicine in the office of his father, Dr. William Johnson of that town. After practising in Somerville for a number of years, he removed to Readington about forty years ago, and actively followed his profession there up to within a few years of his death. A widow and one daughter survive him.

Obituary.

GEH. MEDIZINALRAT HUGO WILHELM VON ZIEMSSEN,

MUNICH.

Professor von Ziemssen died at his home in Munich on January 21, at the age of seventy-nine years. He was born in Greifswald on December 13, 1829, and after passing through the Gymnasium in his native city, studied medicine at the universities of Berlin, Würzburg, and Greifswald, from 1849 to 1853. While in Würzburg he was for a year private assistant to Virchow. He received his doctorate degree at Greifswald in 1853, and passed his Staatsexamen (to obtain his license to practise medicine) *summa cum laude* at Berlin in 1854. He returned to Greifswald, where, in 1856, he was appointed assistant at the medical clinic, serving under Haeser, von Niemeyer, and Rühle, and in 1861 was promoted to be an extraordinary professor. Two years later, in 1863, he accepted the chair of Pathology and Therapeutics, with the directorship of the medical clinics, at Erlangen, remaining there until 1874, when he was called to Munich, where he was made Professor of Special Pathology and Therapeutics and Director of the City General Hospital. Here he established the first "Klinische Institut" in Germany, and remained its director until his death. During the Franco-German War he directed a hospital train, running for a time between Nuremberg and the base of operations in France, and was also at the head of a Committee of Sanitary Assistance which rendered especial services in the military hospitals at Metz.

Few medical men have had lives of greater literary activity than von Ziemssen, for his industry in this direction was extraordinary. His first publication (1854) was his Inaugural Dissertation, or graduation thesis, entitled "De Gangrænæ Nosocomialis Historia et Literatura." In 1857 he wrote a treatise on "Electricity in Medicine," and in 1866 published a monograph on "Pleurisy and Pneumonia in Childhood." In 1862 he founded the "Greifswald Medical Reports," which he edited for two years, making himself seven important contributions to the series. In 1865 he established, in conjunction with Professor A. Zenter, the *Deutsches Archiv für klinische Medicin*, contributing to the same many papers, especially on diseases of the respiratory organs, a subject in which he was always particularly interested. In 1874 he began the publication of his world-known "Handbuch der speciellen Pathologie und Therapie," which was translated in this country under the editorship of Dr. Albert H. Buck, and published by William Wood and Company under the title of Ziemssen's "Cyclopædia of the Practice of Medicine." To this, as to all the works of which he was editor, von Ziemssen made numerous contributions with his own pen. In 1883 he began his "Handbuch der allgemeinen Therapie" in four volumes, which was later included in the "Handbuch der Hygiene und der Gewebekrankheiten." He also edited a "Handbuch der Hautkrankheiten," and a series of "Klinische Vorträge," which ran through twenty-five numbers. In addition to the articles written for his own cyclopædic works, he was a frequent contributor to periodical literature, and to various "Sammelwerke," edited by Penzoldt and Stintzing, von Leyden, and others.

German medicine, and indeed the medical literature of the entire world, owes to this indefatigable worker an enormous debt, which it should not be slow to recognize.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent)

THE PROGRESS OF THE EPIDEMIC—MENINGITIS SIMULATING ECLAMPSIA—DECIDUOMA MALIGNUM—NURSE "FRIVOL"—OBITUARY NOTES.

LONDON, January 10, 1902.

SMALLPOX continues to spread. During the week the number of fresh cases has increased, and other localities have become infected. Those who for months refused to apply the word epidemic to the outbreak are now beginning to use it, and fears are freely expressed as to what may happen if the disease cannot be stamped out before the coronation, when great crowds will be attracted to the metropolis. Already the home counties are being invaded, and reports of cases are being brought from many of the more accessible places, most of them being distinctly traced to persons arriving from London.

The epidemic is now actually assuming proportions which threaten to equal or surpass those of 1894-5, as will be seen if we look back over the past year. There were a few cases in the first quarter of 1901. In the month of May, there were 6; in June, 15; in July, 28. In August came the first sudden extension, when 96 fresh cases were admitted, followed in September by 188; in October, 307; in November, 473, and in December, 804. The year closed with 39 cases on its last day, and the new year opened with the same number on its first day. The daily numbers then were 24, 38, 32, 30, until January 6, when they jumped to 56; and the next day 53 were added, and the next a fall to 33 was noticed. Yesterday there were 37 new notifications, and the number under treatment had passed the ninth hundred.

The difficulty of dealing with some people is illustrated by a story that a steamer in the Thames signaled "all well," and so was not inspected for some time, and meanwhile the crew had been paid off, and disappeared, although a man with smallpox was lying in the forecastle. I should hope the commander will be brought to book.

To-morrow, the Asylums Board will issue a report on the epidemic. Meantime, the antis are busy circulating their misleading leaflets and false figures.

Sir J. Crichton Browne gave an inaugural address to the Sanitary Inspectors' Association on Saturday, in which he referred specially to their duties in reference to the smallpox epidemic. If this pursues its usual course, he told them, it will reach its highest level between this month and May, and that level may mean a formidable amount of disease, for sudden extensions are not improbable. Insignificant, therefore, as the present outbreak is, compared with former epidemics, he said it is calculated to cause anxiety. He quoted statistics to show that among the vaccinated the death rate was 20 per cent., while among the unvaccinated it was 60 per cent.—threefold. In every quinquennial period the fatality had been greater among the unvaccinated. The power of vaccination, however, diminished gradually from the date of operation, showing the necessity of re-vaccination. The "conscience clause," by removing every vestige of persecution, had converted the anti-vaccinationist from a martyr to a mere crank, and so far improved matters. The case of Montreal was cited to show the stupidity of opposing vaccination. That city enjoyed immunity from 1875 to 1885; a period of neglect followed, an unprotected population grew up, and when a case was introduced by a visitor, the disease spread like fire in dry grass, and killed 3,154 citizens.

The Obstetrical Society began the new year with an interesting meeting on the 1st inst., when two good papers were presented and discussed.

Dr. Thos. Wilson of Birmingham read the first of these, which was on a case of pneumococcic meningitis simulating puerperal eclampsia. The patient was comatose on admission, and died within an hour and a half. Some urine drawn off shortly before death contained a slight amount of albumin and 1.5 per cent. of sugar. The post mortem showed the kidneys, uterus, and ovum to be healthy. The chief morbid condition was septic meningitis involving the whole surface of the brain. There was œdema of the lungs, but no pleurisy, pneumonia, pericarditis, or peritonitis; no tuberculosis, no middle-ear disease. A cultivation of the pus on the meninges revealed an organism resembling Fraenkel's pneumococcus. Dr. Wilson said his case could not be distinguished from eclampsia, and urged the importance of a complete post mortem in every fatal case of convulsions or coma during pregnancy. He suggested that the origin might have been derived from reabsorption from the breasts.

Dr. A. Routh doubted this in view of recent experiments, and suggested the sugar might have been derived from the liver.

Dr. Spencer mentioned a case in which he operated for pyosalpinx, in which there was much pus, but which did well until the tenth day, when the odor of the breath led to the urine being examined for sugar, which was found. Paralytic symptoms supervened, ending in death, which was thought by Sir W. Gowers to be due to septic meningitis involving one hemisphere. The occurrence of the sugar in this case and in Dr. Wilson's suggests that it may be related to cerebral sepsis.

Dr. Cuthbert Lockyer read the other paper to which I referred above. It consisted of an account of a case of chorio-epithelioma with pulmonary metastases. The main features shown in sections of the primary growth were carefully detailed. No true chorionic villi were demonstrated, but syncytial masses formed the main feature of the growth, and were also found in the metastases. Dr. Lockyer said two varieties of tumor termed deciduoma malignum are histologically distinct: (1) Syncytioma, derived from the outer layer of the chorionic villus; (2) Tumors containing no syncytium, made up of large modified connective-tissue cells, closely resembling the decidual cells of the maternal portion of the placenta. These two varieties were shown in a lantern demonstration.

The President (Dr. Horrocks) complimented Dr. Lockyer on his paper and demonstration. He rather leaned to the opinion that these malignant growths were of fetal origin, a view supported by those cases in which he followed hydatidiform degeneration of the chorion.

Dr. H. Spencer agreed as to the two kinds of case, but thought it convenient to retain the term deciduoma malignum to include the two varieties. He mentioned that at a former discussion the late Dr. Kanthack considered these growths should be classed as sarcomata.

At the same meeting Dr. Lewers showed two specimens of cancer of the body of the uterus which he had removed by abdominal panhysterectomy. Dr. McCann raised the question whether the tubes and ovaries should not be removed in every case of cancer of the body, as he had seen recurrence in the tubes. Dr. A. Routh thought if the growth did not involve the cornua the tubes might be left, but when the whole fundus was involved, they ought to be removed.

When Sir F. Treves used the expression, "the plague of women," there was a great outcry among the nurses. His justification now comes from one of themselves, who, in the *Nursing Record*, writes about those whose pursuit of pleasure and flirtation caused their more serious sisters to nickname them "frivols." Nothing more severe has been said than this: "Gadding, junketing, riding, driving, racing, dancing, picnics, and 'high, old times' are the unblushing aim of the frivol." The war-office schemes for reforming the nursing department can hardly make bad worse, but it is high time that the medical officers were given more authority, that they might enforce discipline on the nursing women. If the soldiers and their surgeons were consulted, a great number of these women would be dismissed, and their places supplied by male nurses trained in the army hospitals.

My new Medical Directory was delivered before the close of the past year. The net increase in the number of names over the previous issue is 434. The increase is noted in all the divisions. The average on the whole is 1.19 per cent.

The late Mr. France, consulting ophthalmic surgeon to Guy's Hospital, left money to the Council of the Royal Medical Benevolent Fund to found pensions for aged, necessitous members of the profession. The council has accepted the trust, and decided to found pensions of £30, calling them after the benefactor, "France pensionships."

Another society is projected—the electro-therapeutical. A meeting is to be held this evening for its formal establishment.

The Jenner Institute is making a special effort to meet the demand for reliable glycerinated vaccine lymphs.

The donor of the £200,000 which the King devotes to a sanatorium for tuberculosis is Sir Ernest Cassel, K.C.M.G., whose chief work was in connection with irrigation in Egypt.

The discussion on vaccination at the Medico-Chirurgical will be resumed on the 14th.

Charles Roberts, F.R.C.S., who died on the 8th, took great interest in statistics, meteorology, and anthropometry. Of the last subject he wrote a "Manual," and also the "Final Report" of a Committee of the British Association. He was also much interested in questions concerning the health of factory children and other hygienic subjects, on which he contributed to societies and journals. Every now and then, too, a letter of his would appear on some side subject, and whether his opinion was accepted or not, it was always worth consideration.

Dr. Hyde Hills of Cambridge died on the 2d inst. from tetanus. He was a long time on the Health Committee of the Corporation, and in 1894, Mayor.

Dr. David Ramsay of Raunds, near Northampton, has lost his life from septic infection of a wound of his finger accidentally inflicted in operating. He was graduated at Glasgow in 1888.

Dr. Tracy, physician to the Mercy Hospital, Cork, died on the 26th ult. He was treasurer of the local medical society, and enjoyed the confidence of his brethren and the public, who attended his funeral in large numbers, headed by the Lord Mayor and High Sheriff of Cork.

Dr. J. W. Mason died on the 29th ult., in his eightieth year, at Strand Green.

THE CZOLGOSZ TRIAL AND MEDICAL EXPERT TESTIMONY.

To the Editor of the Medical Record:

Sir:—The report of the trial, execution, autopsy, and mental status of Leon F. Czolgosz, published by Dr. Carlos F. MacDonald in the Medical Record of January 4 will, for obvious reasons, be widely read. As an authority upon mental and medico-legal matters, and as one of those officially appointed to examine into the sanity of the assassin, the words of the writer of the report will carry special weight. He says that the trial was "a unique one in the annals of criminal jurisprudence." Everything in regard to it deserves, therefore, more than a passing notice. The sustained dignity of the whole proceeding, the absence of all harrassing trivial technicalities of the law, the rapidity with which a satisfactory jury was obtained, and last, but not least, the avoidance of all disputation between the medical experts in open court were indeed features that added to the remarkable character of this trial, and in the end tended to make it a memorable example of what such a trial should be.

I wish to say a word here in regard to the manner of securing and presenting the expert testimony in this and other instances. That word, of course, can only be one of the highest commendation so far as the Czolgosz trial is concerned. The experts who were summoned, three by the State and two by the defense, were all men of the highest ability and known probity, men who, as intimated in the statement made by Dr. MacDonald, when referring to himself, only "consented to act, provided it should be distinctly understood" that they were not there as partisan experts "in behalf of either side, but simply in a professional capacity to aid in determining the real mental state of the prisoner." With such men as experts, it would have made little difference how they were appointed, whether by the court or by the opposing counsel; for their independence and integrity as the representatives solely of science would have assured the court of a high and unbiased opinion. If all so-called experts were of this character, no exception could be taken to the present method of securing them. These five gentlemen, though summoned there by the opposing sides, really constituted a commission, a single body, for the examination and determination of the sanity of the prisoner. The District Attorney allowed them to confer freely together, and permitted those for the defense to have complete access to all the facts and information in his possession in regard to the case. In other words, these five experts, after the manner of a commission, tried Czolgosz first in regard to his mental condition. This having been decided to be not abnormal, the case was remanded, as it were, for a civil trial, and no further medical testimony was introduced before the jury. "This course on the part of the District Attorney," Dr. MacDonald well says, "marks a new departure in the methods of getting expert evidence in criminal trials where the question of mental responsibility is involved, which is to be highly commended as a practical measure, tending to eliminate much superfluous testimony, and at the same time to minimize the danger of contradictory expert opinion." Hence, the absence in this trial, of all unseemly debate upon technical matters in open court, and the smoothness, so far as the medical side of the case was concerned, with which the "machinery of justice" moved.

In the Czolgosz trial, the objectionable method of allowing the experts to be appointed by the opposing counsel and then compelling those experts to debate, as it were, in open court before a body of uninformed laymen was, by a most happy confluence of circumstances, saved from eventuating into a display of temper, bias, and misconception, which is now all too common in our courts, and which has brought all expert testimony into more or less disrepute. It has been shown in this trial how desirable it would be to adopt some other method than the present one for securing expert testimony, and thereby to obtain always the result which in this case followed a fortunate but unlooked-for set of circumstances.

In view of all this, I am surprised at the statement made by Dr. MacDonald that "in view of the great importance of the case it is regrettable that no experts were called to testify on the trial as to the prisoner's mental condition, in order that it might appear on the record of the trial that his mental state was inquired into and determined by competent authority."

As the experts in this case were unanimous in their opinion, the introduction of their testimony in open court would not have done any harm; but it would have been a procedure which would have been a continuance of the very one which this trial has shown so magnificently it would be desirable to avoid. Moreover, the reason given by Dr. MacDonald for such a procedure seems to me to be quite inadequate. The medical examination, like many other things done before and after the trial, is sufficiently recorded and is now a part of history. After the decision of the experts, Czolgosz was brought before the jury as a sane man, to undergo his trial like any other sane man. There was no further question in the case in regard to his mental status, and it therefore would have been about as relevant to introduce any medical questions in regard to his mentality in the trial as it would have been to introduce the fact that he didn't speak the Chinese language and that he wasn't a Fiji Islander.

The very thing that Dr. MacDonald regrets is, it seems to me, the very thing that added to the unique and commendable character of this trial, namely, the total exclusion of all medical testimony (technical testimony in regard to the prisoner's sanity) from the court room. Even "in view of the great importance of this case," it seems to me that it would have been unwise to have introduced any medical testimony in regard to the prisoner's mental status after it had been unanimously decided by an acceptable and competent commission that he was not an insane man; for the setting of the precedent alone would have offset all the good that would have accrued from making an exception of this case. On several occasions, I have argued for the complete separation of the medical testimony in all such cases from the civil trial. (*Vide A Plea for the Medical Expert*, *Journal American Medical Association*, 1892; *idem*, *Magazine of Current Topics*, March, 1894; *Popular Lunacy*, *Journal American Medical Association*, April 18, 1896; *Insanity in Court*, *ibid.*, September 26, 1896.)

A criminal is sane or not sane. He may be feigning insanity. As a result of the periodicity of the disease, he may have been insane at the time he committed the crime, and yet sane in the legal sense, both before and after it. These are all questions requiring experience, special knowledge, and keenness of judgment to decide. Even in the grosser forms of insane manifestation it is not always an easy matter to come to an opinion; much less so is it in those forms which are close upon the border line. Therefore, if a criminal is suspected of being insane or if such a plea is made for him or he is thought to be feigning insanity, the open court in the presence of a body of non-medically trained men is not the place to discuss and decide so fine a question. Nothing, it seems to me, is more self-evident than that a commission, appointed by the court, or, better still, by agreement between the opposing counsel, as was done in the Czolgosz trial, should first examine into the mental state of the defendant, and then, in accordance with the decision of that commission, the man should be sent to an asylum or remanded for civil trial. But under no circumstances after he has been thus declared sane by competent authority should any further question as to his mental state be introduced into the course of the trial. This, it seems to me, is not only reasonable, but it is the only way that expert testimony can be made use of most effectively by the court, and can be saved from falling into a most unfortunate and unwarrantable disgrace. Of course, it is to be admitted that such a proceeding amounts to a sort of preliminary trial, and appears to upset the great principle so dear to the legal heart, of a man being tried by his peers. As a matter of fact, a man's peers are those whose capabilities are such that they can fully appreciate all the attendant circumstances with which he is or has been concerned. This is just the weak spot in the great principle of trial by jury, and its weakness is made especially glaring when expert testimony is brought into the question. The average jury is not a man's peers, when that man stands in the place of or for something quite outside of the capacity of that jury to understand. If a criminal is insane, he stands as the representative of the abstract idea of insanity, and the learned expert who has examined him represents for the time being also the abstract idea of insanity. The former is insanity *de facto*, so to say; the latter is insanity *de jure*. Both are for the time being representing something which is quite beyond the ignorance and inexperience which are represented in the intellectual capacity, for this particular case, of the average jury. Therefore, a case needing expert examination is not being tried by its peers, when brought before a body of inexpert laymen. The spirit and purpose of the great principle of trial by jury is more nearly conserved, it seems to me, when a jury of experts—a commission virtually—is appointed to try a case involving the need of expert examination. I submit, therefore, that such a preliminary trial by a commission is more nearly in the spirit of a trial by jury than is the present method of trying such cases. With such a jury in anticipation, there will be, I have no doubt, a marked diminution in the number of pleas of insanity in connection with criminal cases brought into court.

The Czolgosz trial was indeed a unique one, and in nothing was it more so, much to the honor of the court and the dignity of its own proceedings, than in the happy exclusion of all medical opinion or assertion from the court in regard to the mental status of the prisoner after an expert jury, the commission of medical experts, had pronounced the defendant sane.

L. Harrison Mettler.

100 State Street, Chicago, Ill.

Progress of Medical Science.

The Boston Medical and Surgical Journal, Jan. 16, 1902.

Auscultation of the Knee-Joint.—William Ernest Blodgett auscultates the knee-joint by means of a full-sized Bowles stethoscope, with a soft-rubber cap sprung over the diaphragm. Of joint sounds proper, excluding skin and muscle sounds, he discriminates three kinds: the first and commonest is a snapping, creaking sound; the second, a grating sound, coarser, rougher, and usually less discrete than the first; the third is a squeak. Paralysis and general anæsthesia apparently do not alter the joint sounds. Three knees with effusion gave no sound at all. In rheumatoid arthritis with atrophy of cartilage the sounds were the coarsest and roughest of any, becoming finer with improvement. In a case of osteoarthritis the sounds were not harsh. The single conclusion which the author thinks warranted by his observations is that joint auscultation deserves further investigation.

The Vagus Reflex.—Thomas J. Mays reports eight cases illustrating a phenomenon which he calls the vagus reflex, and which is characterized by peculiar symptoms produced by pressure on the pneumogastric nerve. These in some cases are nausea and vomiting, cough, pain, and discomfort in the chest, tingling, sweating, and coldness in the arm, fulness in the head with tendency to unconsciousness, occipital fulness and pain, faintness, dyspnœa, and helplessness of the whole body. Silver injections over the vagus relieved and abated the whole abnormal condition in every case. There was no marked pulmonary lesion in six of these cases; but to those who have paid attention to the relations which exist between vagus pain and pulmonary disease, the author thinks, it is quite clear that the former is frequently a premonitory symptom of the latter, and may therefore be regarded as an important diagnostic sign and a therapeutic indication in disease of the respiratory organs.

Needless Laparotomies, with a Report of Eight Cases.—John C. Munro reports cases in which no surgical lesion could be discovered at the time of operation, in spite of the fact that the symptoms, so far as they could be analyzed, led definitely to a diagnosis of some grave surgical trouble within the abdomen. These include a case of acute phosphorus poisoning, supposed to be septic peritonitis; hypertrophic cirrhosis, supposed to be septic peritonitis; acute nephritis mistaken for acute inflammatory process within the abdomen; nephritis, for appendicitis; alcoholism, for pancreatic or other acute intra-abdominal inflammation; alcoholism and morphinism, for rupture of kidney or intra-abdominal hemorrhage; obesity, for supposed tumor of the kidneys; and an unexplained condition which was thought to be pancreatic cyst. The symptoms were in all the cases absolutely misleading, and the author while regretting that he was led to operate, thinks it likely that under similar circumstances he would repeat the procedure.

Journal of the American Medical Association, Jan. 18, 1902.

Cases of Sarcoma and of Hodgkin's Disease Treated by Exposure to X-Rays.—A preliminary report is given by W. A. Pusey. In one case, a round-celled sarcoma of the neck seemed to be completely dissipated. A second patient having osteosarcoma of the shoulder was relieved as to pain, but not otherwise improved. A third case, sarcoma of right pectoral muscles and shoulder, showed a similar result. Two cases of Hodgkin's disease showed great reduction of the lymphomatous masses.

Consideration of Some Important Subjects Connected with the Treatment of Pneumonia.—E. F. Wells regards capillary paresis as calling for treatment according to the following plan: Commence with a mercurial followed by a saline cathartic; bleed to 500 or 750 c.c.; induce a rather free perspiration; give fluids freely; give digitalis and adrenal extract in efficient doses. By these procedures from 6 to 10 per cent. of the toxin in the blood vessels is removed, and that which remains is very considerably diluted; the capillaries are stimulated to contraction, osmosis is increased, the bodily tissues are nourished and their waste products are speedily removed; the heart, instead of wildly beating against a partial vacuum, is steadied by meeting a normal resistance. A second bleeding, later in the course of the disease, but anticipating obviously ominous symptoms, may distinctly turn the tide toward recovery. If there is no leucocytosis (a state which the author regards as desirable and necessary in the malady), he believes it may be induced by nucleinic acid, which may also be of service in preventing cardiac and vascular thrombosis. He is in favor of antipneumococcus serum, though his experience is too limited to afford him very reliable data. He advocates the free use of chloride of sodium in food and by enema. The bowels should receive attention, and any evidence of sepsis in the shape of a fetid diarrhœa calls for salol. Oxygen inhalations should be begun as soon as the breathing begins to be rapid and shallow.

The Pontobulbar Heat Center.—E. T. Reichert details a series of personal experiments from which he concludes that the effects caused by sections of the caudate nuclei, crura, pons, and bulb, show that thermo-accelerator centers exist in both the caudate nuclei and the pontobulbar region. He says that the cause of the rise of temperature, when the caudate nuclei are injured, is to be found essentially or solely in an excitation of a thermo-accelerator center, because similar irritation of parts in front of, above, and beneath do not give rise to any notable increase of temperature, as they should if the nuclei merely represented a pathway of thermo-accelerator fibers to or from these parts. Starting with the caudate nuclei as a point of origin of efferent thermo-accelerator fibers, it is evident that in order to reach the thermogenic tissues they must run through the crura cerebri, pons, and bulb into the spinal cord, and that their irritation at any point along this course might be followed by an increase of temperature providing that shock, vasomotor disturbances, etc., did not interfere; moreover, that irritation of this thermo-accelerator pathway should cause a less marked increase than when the thermo-accelerator center itself is irritated. The less marked and less rapid rise after crural section is logically to be attributed to one or more of three factors: (1) To the coincident irritation of hypothetical thermo-inhibitory fibers, which run from the cortical centers to the pons and parts below; (2) To the probably more marked vascular disturbances due to the section being nearer the cardiac and vasomotor centers; (3) To the probable absence of thermo-accelerator cells from the crura. It seems justifiable to assume that the increase of temperature caused by the section of the crura is due to the irritation of the thermo-accelerator fibers, and that the rise is less marked than when the caudate nuclei are irritated, chiefly because of the absence of thermo accelerator cells in the former. The author believes that our present definite knowledge concerning the heat centers may be summed up in the following propositions: (1) Specific thermogenic centers exist in the brain and spinal cord and these centers are connected with each other and with various parts of the body, especially with the skeletal muscles and skin, by specific afferent and efferent thermogenic nerves; (2) The centers in the brain are either thermo-accelerator or thermo-inhibitory; (3) The center in the spinal cord is a general or reflex center; (4) The brain centers probably affect heat production by acting upon the spinal center; (5) The spinal center when separated by section from the brain centers is able to maintain the normal standard of heat production; (6) The activities of these centers is largely influenced by the changes in the temperature of the blood, and by cutaneous impulses which are probably generated in the peripheries of the "heat" and "cold" nerves; (7) The caudate nuclei contain an important thermo-accelerator center; (8) The pons and bulb probably contain a thermo-accelerator center; (9) A thermo-inhibitory center is located in the dog in the first cerebral convolution posterior to and in the vicinity of the sulcus cruciatus, and that possibly another such center extends downward from the junction of the supra-sylvian and post-sylvian fissures to the posterior fissure; (10) There is no adequate evidence to lead to the belief that specific heat centers exist in any other part of the body than in those above noted.

New York Medical Journal, January 18, 1902.

The Conservative Treatment of Appendicitis and the Fallacy of the Starvation Cure.—J. H. Carstens makes a most emphatic plea for early operation in appendicitis. He says that the true conservative treatment consists in prompt operation, and that the starvation method of procrastination is vicious, and has cost many lives, because it is used as an excuse to dally with patients who should be promptly subjected to removal of the appendix. There are no cases "too late for early operation, and too early for late operation." Operative experience cannot positively tell us in a new case just what the local condition at a given time is. We see cases on the second, third, and fourth day, where we suspect a rupture has taken place, and still by cutting down we find adhesions. We can peel out the appendix and remove it with ease, when its wall is so thin that we know that in six hours it would have ruptured, and we should have had a serious infection, and our patient's chance for recovery would have been far less.

Implantation of a Gold Ball for the Better Support of an Artificial Eye.—L. Webster Fox refers to his first efforts in this direction six years ago. He has improved and perfected the method, which he describes as follows: The eyelids are kept apart by a speculum, the conjunctiva is then grasped above and to the inner side of the inner canthus, and the tissues are well pulled out. He then passes a Beer knife or a curved keratome through the tissues, somewhat obliquely and well down into the orbit; this opening must be made large enough to push the globe in the opening behind the tissues, conjunctiva, etc. This starts the opening, which is enlarged with curved scissors, separating the tissues from the cellular tissues around the orbit, thus giving him a large pouch into which the globe can be inserted. He has discarded glass and silver balls, and only uses gold balls of 11, 12, 13, and 14 millimeters in diameter. The gold ball is inserted through the opening and retained in place by a shell which is modeled after an artificial eye, and called a "conformer." There are three sizes for various-sized orbits. He closes up the incision with two stitches, then places the conformer over the buried ball, and by gentle manipulation on this metal rotates the ball into place. The circular opening in the conformer allows the gold ball to fit the space which will be covered by the cornea of the artificial eye. The eyelids are then closed over the conformer, which is left in place twenty-four hours. The eyelids also help to keep the ball in place. These conformers are made of metal, gold-plated. The author says that the results obtained by this method are perfect; no secondary trouble follows, all healing up by first intention, and the two stitches are taken out on the third day.

Electricity in Renal Disease.—A. D. Rockwell reports five cases. He believes that electricity is of service in arresting inflammatory action and congestive pressure through improvement in circulatory drainage, increased filtration, and removal of the inflammatory products which block up the uriniferous tubules. By these measures, he holds, we can do much toward the prevention of more serious and chronic complications, and hasten recovery in those cases which have not yet crossed the border line of incurable organic changes. He has employed electricity according to the two following methods: First, *the high-tension faradic current*. Flexible electrodes, of blocked tin, three inches in diameter, and covered either with sponge or with layers of absorbent cotton, are placed over the region of each kidney and firmly bound. Beginning with *séances*, not more than ten minutes in duration, they may be very gradually or quickly increased according to the susceptibility of the patient, to three-quarters of an hour. The strength of the current should be gauged by the sensation of the patient, *i.e.* it should be given almost, but not quite, to the point of actual discomfort. Second, *the static-wave current*. This was used in connection and alternation with the high-tension faradic current. It has the advantage over the last-named of exceeding it greatly in frequency and tension; of enabling one to administer a current, not indeed of greater magnitude, but of far greater force and rapidity of oscillation, with the minimum of sensory and motor disturbance. Indeed, currents of the highest tension and frequency seem to have neither motor nor sensory effect at all appreciable, yet we find, as a result of these infinitely rapid vibratory disturbances, a marked influence on the circulation and combustion. On the circulation they have been found to lower the blood pressure at the moment of application, followed by increased pressure and vascularization. As a result, we get an active circulatory drainage of inestimable benefit in conditions of passive congestion. Rockwell believes that the current acts, partly at least, as a diuretic. In addition, it has an influence over metabolism, stimulating it and regulating disordered nutritive changes. In order to obtain this influence over general nutrition, we are obliged to combine with the local treatment by the high-tension faradic the older method of general faradization. This method is equally efficacious, according to my experience, in the condition under consideration, now that we have at command the high-tension coil, but is decidedly more tedious to both physician and patient.

Medical News, January 18, 1902.

General Medical Treatment of Syphilis.—G. Frank Lydston declares that the cardinal principle in the therapy of syphilis is that the physician should remember that he has to deal with three factors: (1) A specific disease to be controlled by specific medication; (2) A distinct individual personality in each patient; (3) The results of antispecific medication. The individual is too apt to be ignored in the treatment of syphilis. The general hygienic management of this disease is most important. Hot baths are very useful, for they increase the therapeutic action of mercury and iodide and limit their possible injurious effects. Attention to the bowels is very important. Digestive disturbance is a common result of the administration of antisyphilitic remedies and may be avoided by experimenting till that form of the mercurial salt is found which is adapted to the individual under treatment. Often when the patient does not tolerate the mercury and iodide well, the substitution of potassium chlorate is most happy in its results. Tonics also must not be overlooked. The general intelligence and therapeutic skill of the practitioner are important factors in the successful treatment of this disease.

Congenital Atresia and Stenosis of the Rectum and Anus.—W. Reynolds Wilson states that faulty development of the rectum and anus occurs in the new-born in the proportion of 1 to 10,000. The prognosis depends upon the character of the deformity and the opportunity for treatment. In the embryo the entoderm, which is the lining membrane of the gut, may be imperfect in its development and result in an incomplete formation of the canal. Forgue considers malformations of the rectum and anus either as instances of reversion in normal development, giving rise to permanent deformity, or as instances of aberrant development. The classification of the conditions in stenosis is dependent only on the degree of narrowing. As to atresia, the deformity may be more or less extensive. There are two chief types: one in which the absence of the rectum may be partial; second, there may be a total absence of the rectum with extensive obliteration of the gut and attachment of the cul-de-sac to the bony pelvis at the level of the sacro-vertebral angle. The evidences of stenosis and atresia depend upon the degree of malformation. In those cases in which the anus is pervious, the condition in the rectum is apt to be undetected until it is too late for treatment. The deformity may be discovered by exploration of the anal depression, by the absence of meconium, and by the general symptoms which always accompany these troubles, such as vomiting, abdominal distention, etc. The object of treatment is to establish, as far as possible, the normal anatomical relations. In cases of stenosis, gradual dilatation is indicated. In imperforation, two methods of treatment propose themselves: the opening of the rectum by perineal incision at the anal site; the establishment of an intestinal outlet by means of inguinal colotomy after the method of Littré.

American Medicine, January 18, 1902.

Obstetric Forceps in Relation to Tuberculous Lungs, Cardiac Anæmia, Etc.—George E. Abbott states that there are many cases of cardiac and tuberculous disease in which the patients date the commencement of their unfavorable or serious relapses to the time of having unwisely exposed themselves to an extra-physical strain, and he believes that the cause of many tuberculous mothers failing so markedly almost immediately after child-birth is the severe strain to which the lung tissue is subjected at this time. The writer thoroughly believes in the use of forceps as soon as the second stage begins. This will prevent all straining and will save many patients from an increase of heart symptoms or tuberculous troubles, and perhaps prevent an early death.

Purulent Tenonitis as a Complication of Typhoid Fever.—N. Zeltmayer reports the case of a soldier who developed a mild case of typhoid fever, but complicated by deep muscular abscesses. The writer was called to the case when there appeared a localized congestion of the conjunctiva and sclera over the insertion of the internal rectus muscle. Sodium salicylate and hot compresses were ordered. In two days the temperature rose, and three days later the inward and downward movements of the eyeball were limited, and there was diplopia in the nasal field. The limitation became marked, and the excursions in all directions were limited. There was a swelling at the lower border of the internus and œdema of the overlying conjunctiva. A deep incision was made at this point and about half a drachm of pus evacuated. Two days later a few drops of pus were expressed and there was no further trouble. No bacteriological examination was made of the pus of any of the abscesses.

A Sugar-Forming Ferment in Suprarenal Extract; a Preliminary Report on Suprarenal Glycosuria.—Alfred C. Croftan describes certain experiments which he thinks reveal the fact that the injection of suprarenal extract can cause the excretion of dextrose provided the quantity injected is sufficiently large. Why in the case of one animal more must be given than in the case of another to produce approximately the same excretion, is undecided and remains to be determined. The effects of the injections were transitory in all cases and all the animals recovered. The appearance of albumin in the urine in a few of the cases indicated some irritation of the kidney epithelia. The appearance of small quantities of bile-pigment in the urine of both dogs experimented on, and the local discoloration of the skin near the site of the injections, were suggestive, in view of the pigmentary anomalies known to occur in disease of the adrenals, and the connection which exists between the destruction of glycogen-dextrose and the formation of pigments.

Philadelphia Medical Journal, January 18, 1902.

Decreasing Fecundity Concomitant with the Progress of Obstetric and Gynecic Science.—George J. Engelmann states that the birth-rate in this country is lower than that of any European country excepting France; that the birth-rate of the American-born population is much below that of France; and that the fecundity of the American woman is lower than that of women of any other country. A fact as gratifying as it is important is that it is not the American wife who reduces fecundity as much as it is the American husband. Many families who possess the best opportunities for rearing children have few or none. It is far oftener the women who bear children who retain their health than those who resort to measures to prevent conception or to destroy its product. A very fruitful cause of uterine and hepatic disorder is the unrelieved congestion of incomplete intercourse. The writer closes his paper by an appeal to obstetricians and gynecologists to do all in their power to stop the criminal practices which are the chief causes of decreasing fecundity.

Report of a Case of Paralysis Following Abortion.—Harry Morell reports the case of a woman aged twenty-nine, who when three months pregnant started to flow, and continued to lose blood for six weeks. She went to bed for a time and then was about the house for about two weeks, although she suffered from severe pain in the back of her thighs. At the end of this time the fœtus had to be taken away, but the placenta would not come even with instruments. A little later it came away spontaneously. The patient was in bed about two weeks after this, and when she was up again she complained of weakness in her left hip and a numbness and unnatural feeling from the waist to the toes. Gradually the right leg became paralyzed, and the patient had to take to her bed again, with absolute paralysis and muscular spasms of both legs. There was a pus tube on each side, and an oozing of pus from the cervix. She remained in bed for two years in good health, excepting the troubles just mentioned, after which there was a gradual return of sensation and motion; and at this time the patient is apparently well, although not robust. The writer concludes by saying that paralysis may occur after labor, abortion, or pelvic inflammation; paralysis after labor usually results from pressure neuritis, and that after abortion or pelvic inflammation is, or is likely to be, due to myelitis from infection. It is sometimes impossible to say clinically whether the disease is a neuritis or myelitis or both.

Outline of the Surgical Treatment of Acute Pancreatic Injuries.—B. E. Hadra declares that operative treatment of pancreatic wounds ought to begin as early and be as thorough as possible. The indications to be met are control of hemorrhage, avoidance of infection, prevention of escape of juice, repair of injuries; all of which in the nature of such cases will only be a part of the whole operative procedure. A stab or bullet wound from behind, when it is doubtful whether the pancreas is injured or not, will require at least good drainage through its tract. When there is an injury extending through the posterior parietal peritoneum, or if it is suspected, a regular high laparotomy ought to be performed at once. If the injury is received from the front, so that a wound of the pancreas is possible, the abdomen ought to be opened irrespective of other indications. All anterior pancreatic wounds include wounding of the lining peritoneum. The various possible complications in these injuries will naturally modify the method of procedure. Whenever local repair is impossible or insecure, there should be instituted a combination of anterior and posterior drainage. If primarily the pancreas has not been attended to, either from neglect or from the fact that injury of this organ has not been recognized, when the signs of this trouble do arise, it would seem proper to open or reopen the abdomen and to attend to the pancreas. In this way an infective peritonitis may be aborted. The digestive power of the pancreatic juice must always be remembered. The wounding of the blood vessels is also of the greatest importance, and if injured, they must be ligated.

The Lancet, January 11, 1902.

Some Figures as Regards Susceptibility to Revaccination.—F. W. Andrewes gives figures concerning 158 authentic cases. He classifies the results under three headings: (1) Perfect vaccinia, *i. e.* large, well-formed vesicles resembling those of primary vaccinia in all respects save that the process was often accelerated by a day or two; (2) Imperfect vaccinia, *i. e.* the production of vesicles, small, imperfect, and generally much accelerated; and (3) Negative result, *i. e.* transitory redness without the formation of any vesicles at all. The gross results of the 158 cases work out as follows: Perfect vaccinia, 72 cases, or 45.57 per cent.; imperfect vaccinia, 65 cases, or 41.14 per cent.; and with a negative result, 21 cases, or 13.29 per cent.

An Unusual Complication of Influenza.—J. G. Carruthers' patient was a healthy man, thirty-four years of age, of good physique and good habits. The disease progressed in the usual manner for twenty days, when a quantity of venous blood was passed per rectum, each evacuation consisting of about a pint. This continued at three-hour intervals for thirty-six hours, when it ceased. Acetate of lead and opium were administered. The immediate effects of the hemorrhage were recovered from, but the patient died nine days later from exhaustion resulting from influenza. At the time of the hemorrhage the idea of a perchloride injection occurred to me, but in default of localizing any lesion, it also occurred to me that general peritonitis might be set up by an injection, so opium and lead wash was preferred.

A New Method of Breaking Down Adhesions.—The method described by G. W. Ord consists in fixing the part *above* the stiff joint, by means of the surgeon's left hand, to the bed or the table, and then quickly flexing or causing movement in the joint. The following specific directions are given: *The shoulder-joint (right).*—For these manipulations the surgeon stands behind the patient's head. The patient lies flat on his back on a mattress, and the surgeon's left hand being placed flat on the clavicle of the affected shoulder, he pins the patient to the mattress or the table preferably to the latter; the operator's free hand then grasping the elbow, raises that joint quickly to a level with the shoulder-joint. *The wrist-joint.*—The patient's forearm is placed on a table in the supine position. The surgeon's left hand pins down the forearm to the table, while his right, grasping the patient's hand, quickly flexes it to a right angle. *The finger-joint.*—This joint is treated in a similar way, the hand being placed on the table with its palmar surface upward. *The knee-joint.*—The patient lies *prone* on the bed. The surgeon's left hand pins down the thigh, while his right, grasping the leg above the ankle, quickly flexes the knee.

Acute Suffocative Pulmonary Œdema.—After a general description of the condition illustrated by two clinical histories, J. Lindsay Steven differentiates the affection from pulmonary embolism, acute spasmodic asthma, uræmic asthma, and the acute pulmonary œdema sometimes following the removal of a large pleural effusion by paracentesis thoracus. Concerning treatment, he says that, on account of the great dyspnœa and the overpowering sense of suffocation caused by the continuous flow of fluid from the trachea into the mouth, the stimulants are better administered hypodermically and by the rectum. An ounce of brandy may be injected into the rectum diluted with an ounce or two of water or beef-tea. At the same time, a hypodermic injection of strychnine ($\frac{1}{60}$ gr.), and of digitalin ($\frac{1}{100}$ gr.) may be administered. The patient should be kept absolutely at rest in the sitting posture. A sinapism over the præcordium is of assistance, and the extremities should be kept warm by hot bottles. Opiates in any form are to be avoided as tending to prevent the expulsion of the œdematous fluid from the pulmonary alveoli. The injections may be repeated, if necessary, in three or four hours. If the patient is able to swallow, diffusible stimulants, such as sal volatile, are certainly to be recommended, and small quantities of milk, beef-tea, and brandy from time to time. The propriety of blood-letting also suggests itself in considering the treatment of acute suffocative pulmonary œdema, and is favorably spoken of by Dieulafoy. The blood may be taken either at the arm or by wet-cupping of the chest. The depression and collapse, however, are frequently so extreme that one hesitates to deplete.

British Medical Journal, January 11, 1902.

Typhoid Fever in the Inoculated.—C. Birt gives the mortality of uninoculated individuals who have suffered from typhoid fever as 14.25 per cent. During the same period 263 who were inoculated with typhoid vaccine, for the most part six to eighteen months previously, contracted this disease. Of these 6.8 per cent. died. The writer adds that it must be remembered that immunity against this disease is not readily established in some.

Epidemic Catarrhal Jaundice.—Eliot Curwen describes his observations of epidemics in Pekin and Tientsin. Most of the patients complained of great weakness and of some shortness of breath; there were general anorexia, a feeling of abdominal distention and nausea, and constipation with pale motions was the rule; diarrhœa occasionally occurred. Only four complained of pruritus. Many had some degree of fever with shivering. As a rule the icteric tint of the conjunctivæ was first noticed the day before or the day after the fever disappeared. The affection, according to the observations of the writer, cannot be very infectious.

Carcinoma and Malaria.—J. S. Davidson concludes as follows: Cancer seems to be a disease of locality rather than of race, and it is probably due to a microorganism. It does not appear to be prevalent in warm regions. A large malarial mortality is associated with a low cancer death rate. There is no evidence to connect it with food nor with excessive consumption of meat. It is a disease of cold climates, and it would appear to be most fatal in damp, cold countries associated with a clay soil, along the banks of rivers which are liable to overflow. The writer states that he has heard of a case of death from cancer of the stomach in a European who was stated to have suffered from frequent attacks of malarial fever.

Hydroa Gestationis Due to Staphylococcus Albus.—Nathaniel W. Holmes and W. Bulloch report the case of a woman, aged twenty-six years, who, on the day following the delivery of her third child, was annoyed by a rash which broke out on various parts of her body. There were redness and itching, but the temperature was normal. Bullæ formed and the fluid contained in them was examined; it proved to be a pure culture of staphylococcus albus. It was discovered that the patient at the age of thirteen years had a very badly poisoned foot and leg from a brass rivet in her boot. About the same time she had diphtheria. At each of her previous confinements she suffered from the same eruption as this one reported. The patient recovered, and the infant, who took the mother's milk from birth, was quite free from any rash.

Note on a Method of Quantitatively Estimating the Phagocytic Power of the Leucocytes of the Blood.—W. B. Leishman describes the aim of this method as the enumeration of bacilli or cocci phagocyted within a definite time by multinuclear cells of the blood under examination, obtaining an average of these values, and comparing the result with that of a control blood, preferably that of the observer, examined under identical conditions. A certain amount of the blood to be observed (5 c.c. is convenient) is mixed with the same amount of an emulsion of the culture of the germ which is being investigated. One drop of the resulting mixture is taken for the experiment and spread on a glass slide and covered with a cover glass. The same amount of control blood is placed on the same slide under another cover glass. After an arbitrary time, half an hour for example, during which the slide is placed in a moist chamber, and left in an incubator at 37° C., the films are dried and stained and compared. So far the results show that the patient's phagocytic power, as gauged by the control blood, has varied in direct proportion to the amelioration of his symptoms. The patient under consideration had been afflicted with boils, and had been given staphylococcus vaccine hypodermically.

Deutsche medicinische Wochenschrift, December 26, 1901.

Plasmotropic Toxin Formation in the Body.—E. Grawitz says that, under certain conditions, poisons may be introduced or arise within the body which exert a deleterious influence upon the red blood cells, causing in them a granulation degeneration, but not their complete destruction. In this manner the cells of the liver, spleen, and bone-marrow may fail to receive proper nutrition, and undergo extensive degeneration. In many of these cases the hæmoglobin is changed to methæmoglobin. Such a process is described as "plasmotropic." If the deleterious action upon the red blood cells is carried further, their complete disintegration results, and the process is designated "plasmolytic." Certain poisons in small doses are plasmotropic, and in large doses plasmolytic. An example of such is pyrodin. Other substances, such as lead, never in any dose exert other than a plasmotropic action. Plasmotropic degeneration of the red blood cells occurs in patients who suffer from intestinal hemorrhages from various causes, such as ulcus ventriculi, carcinoma ventriculi, and cirrhosis of the liver. By experimental work, Grawitz has shown that this is due to poisons formed during the passage of the blood through the intestinal canal. Animals to whom blood was internally administered failed to show plasmotropic degeneration, but the same was easily produced in this manner in human beings. Identical results were obtained by the administration of certain therapeutical preparations of hæmoglobin. It is thought that in the same manner are to be explained the blood degenerations brought about by various intestinal autointoxications.

The Anti-Bodies of the Blood.—P. Ehrlich enters into an exhaustive consideration of his theory of immunity. In accordance with the fundamental principles of cell physiology and pathology as laid down by Virchow, it is certain that the normal protective bodies of the blood and those artificially produced as the result of infection are entirely similar in their mode of origin. In regard to the formation of the latter, so far as antitoxin is concerned, two views have been advanced: First, the hypothetical metamorphosis of toxin into antitoxin, and, second, the secretion theory. According to the first view, antitoxin is nothing but a toxin so changed that it has become non-poisonous. This is brought about through the activity of a substance called "alexin." Many facts render this view untenable. In the first place, the antitoxin produced in the body as the result of the introduction of toxin, is, in amount, out of all proportion to the latter, being in many cases 100,000 times greater than this. Furthermore, the fact that in normal animals antitoxin is often present, shows that such can be produced by the body itself without the assistance of any toxin. The satisfactory explanation of the identity of these normal and artificial processes forms one of the chief points in favor of the "side-chain" theory. The explanation of this theory is best accomplished by considerations of diphtheria antitoxin. If we take a given quantity of such antitoxin, and in a series of experiments add to it different diphtheria toxin bouillons, we find that it neutralizes, in various cases, different quantities of this bouillon, and that the quantities so neutralized previous to neutralization possessed a different toxic power. This proves that whatever laws govern the neutralization of toxin by antitoxin, they do not apparently follow those of ordinary chemical equivalence. If we take a given portion of such toxic bouillon, having previously ascertained its toxic power and the quantity of antitoxin necessary to neutralize it, and preserve it for a certain time, we find at the end of this time that it requires the same amount of antitoxin to neutralize it as it originally did, but that its toxic power has been markedly reduced. This shows that the toxin contained two substances or groups of substances, one of which was concerned in the neutralization process, and was stable, while the other constituted the toxic property, and was unstable, being very much reduced in amount the longer the bouillon was preserved. The first of these is called the "haptophore" group, and the second the "toxiphore" group. "Toxoids" are such as have retained their haptophore group, but entirely lost their toxiphore group. The presence of such toxoids accounts for the apparent violation of the laws of chemical equivalence above noted. Two facts show that the haptophore group is concerned in the antitoxin formation. First, toxoids are abundantly able to produce antitoxin, and, second, toxins whose haptophore group is already used up are no longer able to produce antitoxin.

It is now necessary to consider the functions of the living organism in the formation of antitoxin. It is a firmly established law that chemical substances introduced into the body act only upon certain cells. In other words, certain cells of the body show a predilection for certain substances. Among such may be mentioned morphine, atropine, strychnine, and digitalin. Furthermore, such substances do not enter into firm chemical combination with the body elements, but are found stored up in the cells which show a predilection for them, and may be extracted from these by various processes. According to this, the possibility that certain substances may enter into such union with the albumin molecule cannot be denied. This is also to be applied to the nutritive processes of cells, which accordingly are to be considered as a synthetic process. In accordance with this idea in living protoplasm, there are numerous groups called "side-chains," or "receptors," which possess a maximum attraction for certain nutritive substances, and by means of which such substances are retained and anchored to the cell. These receptors are multitudinous in number. Now the haptophore group of the toxin molecule, being non-poisonous in character, acts as a nutritive substance, finds its receptor in the protoplasm of the cell, and thus anchors the whole toxin molecule to that cell. In this manner the cell is brought under the deleterious influence of the toxin. If the influence upon the cell of the toxophore group of the toxin molecule is not too severe, a regeneration process, in accordance with a universal law in nature, is set up, and the haptophore-receptor, having been used up in the process, is replaced. By a continuation of this process, there finally comes a time when the haptophore-receptors are so abundantly produced that they can no longer be retained in the cell, and they pass into the blood. When this takes place, they seize the toxin molecule in the blood, and prevent its entrance into the cell where it can do harm. Accordingly, immunity to toxins is entirely dependent upon the amount of haptophore-receptors in the blood. Of course, it is to be understood that the toxophore group of the toxin molecule also finds its receptor in the cell protoplasm, but this is not concerned in the production of immunity, as it is soon disposed of by the poisonous action of the toxophores.

When we consider the questions of hæmolysis and bacteriolysis, the conditions become very much more complicated than those just described in connection with antitoxin formation. For the solution of these questions the study of hæmolysis offers the greatest advantage. Horses, when inoculated with the blood of rabbits, produce a serum which destroys the blood cells of the latter animals. When such serum is heated to 55° C., it loses this property, but regains it when certain normal sera are added to it. From this it is seen that in hæmolytic sera two substances are present, one of which is present in the immune sera and is stable, and the other is present in the normal sera, being unstable and easily destroyed by heat. The first of these is called the "immune body," and the second the "complement." By experimenting with sera which contain only the immune body or the complement, it is shown that the red blood cells are not able to take up the complement when it is present alone, but only when the immune body is also present. Nevertheless, they take up the immune body when it is alone present; this, however, does not produce hæmolysis. It is thus seen that the immune body is the factor which anchors the complement to the red blood cell. Ehrlich believes that this immune body possesses two kinds of haptophore groups, one of which becomes united with its receptor in the cell, and the other binds the complement to the cell. In order to express this double action of the immune body, he calls it the "amboceptor." The complement possesses a constitution analogous to the toxin. It has a haptophore group, by means of which the amboceptor unites it to the cell, and through which anticomplements are produced in a manner entirely similar to that in which antitoxins are formed; it also possesses another group which is the analogue of the toxophore group of the toxins, and which brings about the destruction of the red blood cell. The action of this group is called "zymotoxic." Bordet does not agree with this view, and holds that the immune body and complement do not unite, but that the former makes the red blood cell accessible to the action of the latter. This is not conceivable, because red blood cells do not possess complementophile groups under any circumstances. Furthermore, his theory does not explain why an immune body arising from a given animal exerts the most influence when the serum of an animal of the same species is added to it. According to his theory, it should make no difference what kind of a complement is added. The amboceptor theory, however, fully explains this, for a given amboceptor would, of course, unite most readily with its own complement. Bordet also holds that the complements are a unity. Experimentation, however, has shown that they may be of very many kinds. In regard to the origin of the immune body and complement, it is certain that such is cellular. The first are receptors of high molecular composition. Their abundance in the blood in immune sera is brought about in a manner entirely similar to that given for antitoxin receptors. The complement is to be regarded as a normal cell secretion. The origin of agglutinins and precipitins, and all other protective bodies, is entirely similar in character to that of the immune body. A consideration of this "side-chain" theory shows that the protective bodies of the blood owe their formation to processes identical in character to those of physiological nutrition. This is entirely in accord with the fundamental principles of cellular physiology and pathology.

Deutsche medicinische Wochenschrift, January 2, 1902.

Diagnosis of Pernicious Anæmia by Hæmatological Methods.—Emil Körmöczi considers the diagnosis of this disease after the methods laid down by Ehrlich. The latter maintains that the blood of pernicious anæmia is always characterized by the presence of macrocytes and megalocytes. In the blood examinations of a large number of cases of secondary anæmia associated with nephritis, carcinoma, amyloid degeneration, chlorosis, etc., Körmöczi has never found megoblastic cells. In some instances, however, such cells were found in the marrow taken at autopsy. He has observed fourteen cases of pernicious anæmia, of which he reports five, because they were fatal, and post-mortem examinations of the marrow were made. In three of these no megaloblasts or nucleated red blood cells were found in the blood during life. In all of them macrocytes, megalocytes, and megaloblasts were found in the marrow post mortem. As the result of his work he believes that the hæmatological picture of pernicious anæmia is in many cases not to be differentiated from that of secondary anæmia; nevertheless, the marrow in this disease is always of the megaloblastic type. In pernicious anæmia, macrocytes are more characteristic and more abundant than megaloblasts; nevertheless, their presence is not diagnostic of the condition, but must be supported by other hæmatological appearances and characteristic clinical symptoms.

Glycolysis.—Ernst Bendix and Adolph Bickel oppose the theory of glycolysis advanced by Lépine, who ascribes the transformation of glycogen into glucose to the activity of a glycolytic ferment present in the internal secretion of the pancreas and absorbed from that organ into the blood. In order to establish the validity of Lépine's theory, three sources of error must be excluded: (1) Errors in the methods of sugar estimation; (2) The decomposition of glucose by bacterial activity; (3) The decomposition of sugars by purely chemical (not fermentative) processes. In regard to the first source of error it may be said that the researches of Schenk, Bickel, Leo, and Bendix have shown that quantitative sugar estimations in fluids containing albumin, such as have been employed in all glycolytic experiments, are far from being exact. It is true that the action of bacteria may be excluded by the use of antiseptics; yet in the work hitherto done, no such precautions have been satisfactorily taken. So far as the chemical decomposition of sugar is concerned, Bendix and Bickel have shown that in pure aqueous soda solutions (0.2 per cent. to 0.5 per cent.) at the body temperature, glucose is markedly decomposed. Their results were obtained by the use of the reduction methods of Pflüger. In view of these facts it can only be said that in our present knowledge the supposition that glycogen is transformed into glucose by the activity of a glycolytic ferment is merely interesting speculation.

Treatment of Chronic Dysentery by Temporary Colostomy—A. Nehrkorn reports a case of chronic dysentery upon which, as a last resort, colostomy was done, and satisfactory results were obtained. The disease was of about nine months' standing, and had been subjected to all known medication without avail. At the time of the operation the general condition was of the worst, the hæmoglobin being reduced to about 30 per cent., and the number of red blood cells to 1,800,000. Upon operation the sigmoid flexure was found to be œdematous, markedly infiltrated, and its internal surface covered with a layer of slimy, fibrin-like mucus. Several ulcers were found therein, which bled freely upon slight provocation. An artificial anus was established, and through this the colon was washed out daily with a weak solution of salicylic acid. Following the operation the general condition markedly improved and the dysenteric lesions gradually disappeared, so that in about seven weeks complete recovery had practically taken place. Three and one-half months after the operation a second operation was performed for closure of the artificial anus. This was likewise followed by good results. This case is of interest from the fact that operative procedures as a means in the treatment of dysentery are practically unknown, and their recommendation has not been given a place in literature; yet it is here seen that even in the last stages of this disease such are of great utility, and life may be saved thereby.

Münchener medicinische Wochenschrift, December 24, 1901.

Immunity.—Dr. Weichardt reviews the various theories of immunity and enters into a detailed consideration of the various steps which have led Ehrlich to proclaim his well-known "side-chain" theory. The researches which have been conducted with respect to the "immune bodies" have shown that in different infections such are produced in different locations. In typhoid fever and cholera the "immune body" is formed in the blood-forming organs, while in pneumonia it is produced in largest amount in the bone marrow. In accordance with this fact, just before the crisis in pneumonia the marrow corpuscles are increased in the blood. In the use of antitoxic sera the combination between such sera and the toxin follows the law of multiple chemical equivalence, but in the use of bactericidal sera such is not the case. This accounts for the greater activity of antitoxic sera as against that of bactericidal sera. Notwithstanding this fact the latter have been used with advantage as is evidenced in the results obtained with plague antiserum in India.

Uterine Lactation Atrophy.—L. Fraenkel agrees with Thorn that lactatimatrophy of the uterus may be either a physiological or a pathological process. In his experience, however, pathological uterine atrophy is much more frequent than Thorn considers it to be. In all cases of physiological atrophy of this organ complete regeneration has taken place previous to the seventh month following delivery, and all cases which show atrophy after this time are to be considered as pathological. In order to make the diagnosis between physiological and pathological atrophy it is necessary to examine the uterus frequently between the third and seventh month following delivery. If it is found that during this time regeneration is in progress, it may be assumed that the atrophy is physiological, otherwise it should be decided that a pathological process is present. Thorn thinks that physiological atrophy first begins to regenerate after the cessation of lactation, but it is certain that this form of atrophy is always regenerated previous to this time. Thorn in answer to the above says that statistics show that uterine atrophies which are not eventually completely regenerated, and are thus to be considered as pathological, are very rare, and that a differentiation between the physiological and pathological process on the basis of the time of complete regeneration after delivery cannot be made. He cites numerous instances to substantiate this statement.

Münchener medicinische Wochenschrift, December 31, 1901.

Prolapse of the Urethra in a Girl Five Years of Age.—Dr. Bente reports a case of prolapse of the urethra in a female child five years of age. The general condition of the child had always been good, and no cause for the prolapse could be discovered except perhaps a condition of chronic constipation. The occurrence of periodical attacks of coughing was also possibly active as an inciting cause. The first symptom observed by the parents was a vaginal hemorrhage similar in character to that of a normal menstruation. Upon examination a tumor presented itself, bounded anteriorly by the clitoris and posteriorly by the hymen. Pressure caused slight pain, together with moderate hemorrhage from the external orifice of the urethra. The tumor was easily reduced and held in place by a catheter maintained in the urethra. Cauterization with nitrate of silver was also practised. After ample trial the results of this treatment were not satisfactory and a radical operation was performed. Complete recovery followed. This case is of special interest as showing that prolapse of the urethra is not uniformly associated with a poor general condition, but may occur in persons who are in the best of health.

Epidemic Conjunctivitis Due to the Koch-Week Bacillus.—C. Markus reports the study of 150 cases of this disease during the recent epidemic among children at Bitterfeld. Usually the first sign of the trouble is the appearance of a moderately abundant, yellowish-white secretion upon the conjunctivæ of both lids. At this time there is little or no congestion, but the upper lid is somewhat infiltrated. The secretion rapidly increases in amount and becomes decidedly purulent in character. Conjunctival congestion appears and rapidly increases in severity, both the palpebral and ocular conjunctivæ being affected. Both upper and lower lids become markedly œdematous. Subconjunctival hemorrhages are often present. A creamy purulent secretion is never present, and its absence forms the chief differential clinical sign between this disease and ordinary blenorrhœal conjunctivitis. Chemosis and membranous formations are also occasionally seen. This particular epidemic was characterized by the appearance of marginal phlyctenules early in the disease. These were usually multiple and not dependent upon the presence of a scrofulous diathesis. In most instances the disease ran an acute course as above depicted. A very few were observed in which the process was subacute from the onset, but a considerable number of cases were seen in which the course was chronic throughout. In the majority of instances the disease lasts from three to four weeks. Exceptionally it can be cured in from eight to fourteen days. Very often the acute cases subsequently become chronic and in this condition acute exacerbations are frequent. The specific bacillus is present in the secretion generally in great numbers. It may be present in pure culture or associated with various other bacteria, especially pneumococci. In cover-glass preparations it may be readily stained with dilute carbol-fuchsin. It does not retain Gram's stain. The acute cases with abundant secretion are best treated by applications of a 2-per-cent.-nitrate-of-silver solution followed by irrigation with saline solution. The phlyctenules easily succumb to applications of yellow-oxide-of-mercury ointment. In chronic cases the lids should be touched with 1½-per-cent. lead solution.

Berliner klinische Wochenschrift, December 30, 1901.

Motility of the Lymphocytes.—Alfred Wolff substantiates the opinion of Hirschfeld that the lymphocytes possess an active motility. The latter, by the employment of Deetjen's agar saline solution, was enabled to observe such motility in the large lymphocytes taken from a case of lymphatic leukæmia. By the employment of the same method, Wolff has been able to ascertain the manner in which such locomotion is brought about. The formation of prolongations of the cell protoplasm is the first sign of motility observed. These are entirely similar to those seen in the well-known locomotion of amœbæ. Several facts show that this phenomenon of the lymphocytes is to be considered as typical amœboid movement, and not a form of degeneration. In the first place, polynuclear leucocytes show the same appearances, and it is generally conceded that in these such changes do not signify degeneration. Furthermore, it is known that the nuclei of cells do not stain with artificial dyes so long as these cells are alive, but that this is only possible after they are dead. By adding coloring matter such as methylene blue or neutral red to the agar saline solution, and introducing the large lymphocytes therein, it is seen that, except in a very few instances, their nuclei do not stain. That this non-staining is not produced by the viscidity of the medium in that this prevents the free access of the coloring matter into the cell substance is shown by the fact that under identical conditions lymphocytes known to be dead and blood plates are readily stained. It appears, therefore, to be established that in the Deetjen agar saline solution lymphocytes show characteristic changes of form, which signify slow locomotion, and that such changes are a living property of these cells, and are not indicative of degeneration. The large lymphocytes always show more motility than the small variety. For this reason the blood of lymphatic leukæmia is especially suitable for these observations.

Rhinitis Vasomotoria.—W. Lublinski describes this disease as occurring principally in anæmic and chlorotic subjects. It is seldom bilateral, but usually alternates from one side to the other. The mucous membrane of the nares is much swollen and congested, and frequently completely occludes the nasal passage. Especially is this the case in the early morning when the patient first awakens. This is accompanied by a thin, watery secretion, which decreases in amount as the day advances. The voice is nasal in tone and oftentimes dryness of the throat and slight cough and dyspnœa are complained of. The point of the nose and the upper lip are swollen and congested, as are also the alæ nasi. Upon examination it is seen that the mucous membrane of the affected side is swollen and more or less completely occludes the passage. This may be easily depressed by the sound, which shows that there is no increase in the connective tissue, and differentiates this condition from rhinitis hypertrophica. Constitutional measures are of importance in the treatment, and iron and arsenic should be freely given. As for local treatment, massage of the swollen cutaneous surfaces, with a sound moistened with menthol-paraffin (¼-½ per cent.) is of service. This should be repeated two or three times weekly, and each treatment should last from five to ten minutes. For the treatment of the swollen mucous membrane the use of the galvanocautery has been frequently recommended. When such is undertaken, anæsthesia should be produced by the employment of a 10-per-cent. eucain solution. Satisfactory results are often obtained in this manner, but the use of the galvanocautery is always followed by great discomfort of the patient, and in many cases seems unnecessarily harsh. The submucous injection of a 10-per-cent. solution of chloride of zinc is especially to be recommended, as it is very efficacious in relieving the tumefaction of the mucous membrane, and is not attended by any unpleasant sequelæ. If any hemorrhage takes place after the withdrawal of the hypodermic needle, this can be easily checked by the application of a few drops of antipyrin solution (10 per cent.). Usually such injections are followed by complete recovery in about two weeks. Occasionally a second injection is required.

French Journals.

Parasite of Epilepsy.—Bra announces that in seventy cases of epilepsy he has found in the blood of the patient, before the fit, a parasite that he has not been able to discover after the cessation of the fit. This microorganism which has been cultivated has sometimes appeared as a coccus, sometimes as a diplococcus, and sometimes in chains.—*La Presse Médicale*, January 8, 1902.

A Clinical Study of Polypi of the Urinary Meatus.—Leroy states that these tumors vary in size from that of a pea to a hazel-nut. The pedicle also varies in size. Very often several or all parts of the mucosa take part in the formation. There may be one polypus or several. They may occur at any age, but it is between twenty and thirty that they are most frequently observed. The causes are various, as uncleanliness, leucorrhœa, irritation, etc. The symptoms are painful micturition, frequency of the same, bloody discharge, the sensation of a foreign body in the canal, etc. In the beginning the prognosis is good. Later, the painful symptoms and the possibility of the transformation of a simple papilloma into an epitheliomatous tumor must be considered, and demand intervention as soon as possible.—*Gazette de Gynécologie*, January 1, 1902.

Symptomatic Chorea.—Louis Rénon speaks of symptomatic chorea as comprising three great classes: Hemiplegic hemichorea associated with athetosis, congenital chorea, and generalized symptomatic chorea. He declares that this class is constantly subject to modifications, for it is certain that the number of choreas with lesions is destined to increase each day with the perfecting of the anatomical and histological methods which have overturned the pathology of the nervous system, and with the progress in the study of pathogenic agents and poisons. The therapeutic indications in symptomatic chorea are much restricted, and medication seems *nil* in a malady essentially incurable. If the cerebral lesion which is the cause of the chorea is dependent upon syphilis, there are chances of success in the energetic treatment of the patient. In congenital chorea the antispasmodics are justifiable, also electricity and hydrotherapy. Massage, moderate gymnastic exercises, and even surgical interventions may be of service in the choreas with the syndrome of Little.—*Gazette des Hôpitaux*, January 2 and 4, 1902.

Blood Cyst of the Spleen.—G. Chavier reports the case of a soldier who about seventeen months before he came under observation had been kicked by a mule in the splenic region. He had been in the infirmary only three days after this. At the present time, when he was seen, he complained of constipation which had lasted three days and was accompanied by colic. The tongue was a little coated, the abdomen a little distended. The temperature was normal. Later the pain became violent, purgation had no effect, and there had been no emission of gas during the day. Respiration was difficult, the pulse was frequent and small, and there was no rise in temperature. The abdomen became much distended and tympanitic, with the exception of the left hypochondriac region, where there was extensive dulness. He had never had intermittent fever. The patient grew rapidly worse and died the next morning. Autopsy revealed a large blood cyst of the spleen. This tumor lay on the anterior face of the stomach which it had flattened out completely. The intestine was not distended, nor was there any trace of peritonitis. There was a slit in the wall of the stomach, through which had escaped a mass of food. The lining of the stomach was congested. There was nothing noteworthy in the intestines, liver, or kidneys. The cyst of the spleen had formed after the injury, and had given rise to all of the symptoms described.—*Le Bulletin Médical*, January 8, 1902.

Medicine, January, 1902.

Acute Pharyngitis of the Streptococcal Type.—Lewis S. Somers reports four cases which occurred in one week in May, 1901. All were characterized by the presence of streptococci, a complex of bilious symptoms, febrile phenomena, and the rapid disappearance of the pharyngeal membrane, with all of the symptoms except severe exhaustion. The infection in all was of an attenuated type as regarded both the general and local symptoms, and in this respect differed from the usual streptococcic angina as seen in connection with some of the acute infectious diseases such as scarlet fever, with its angina as an essential part of the disease.

A Study of the Hereditary Effects of Alcohol.—J. M. French, from the statistics obtained from various sources, concludes that alcohol is the greatest cause of degeneracy, both mental and physical. When not an inebriate, the subject is likely to be diseased, degenerate, mentally unstable or unbalanced, fanatical, eccentric, or a genius. Inherited inebriety develops rapidly at the first exciting cause. The subject cannot be a moderate drinker. He is either a total abstainer or a drunkard. His inebriety is difficult to cure, and the patient is apt to relapse. Out of 814 children of alcoholics observed by Legrain of Paris, 322, or 40 per cent., were degenerates. Seventeen per cent. were epileptic or hysterical. By adding 174 who had not strength to survive, but died of infantile weakness and debility, the percentage runs up to 61. Four per cent. showed distinct moral impurity.

Purulent Ophthalmia of the New-Born.—Willis O. Nance holds that the essentials in the successful management of purulent ophthalmia cases occurring in the new-born are: (1) Early diagnosis; (2) Skilful technique in the eversion of the lids; (3) Prompt and thorough application of medicaments to cleanse the eye, and neutralize the action of pathogenic organisms; (4) Intelligent and conscientious nursing; (5) Attention to the physical condition of the patient. For the purpose of cleansing the eye, the most important feature of the treatment is an irrigator. The vessel should hold at least two quarts, and should be placed not more than one foot above the patient's head. It should be frequently cleansed, and have a strip of antiseptic gauze wrapped about the nozzle. In some cases the eyes have to be flushed at intervals of fifteen minutes for many hours. A solution of boric acid (3 per cent.) is as efficacious as any that can be used for irrigation. None of the newer applications possesses any advantage over nitrate of silver.

Relation of Insects to the Spread of Disease.—Joseph McFarland records six ways in which insects may aid in the dissemination of disease: (1) They may carry, from place to place, disease-producing microorganisms which have collected upon their bodies and limbs, and occasion infection directly by alighting upon wounds, and indirectly by alighting upon food stuffs; (2) Insects may carry within their bodies germs of disease which have entered with the food, and may subsequently be deposited elsewhere with the fæces; (3) Suctorial insects, by taking blood-containing parasites from the bodies of diseased animals, may carry these upon their proboscides into the next animal bitten, directly and immediately infecting it. (4) Insects may take infectious germs into their bodies, and transmit them to their offspring, whose bites are infectious; (5) Insects may take into their bodies parasitic organisms which there undergo a further development, the insect acting either as an intermediate or a definitive host, and transmitting the parasite to other animals in some changed form in which they are infective; (6) The insects may become infected with pathogenic organisms, die, fall into food stuffs, and thus impart infection to man.

The Journal of Tropical Medicine, January 1, 1902.

Snake Poisoning in Central Africa.—Neil Macvicar reports three non-fatal cases, of which the chief symptoms were local pain and swelling. He states that in the venom of all poisonous snakes there exists a constituent which has the power of destroying blood cells, and which also acts on the plasma, so that if introduced rapidly (*e. g.* into a vein) it causes extensive clotting, but if introduced slowly (subcutaneously) it destroys the normal coagulative power of the blood. It also acts on the capillaries, so damaging them that they give way, and allow of extravasations. This constituent is met with in only very small quantity in the poison of most colubrine snakes, while in the poison of Indian vipers it is present in sufficient quantity to produce marked hemorrhagic symptoms, these symptoms supervening after the patient has recovered from the earlier symptoms of prostration and paralysis. As to treatment, even in cases that come late, it is well to remove the damaged subcutaneous tissue immediately beneath the fang marks. Permanganate of potassium may then be rubbed into the wound.

Amputation for Perforating Ulcer of the Foot in Lepers.—Edward Horder holds that this operation should give good results, and should, therefore, be performed in order to remove once for all the source of autoinfection, eradicate as far as possible the cause of the exacerbations of leprosy, and give these patients another chance of obtaining fairly good health. He reports nine cases in which this treatment was followed. Less than amputation, he says, is of no avail; removal of necroid bones and tendons has not given permanent relief. The patients were all operated on in 1899. In five there has been no return of ulceration; in one, not for eighteen months; in two, not for a year; in one it returned. The general health in the last case was not improved; in two it was improved, in six much improved. A strong argument in favor of operation is the readiness now shown by the poor lepers to part with a portion, or whole, of an ulcerated foot. It is very noticeable how limited is the life of many of the lepers after they leave the asylum in Pakhoi, proving that good housing needed for ordinary complaints is a factor to be reckoned with in the treatment of this dire disease.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, January 16, 1902.

George L. Peabody, M.D., Vice-President, in the Chair.

The Treasury Department and Consumptives.—Dr. S. A. Knopf, the mover of the resolutions introduced at the last meeting of the academy, condemning the ruling of the Treasury Department, by which consumptives were excluded from our shores, made some remarks in further explanation of the motives that had prompted him to introduce these resolutions.

Dr. Andrew H. Smith said that to his mind this proposition to exclude consumptives from this country was unworthy of America, and he principally objected to this action of the Treasury Department because of its unnecessary cruelty.

Dr. Alfred Meyer said that it was not enough to adopt the resolutions; such action should be followed by an effort on the part of the Academy of Medicine to secure a different ruling on this point from the Treasury Department.

Dr. E. G. Janeway suggested that before action was taken on these resolutions, the Treasury Department should be asked for details concerning the ruling in question, and the statistics and reasons upon which it was based. It looked to him that the hardship arising from the present attitude of the Treasury Department had resulted from the action of one man without counsel having been taken with the medical profession.

On motion of Dr. Knopf, action on the resolutions was postponed until the next meeting of the academy, and the Secretary was instructed to ask the Treasury Department for the information desired.

Vacant Buildings Suggested for Consumptive Hospitals.—Dr. G. L. Peabody announced that he had received a communication from the present Commissioner of Charities, Mr. Homer Folks, asking for the advice of the academy regarding the advisability of using as hospitals for consumptives certain buildings recently vacated by the Manhattan State Hospital for the Insane.

On motion of Dr. Henry P. Loomis. the Chairman was requested to appoint a committee to consider this question, formulate an answer and report the same to the academy at its next meeting. The Chairman appointed on this committee Drs. H. P. Loomis, E. G. Janeway, and Alfred E. Meyer.

The Food Factor as a Cause of Health and Disease During Childhood.—Dr. Joseph E. Winters was the author of this paper. (Vide page 121.)

Dr. Leroy M. Yale said that the author of the paper had come to practically the same conclusions regarding infant feeding that he had himself reached; hence, he would dwell more particularly on certain everyday details. The reader of the paper had shown why the meat dietary so much in vogue was deleterious. In the well-to-do families one would find among the adults a vast deal of gout and rheumatism, and their children came into the world handicapped on this account. Such children, moreover, did not have the opportunity to expend their energy, as did the children of the poor who played freely in the street.

Dr. John Dorning said that it was not uncommon to find an infant of three months taking from half an ounce to an ounce and a half of beef juice daily. This practice seemed to him reprehensible. He agreed with the author that meat should not be added to the diet until about the third year. Milk and cereals constituted the proper diet for the child. One could not consider solely the chemical composition of a food stuff in determining whether it was fit or unfit for the child. He would place oatmeal at the head of the list of cereals for both children and adults. He preferred to give a child the whole wheat bread or a coarse bread containing some of the cortex of the granules. Whole meal contained about 15 per cent. of proteids, of which about 10 per cent. were soluble.

Dr. Thomas S. Southworth said that he had long been convinced that a great deal of the illness of children was dependent upon poor nutrition. The well-nourished child rarely fell a prey to disease. The foundation of good or bad health had often been laid before the child reached the period especially considered in this paper. The transition from a milk diet to a mixed diet was a critical period, and if not carefully supervised by the wise physician, the foundation for much ill health would probably be laid. He would prefer to have a child continue the use of the bottle to using a tumbler, because in the former case the little one would ordinarily take more milk, and milk should be the chief article of diet. He did not feel disposed to condemn meat juice so unreservedly as the author had done, as it often proved a valuable nutrient as well as a means of improving the quality of the blood. It was true, the mistake was often made of giving too much meat juice.

Dr. W. H. Bates said that from clinical observation of the effects of diet upon eye diseases, particularly among the poor, he had come to feel that the same diet would not suit all children. He gave examples of the varied effects of a meat diet and of a milk diet upon such children.

Dr. Elmer Lee said that the paper of the evening showed experience, investigation, and mature thought. Perhaps the kernel of the whole subject was to be found in the author's statement, that we must go to organic nature. It was common practice to make use of only a part of the good things provided by nature. The different varieties of flour attested this, for they represented only parts of the grain, and hence the consumers of these flours only received a part of the health, nature had intended for them. He thought that only such food as was in itself capable of germination was a safe and suitable food for either the child or the adult. The cereal was perhaps the best food, while meat was the poorest in nutritive value and the dearest to buy. The author had spoken of chemistry and physiology, but had said nothing about that comparatively new subject, electrical physiology. The various constituents of the food united to furnish the electrical energy. Attention had been directed this evening to the fact that the fluids of the tissues of the body were alkaline. Mr. Edison, in the construction of his latest storage battery, had made use of an alkaline battery fluid, whereas hitherto acid fluids had been used.

Dr. Winters closed the discussion. He said that the remarks of Dr. Dorning about the chemical composition of food giving but little idea of its nutritive value, reminded him of some of the proprietary foods on the market. He was sorry to say that many of the best recognized text-books recommended one or more of these prepared foods, yet they were undoubtedly deprived of every particle of nutritive value by the chemical process to which they had been subjected in order to preserve them. The fact that they were given in combination with milk was what had given them their hold upon the public; it was the milk that nourished the child and not these foods—indeed, the latter were injurious. The speaker said he had been studying the various flours, and he had come to think that whole wheat flour was a common source of digestive derangement among the children in the best families of this city. He did not believe the children in this city were capable of digesting whole wheat flour, and Graham bread or any of those preparations which contain much woody fiber. He had seen a number of children entirely recover by simply stopping these articles of diet. His attention had been first directed to the use of meat juice for children, by the case of a child who was profoundly anæmic. This anæmia had begun with the substitution of beef juice for one feeding. The beef juice was discontinued, and she was put back on cereals. Without medicine the anæmic quickly disappeared, and since then he had repeated this observation hundreds of times, for it had been first made about twelve years ago. He believed there was no surer way of producing profound anæmia in well-to-do children in this city than by the excessive use of beef juice. An anæmic child, free from organic disease and free from infection, if given milk, cereals, and vegetables in proper proportions, he could guarantee, would, in every instance, become rosy and rotund.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PEDIATRICS.

Stated Meeting, January 9, 1902.

R. G. FREEMAN, M.D., CHAIRMAN.

Congenital Asymmetry or Hemihypertrophy in an Infant.—Dr. A. HYMANSON presented this case. The patient was an infant of six months, born of parents who were not relatives. Measurements showed the right upper and lower extremities to be longer and larger than the corresponding ones of the other side. On October 1 the child was in convulsions for twenty-four hours from some unknown cause, but it recovered perfectly. The organs also appeared to be larger on the right side than on the left. The speaker said that he had been able to find only about a dozen cases of this kind on record.

Dr. S. H. DESSAU said that he had seen a similar case some years ago, and had presented it to the Northwestern Medical and Surgical Society. It had been afterward referred to by the late Dr. J. H. Fruitnight as a case of congenital rickets. The case just presented, however, did not seem to exhibit any of the features of rachitis.

A Case of Spasmus Nutans.—Dr. C. HERMAN presented this case. The child had been born normally of apparently healthy parents. When thirteen months old it had developed measles, and since that time this nodding of the head had been noticed. There was no history of traumatism, and the child lived in a rather dark room, but no artificial light was used. The head moved upward to the left and downward to the right, but there was also some nodding. As Dr. A. Caillé had pointed out, the motions of the head could be checked by covering the eyes. Nystagmus was also present, and could be made more prominent by holding the head. The nystagmus was noticeable when looking to the left, but almost none could be detected when looking to the right. In this case, as in almost all others of the kind, rickets was present. The child was seventeen and one-half months old, but did not even stand yet, and there were abundant evidences of rickets. The hygienic treatment was most important. He had tried the bromides in a number of these cases with practically negative results. These children were apt to hold the head to one side, and then roll or turn the eyes in an opposite direction. The prognosis was good.

Dr. LOUIS FISCHER said that many authors, among others Baginsky, had recently referred to the apparent uselessness of phosphorus in the treatment of rachitis. The speaker said that the more he used phosphorus in these cases, the more impressed was he with the truth of this teaching. Chemists said the so-called phosphorized oil contained no phosphorus.

Dr. DESSAU said that he had used phosphorus very largely for many years, but had used it in conjunction with cod-liver oil. The phosphorus was administered in the form of the U. S. P. elixir of phosphorus. As he never gave the phosphorus without the cod-liver oil, it was impossible to say whether the marked improvement observed under such treatment was attributable only to the oil or was, in part at least, due to the phosphorus. He was, however, a firm believer in the efficacy of phosphorus as a remedy in rachitis.

Dr. H. S. STOKES said that none of the five or six cases of spasmus nutans that he had seen were rachitic, though undoubtedly the child just presented was so. They had usually presented a distinct history of injury.

The Effect of Heat Upon Cow's Milk as an Infant's Food.—DR. S. H. DESSAU read a paper on this subject. It dealt with the chemical action of heat on cow's milk. He said that cow's milk as an infant food should be regarded as a raw article of diet. While cow's milk contained the same elements of nutrition as human milk, their relative proportions were such as to make the two kinds of milk very different articles for infant feeding. The indigestibility of the curd of cow's milk had been recognized from the first as a great obstacle to the use of such milk for infants. The curd of sterilized cow's milk, as seen in the vomitus, resembled that of human milk, a point that had been very generally overlooked by pediatricians. But the high degree of heat used in the original method of sterilizing milk caused many chemical changes in the milk, among others the decomposition of the fats. He had noted that when the temperature of the top-milk was gradually raised by means of the double steam-cooker to 140° or 160° F. for ten minutes, the curd was much softer than usual, and that this was still more marked when this milk was mixed with equal parts of water, or in the proportion of one to three. The taste of such milk was not unpalatable, as was the case with boiled milk. It was important that the heat should not be raised to the boiling point, and this could be done in practice quite easily by heating the milk in the steam cooker for a period of ten minutes after the water in the outer vessel had begun to boil. This method of preparing milk had the advantage of giving a very digestible article, and at the same time removing most of the noxious germs. By the dilution mentioned the proportion of fats was decreased, but this was apparently offset by the increased digestibility. These conclusions were not founded on theory, but on a large experience and careful practice. There need be no fear of children fed on such milk developing scurvy.

Dr. J. FINLEY BELL of Englewood, N. J., said that the heating of cow's milk to 140° F. in a closed vessel would destroy most of the pathogenic germs, though no careful study had been made as yet to show whether or not the anaerobes were destroyed under these conditions. Of course, such heating of milk would not destroy the toxins that might have previously developed in the milk through bacterial action.

Dr. MAX EINHORN said that according to his experience boiled milk would coagulate with gastric juice just as quickly as raw milk and from some experiments that he had made years ago the coagula in the infant's stomach were found to be very large, even after the heating of the milk. The addition of gruels certainly did make a finer coagulum.

Dr. L. FISCHER said that according to his experience milk heated to 212° F. gave rise to extreme constipation; also that pasteurized milk would cause a great deal more trouble and constipation than raw milk. Last year he had placed a number of children on milk heated to 140° or 150° F., following out the theory of Russell. It was certain that the milk was much more digestible when given warm, but he would not be willing to risk giving to an infant milk at the temperature of 100° or 140° F., or even at 167° F., unless he knew positively the quality of the milk supplied.

Dr. R. G. FREEMAN said that the reader of the paper had given the impression that scurvy had been caused originally by sterilized milk but the collective investigation of the American Pediatric Society showed that it had been very largely produced by the use of patent foods. Unfortunately when scurvy was first investigated it was at the time that sterilized milk was so much in vogue, but a study of a large number of cases showed that sterilized milk was not responsible for more than 16 per cent. of the cases of scurvy. After all, scurvy was rather the result of the use of an unsuitable food than of any particular mode of preparation of the food. He had undertaken some years ago a number of experiments to determine whether pasteurization or sterilization had anything to do with the curds, and he had been unable to satisfy himself that the heating had any effect whatever on the curds. The heating of milk to 140° F. for ten minutes would not kill the pathogenic organisms which we feared in milk; to destroy these, the milk should be heated to at least 160° F. for half an hour.

Dr. Dessau said that he did not make use of sterilized milk except perhaps during the summer, and hence had not observed any special trouble from constipation. Sterilized milk, when first introduced, had been adopted as a daily food, but the appearance of scurvy had frightened many from using sterilized milk on the supposition that this was the cause of the scurvy. At the present time comparatively few physicians advocated the use of sterilized milk as a daily food.

Chemistry of the Stomach Contents in Children.—Dr. Louis Fischer was the author of this paper. He said that he had made a study of this subject, using a Nélaton catheter, No. 6 or 10, to siphon off the gastric contents. This was done with the child on the back, and usully two or three hours after feeding. Many specimens of vomited matter had also been studied. The chemical examination consisted in removing the chyle, filtering it, and testing for hydrochloric acid, lactic acid, propeptone, peptone, and rennet. The condition of the coagulum was also noted. A series of ten breast-fed infants was first examined. Five of these children had a very fine flocculent coagulum in the stomach. Of the other five children, one was syphilitic, one was hydrocephalic, and one was rachitic, and in these a thick coagulum was present from three to four hours after feeding. Hydrochloric acid was present in all but two of these. In all the healthy breast-fed children the curd was very fine. A series of five bottle-fed children was examined. In these infants, the matter vomited two or three hours after feeding was usually thick, lumpy, and acid, and examination showed hydrochloric acid absent, but lactic acid present in abundance. In some cases butyric acid or acetic acid was also present, and there was little or no propeptone or peptone. Hydrochloric acid was absent in the mild as well as in the severe cases of diphtheria examined, but returned during convalescence. In one of his cases of malignant diphtheria, no hydrochloric acid was found in the vomitus until forty-eight hours after the injection of antitoxin. In very young and healthy nurslings there was an excess of lactic acid at the commencement of digestion, while at the completion of this process free hydrochloric acid was found in the same proportion noted in adults. There was a constant antagonism between the lactic and hydrochloric acid.

Dr. Einhorn said that his experiments did not entirely coincide with those presented in the paper. He had examined a series of normal children, both breast-fed and bottle-fed, and in only two had free hydrochloric acid been present. In the stomach of children, gastric juice was secreted in smaller quantity than in adults. The children he had examined had ranged in age from three to eighteen months. Milk contained a large proportion of albuminates which united with the hydrochloric acid as soon as it was excreted. Small quantities of free hydrochloric acid were masked when milk was ingested, and that was the reason why a test meal of roll and tea, or of some material containing comparatively little albuminate, was selected for such examinations. It was generally believed that in febrile affections there was an absence of hydrochloric acid, but while this was the general rule, he had found some adults suffering from typhoid, and having considerable fever, in whom hydrochloric acid was present. The diminution of gastric secretion and its return during convalescence in cases of diphtheria did not seem to him to be of prognostic value, except as an indication of a restoration of one of the bodily functions, and hence a general improvement. He thought massage of the stomach was not altogether free from risk.

Dr. M. I. Knapp spoke of the technique employed in testing the gastric secretions. He said that he had made a number of experiments for the detection of acetic, butyric, citric, formic, lactic, malic, succinic, oxalic, and tartaric acids, and they had all reacted more or less with Congo paper, and also with methyl orange. Ginsberg's reagent he had found excellent. The ammonio-citrate of iron with potassium ferrocyanide formed a blue compound only in the presence of an inorganic acid. He had known this to give a reaction when the Ginsberg reagent had failed. He had found no benefit from massage of the stomach; in two cases it had caused hemorrhage, and in every instance had given poor results. It tended to lower the acidity. In one of the cases reported in the paper, mention was made of the vomiting of bile, but one should be cautious about asserting that bile had been vomited simply from the appearance of the matter ejected.

Dr. Fischer, in closing, said that the cases of diphtheria in which the gastric secretion had been checked had not been associated with any noticeable degree of fever. Although the treatment of stomach disorders by massage had been unfavorably criticised this evening, he looked upon it as a most important therapeutic measure, particularly in cases of infantile constipation. He had used it in hundreds of children, and was sure that it promoted peristalsis and secretion. Naturally, he did not leave this procedure to the mother, but had it done by a competent massage operator. Two drugs had served him well in these cases—nux vomica and dilute hydrochloric acid. The latter had been particularly valuable. The paper just presented was merely a preliminary communication.

Therapeutic Hints.

Chordee.—

℞	Camphoræ		gr. xx.
	Pulv. opii		gr. v.

M. et ft. pil. No X. S.: One or two at bedtime.

Migraine.—

℞	Sulphonal		gr. xx.
	Phenacetin		gr. vijss.

Give in wafer as required. —Silgois.

Alopecia of Lues.—

℞	Resorcini puri		gr. x.
	Hydrargyri chl. corros		gr. v.
	Olei ricini		ʒss.
	Ol. amygdal. amar		♏x.
	Ol. bergami		♏v.
	Spir. vini rect.		℥iv.

M. S.: Apply each night.

—Allen.

Dandruff.—

℞	Ceræ alb.		ʒiijss.
	Ol. petrolati		℥ijss.
	Aq. rosæ		℥j.
	Sod. biborat.		gr. xv.
	Sulphur præcip.		ʒiijss.

M. et ft. ung. exactissime. S.: Apply daily or every few days.

—Jackson.

Scabies.—Apply dry-washed sulphur, rubbing it in well, and sprinkling in the clothes and bedding.—Sherwell.

Pruritus Senilis.—Give a brisk purge, followed by a milk diet, and two grains of benzo-naphthol, daily, as an intestinal disinfectant.—Parisot.

Pruritus Vulvæ.—

℞	Bismuth subnit.,		
	Potass. brom.	āā	gr. xv.
	Hydrarg. chl. mit.		gr. viij.
	Pulv. belladonnæ		gr. iij.
	Pulv. amyli		gr. ccc.

M. S.: Apply twice daily.

—Mussy.

Insomnia During Detention.—

℞	Chloralis hydratis		gr. viij.
	Sodii bromidi		gr. xv.
	Syr. lactucarii		
	Aq. destil	āā	℥ss.

M. S.: One teaspoonful every hour until quiet, for a child six months or older.

—Gould and Pyle.

Anorexia of Tuberculosis, Chlorosis, and Cardiac Diseases.

℞	Quininæ sulphat	0.06
	Ext. nuc. vom	0.02
	Pulv. rad. rhei	0.50

Such a powder in wafer, morning and afternoon.

℞ Troch. protonucleini No. XXX.
S.: Two to four in milk, every three hours.

—*Merk's Archives.*

Hypodermoclysis.—Experience has shown that for efficiency, freedom from danger, and ease of administration, the subcutaneous injection of normal salt solution (hypodermoclysis), six drachms of sterilized salt to one gallon sterilized water, at a temperature of 110° to 120° F. excels all things that have ever been used to relieve those suffering from shock and from the effects of hemorrhage, and as an eliminant in septic and toxic conditions.—*The Practitioner*, October, 1901.

Toothache.—Hold an acetanilid compound tablet in the mouth. That due to pregnancy or debility should be treated with maximum doses of calcium hypophosphite.

Rheumatism.—Apply oil of wintergreen under gum tissue and bandage. Give five to ten minims of oil of wintergreen every two or three hours. In gouty pains, dissolve half a grain of colchicine in six ounces of water, and give a drachm every one to three hours.—C. E. Boynton.

Frost Bite.—Protect the hands, feet, and ears, especially in children. When frostbitten, rub parts with camphorated alcohol and apply:

Starch	9 parts.
Salicylate of bismuth	1 part.

Apply tincture of iodine pure, or paint on each night:

Glycerine	20
Tinct. iod.	10

—Comby.

To calm itching at night, apply:

Glycerini	50
Aquæ rosæ	50
Tannin	0.10

—C. Besnier.

When ulceration has occurred, apply morning and night:

Borax	5
Vaseline	30

—*Journal de Médecine*, December 10, 1901.

Prostatism; Nocturnal Congestion.—Take at bed time 30 gr. of bromide of potassium, or introduce one of these suppositories:

℞	Ext. hyoscyami	0.05
	Ext. belladonnæ	0.02
	Ext. valerianæ	0.20
	Ol. theobrom.	2.50

—Guiard.

Catarrh.—

℞	Formaldehyde	ʒj.
	Glycerini	ʒiv.
	Aquæ destil.	℥v.

M. Use as a spray four or five times a day.

—*Merck's Archives.*

Hepatic Colic.—

℞	Chloroformi	
	Tinct. myrrhæ ..āā	♏xv.
	Etheris sulph.	ʒj.
	Mucilag. acaciæ.	ʒij.
	Syr. simplicis.	℥iijss.

M. S.: One tablespoonful every fifteen minutes.

—Lemoine.

Cystitis.—

℞	Acidi borici	ʒj.
	Sodii boratis	gr. xxx.
	Sodii chloridi	gr. xv.
	Aquæ destil.	Oj.

M. S.: Irrigate the bladder with a double current catheter.

—Lobingier.

Chronic Constipation.—

℞	Ext. nuc. vomicæ	gr. xij.
	Ext. aloes	
	Ext. colchici acetic.	
	Calomel	
	Ipecac. ..āā	gr. xx.

M. et ft. pil. div. No. XX. S.: One at night.

—A. L. Loomis.

Tuberculosis and Chlorosis.—

℞	Neutral acetate of copper	gr. 1.6
	Crystallized sodium phosphate	gr. 5.6

Licorice and glycerine, q. s. to make one pill.
Two pills to be taken daily.

—*Le Progrès Médical.*

Constipation with Scanty and Defective Bile Secretion.—

℞	Acidi arsenosi	gr. j.
	Hydrargyri chloridi corrosivi	gr j.
	Pulveris ipecacuanhæ.	gr. ij.
	Hydrargyri chloridi mitis	gr. xvj.

M. Div. in tab. No. XV. S.: One or two tablets daily.

Heroin may be given in the form of drops, dissolved in a small quantity of dilute acetic acid, according to the following formula:

℞	Heroini puri	0.20 gm.
	Acidi acetici	gtt. v-x.
	Aquæ dest.	10.00 gm.

M. S.: Three times daily from 5 to 10 drops.

The same solution may also be used subcutaneously (after having been boiled) in quantities of from ¼ to ½ of a 1-gm. Pravaz syringe. —Wierzbicki.

Sycosis.—

℞	Naphthol.	75-150 gr.
	Green soap	
	Prepared chalk	
	Sulphur	
	Lanolin ..āā	375 gr.

M. S.: For local application.

Eggs in Therapeutics.—A mustard plaster made with the white of an egg will not leave a blister.

The white skin that lines the shell of an egg is a useful application for a boil.

White of an egg beaten with loaf sugar and lemon relieves hoarseness—a teaspoonful taken once every hour.

An egg added to the morning cup of coffee makes a good tonic.

A raw egg with the yolk unbroken taken in a glass of wine is beneficial for convalescents.

It is said that a raw egg swallowed at once when a fishbone is caught in the throat beyond the reach of the finger will dislodge the bone and carry it down.

The white of a raw egg turned over a burn or scald is most soothing. In bowel trouble a partly beaten raw egg relieves the feeling of distress.—*The Public Health Journal.*

Dysphagia.—Yonge strongly recommends orthoform for the treatment of the distressing dysphagia which accompanies laryngeal tuberculosis. It is non-toxic, anæsthetic, and antiseptic.

Watson Williams considers a large majority of cases of acute follicular tonsillitis of rheumatic origin. This perhaps explains why ammoniated tincture of gum guaiac given internally is so promptly effective in these cases.

Schamberg considers arsenic and mercury the drugs which exert the best influence in lichen planus.

In lumbago, dry cupping is often a most ready and valuable therapeutic measure.—*Journal of Medicine and Science*, July, 1901.

Recovery from a Temperature of 110° F.—James Cantlie reports a case in the practice of Dr. Wm. Hartigan in Hong-Kong. A man over fifty years of age, engaged in superintending harbor works, developed a high temperature about 10 o'clock in the morning. The temperature quickly rose, and when Dr. Hartigan saw his patient, the thermometer registered 110° F. On testing the thermometer it was found to be perfectly reliable. When the writer saw the case some forty minutes later, the temperature was 108.2° F., although the patient was, and had been, perspiring freely, and although his body was wrapped in wet sheets and was being rubbed with ice. The patient seemed by his appearance to be beyond recovery, when the temperature was at its highest; but yielding to treatment energetically pursued, the temperature rapidly fell, and in two hours after attaining its maximum dropped to 102°. The patient recovered completely, and in a week or so was about again.—*The Journal of Tropical Medicine.*

New Instruments.

A NEW ŒSOPHAGOSCOPE.*

By MAX EINHORN, M.D.,
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Œsophagoscopy in the diseases of the œsophagus and cardia has gained an important place in the last few years. All the literature of importance on this subject will be found in an article[1] published by me in the year 1897 regarding the inspection of the œsophagus and cardia. Later, some important papers on œsophagoscopy appeared by von Hacker[2] and Rosenheim.[3] Von Hacker's epoch-making labors show plainest the high and practical value of this method of examination, which not only facilitates the diagnosis of many of the diseases of the œsophagus, but frequently exerts a direct influence upon their treatment.

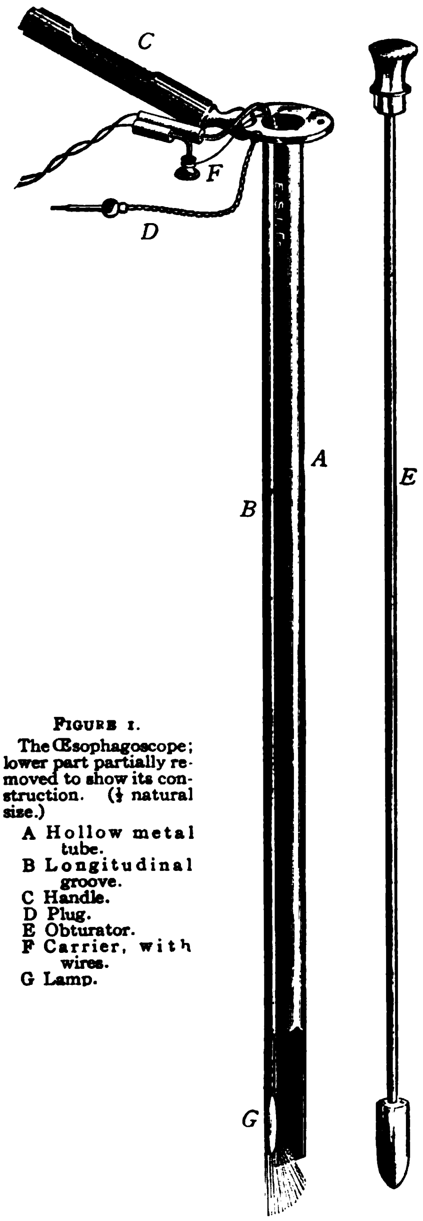

FIGURE 1.

The Œsophagoscope; lower part partially removed to show its construction. (⅓ natural size.)

- A Hollow metal tube.
- B Longitudinal groove.
- C Handle.
- D Plug.
- E Obturator.
- F Carrier, with wires.
- G Lamp.

In the instruments used up to now for œsophagoscopy (Mikulicz, Rosenheim, Kelling) the source of the illumination is outside of the œsophageal tube. As a rule, the panelectroscope is employed for this purpose—an instrument that throws concentrated light through the whole tube, thus illuminating the lowest spot that is to be inspected. It is evident that inspection would be easier if the lamp were placed at the lower end of the tube near the area to be examined, since a better illumination could in this way be secured.

Formerly, the construction of such an apparatus could not be accomplished, as after a while much heat was involved by the electric lamps, thus threatening burning of the tissues. More recently the Electro-Surgical Instrument Company of Rochester, N. Y., has succeeded in manufacturing so-called cold electric lamps. They generate very little heat indeed, and can be held from one to two minutes, and even longer, between the fingers or in the mouth, without interruption of current and without generating any considerable heat.*

Since a short time the above principle and these lamps have been used for urethroscopy and proctoscopy. I have constructed a similar instrument for the œsophagus.

The œsophagoscope, constructed for me by the firm mentioned above, consists, as the accompanying drawing (Fig. 1) will illustrate, of a round, hollow metal tube (A), having on one side a small longitudinal groove (B), which is separated by a thin wall from the lumen of the tube. Two isolated electric wires attached to a carrier (F†) run through the groove (B). At their end a small lamp (G) is attached and placed a little above the end opening of tube (A), being, however, not inclosed by the thin metal sheet that covers the wires. To the tube is attached a handle (C), a plug (D), and an obturator (E). Before introducing the instrument the obturator must be in place, and is held there firmly by means of the plug (D). After the introduction of the instrument, this plug is removed and the obturator withdrawn. The wires are connected with an electric battery, and everything is now ready for inspection. The handle (C) facilitates the use of the instrument.

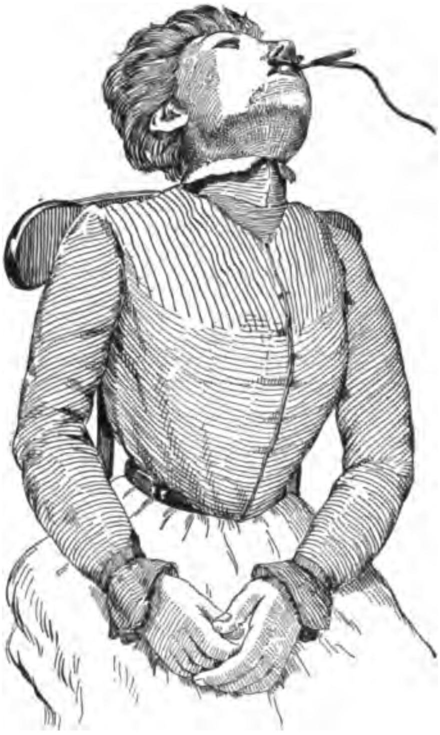

FIG. 2.

Showing patient with œsophagoscope inserted ready for inspection.

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*Read before the Medical Association of Greater New York, with demonstrations, December 9, 1901.

*I am now using these lamps of 6 to 8 candle-power for my gastrodiaphane.

†The carrier can be easily removed with the lamp, thus facilitating thorough cleansing and sterilization of the instrument and any necessary renewal of lamp.

As already mentioned in my former paper, I usually practise œsophagoscopy in the sitting posture without any anæsthetic (cocaine spray, etc.). The procedure is not a difficult one, and is done as follows:

Method.—The patient sits on a chair which has a back. The instrument (with obturator inserted) is immersed in warm water, and, while depressing the tongue with the left index finger, is held in the right hand like a pen and introduced into the mouth and pharynx of the patient. The latter is now directed to throw his head backward and the instrument is then pushed down into the œsophagus without exerting any force.

The accompanying drawing (Fig. 2) shows the position of the patient after the introduction of the instrument. Attention must be paid that the lips of the patient are not pressed by the instrument. The obturator is now removed, the connection made, an inspection may then take place by looking into the tube. At the end of this, the mucous membrane of the œsophagus is plainly visible. If the instrument is slowly withdrawn while looking into it, the whole wall of the œsophagus may thus be inspected.

I have had the œsophagoscope made in two different lengths (35 and 40 cm.) and thicknesses (1 and 1½ cm.), which will fulfill various indications. The thicker instrument will be used more especially in the local application of medicaments, or for the removal of foreign bodies, whereas we would ordinarily get along with the more slender instrument.

This new œsophagoscope* has proved to be of great value, and I do not hesitate to recommend it warmly.

1. Max Einhorn: "The Inspection of the Œsophagus and Cardia," *New York Medical Journal*, December 11, 1897.

2. Von Hacker: "Die Œsophagoscopie und ihre klinische Bedeutung," *Beiträge zur klinischen Chirurgie*, Bd. 20, 1898, p. 141. "Die Œsophagoscopie beim Krebs der Speiseröhre und des Mageneingangs." Ibidem, p. 275. "Ueber die Entfernung von Fremdkörpern aus der Speiseröhre mittelst der Œsophagoscopie." Ibidem, Bd. 29, 1901, p. 128.

3. Theo. Rosenheim: "Ueber Œsophagusstenose," Deutsche Klinik, 1901.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending January 18, 1902.

	Cases.	Deaths
Measles	689	25
Diphtheria and croup	314	52
Scarlet fever	276	23
Smallpox	18	5
Chickenpox	85	1
Tuberculosis	257	147
Typhoid fever	38	11
Cerebro-spinal meningitis	..	3

Results of Scientific Balloon Ascensions.—Some results of the scientific ballon ascensions made in Europe under the direction of the International Aeronautical Committee are as follows: Great variations have been found at different localities, even in the uppermost layers of the atmosphere.

The coldest regions lie to the northeast, the warmest to the southwest, of the European Continent. At an altitude of 5,000 meters the temperature was 20° C. above Paris and only 110° C. above Vienna at the same time. The isothermal lines at 5,000 meters run from south toward northeast. Those of minus 10° C. extend west from the north of the Adriatic Sea to Moscow; those of minus 15° from southwestern France to St. Petersburg, etc. The isobars of 5,000 meters also extend in general in the same direction. The lowest pressures are above England; the highest above southeastern Europe. The velocity of the wind increases from 8.3 meters per second at 1,600 meters altitude to 11.2 meters at 2,300. At altitudes above 6,000 meters the velocities are probably above 16 meters.—*The New York Sun.*

Erysipeloid.—Tavel reports nine cases of this disease which is also known as erysipelas chronicum and erythema migrans. It occurs chiefly in persons who are brought into close contact with animals, especially undomesticated, also those engaged in the tanning industry. In the majority of cases the incubative period is from one to three days. The symptoms are at first not directly localized at the seat of infection, but the swelling and inflammation at once involve the neighboring regions. In contrast with what occurs in streptococcus and staphylococcus infections, no suppuration is usually produced. The deeper tissues are at first involved, the cutaneous being subsequently affected. The cutaneous appearances are not marked by a sharp demarkation between the involved and sound portions, as is seen in erysipelas. No lymphangitis or lymphadenitis is usually present. Temperature elevations are occasionally observed, but the pulse is not increased over the normal and is sometimes reduced in frequency. Respiration is not affected. The duration of the disease is usually about ten days. Rarely is it completed in two or three days, and in some cases three weeks are required. The differential diagnosis is not, as a rule, difficult. The principal diseases with which erysipeloid may be confounded are erysipelas, erythema multiforme, streptococcus and staphylococcus infections and glanders. The specific bacterial excitement of the disease is unknown. The local application of unguentum cinereum and ichthyol is followed by good results. Internal medication is rarely required, but when indicated it should be symptomatic in nature.—*Deutsche Zeitschrift für Chirurgie.*

Tetanus After Subcutaneous Gelatin Injections.—Hans Lorenz adds two more cases to the rapidly increasing list in which tetanus has followed subcutaneous inoculations of gelatin. In the first case, the injections were employed for the relief of hæmaturia, and in the second, for that of a severe prolonged secondary hemorrhage following operation for carcinoma of the rectum. Both resulted fatally. The source of infection was not ascertained. At the time of the inoculations ample antiseptic precautions were taken. A portion of the gelatin solution which was used in the second case was subsequently inoculated subcutaneously, intravenously, and intraperitoneally into animals without result.—*Deutsche Zeitschrift für Chirurgie.*

The Report of the British Departmental Committee on Food Preservatives.—This report has recently been published and naturally contains much matter of great interest to those concerned in the pure food question. It would appear that preservatives are used almost as largely in Great Britain as in this country. Manufacturers and producers of food of all kinds will, if the recommendations of the British Committee are followed, be bound by strict laws to use no more of food preservatives than is necessary, and not incompatible with health.

Insanity in the Country Districts of England.—The *Medical Press* has recently referred to the fact that insanity appears to be greatly on the increase in the rural parts of Great Britain; and that some country parishes are perfect hotbeds for the propagation of insanity. Intermarriage is said to be the cause.

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*The œsophagoscope is manufactured by the Electro-Surgical Instrument Co., Rochester, N. Y.

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Original Articles.

CARBONATE OF CREOSOTE IN PNEUMONIA.

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IN the MEDICAL RECORD of November 2, 1901, Dr. Leonard Weber reports nine cases of pneumonia treated by creosotal, or the carbonate of creosote, with one death. As I had already formed a favorable opinion of the same remedy in the treatment of this disease in private practice and in consultation, I determined to put every case admitted with lobar pneumonia to my wards in the Roosevelt Hospital, as far as possible, exclusively upon this drug, so far as medication was concerned. Eighteen patients were so treated from May 1 to November 1, 1901, six of them during the months of July and August being under the care of my colleague, Dr. Frank W. Jackson, who consented to continue this treatment with them. Of these patients, fifteen were males and three females; two under the care of Dr. Jackson were boys, ten years old, while the ages of the others ranged from thirteen to forty-five. Two (males) were colored. Of these eighteen patients, one (male) died, and the rest recovered, a record which, so far as it goes, is much more favorable than my usual experience in pneumonia, whether in hospital practice or outside. Both lungs were involved in three patients, all of whom recovered, while the remainder, six, had the right lung attacked, and nine the left.

As will be seen from the reports which have been condensed from the hospital books by my house physician, Dr. A. W. Bingham, the patients presented a fair average of the ordinary symptoms and conditions in lobar pneumonia, so that they could hardly be called selected cases. Whether they generally ran a milder course owing to seasonal conditions cannot be decided, but at least in three very alcoholic patients, one of whom had double pneumonia, the conditions were severe enough to be worthy of special mention. The first of these, Case III, the man, aged thirty-three, had long been a heavy drinker, and for six weeks previously had severe bronchitis. He was then attacked with chills, vomiting, great pain in the præcordia, rusty sputum, and marked prostration. On admission on the third day, though his temperature was only 102°, his general condition looked very unfavorable, his lips were cyanosed, and his tongue heavily coated and dry. His temperature then rose steadily, and by the eighth day reached 106°. His temperature did not reach normal till the twenty-first day.

The second, Case XV, that of a large, powerfully built man, aged forty-five, was admitted as a private patient to the Roosevelt Pavilion, with the following antecedents: He had long indulged freely in liquor, and his attending physician stated that for at least six months he had albumin in his urine, and was often languid and stupid. For the past three months he was very restless nights. Six weeks ago, he had a spasm which lasted but a short time, and during which he did not lose consciousness. The excitement of the election campaign, in which he was greatly interested, led him to excessive drinking, till at 10 o'clock A.M., October 10, he was seized with a violent epileptic convulsion, in which he severely bit his tongue. He did not fully recover consciousness till 2 P.M., when shortly afterward he had another convulsion, and then he remained in coma with recurring convulsions till 10 P.M., when he was admitted to the hospital, and I was summoned to see him. After my arrival, he had two more convulsions in quick succession. His pulse was 124, and of very high tension. He had passed no urine since 10 A.M., and only 6 ounces were obtained when he was catheterized. It was pale, sp. gr. 1010, albuminous, and with abundant fatty and granular casts. I ordered him to be bled 12 ounces, with dry cups over the kidneys, and had ½ drachm sodium bromide and 20 grains of chloral given per rectum every three hours, with 10 drops of the tincture of veratrum viride. He had no more convulsions after the bleeding, and the next morning he was conscious, with pulse still of high tension and temperature 100° F., whereupon the veratrum was pushed every half-hour till the pulse became softer. On the third day, he developed the full train of symptoms of delirium tremens, and required incessant restraint. This state continued for two days, when his temperature suddenly rose to 104.4°, and he expectorated a quantity of bright-red blood. On my visit to him that day, I found that pneumonia had fully set in in his right lung, and I was not inclined to give a favorable prognosis, considering the usual course of such cases. The creosotal was given continuously, 15 grains every two hours night and day for ten days, and then at longer intervals, with a gradual descent to normal in three weeks.

The third patient, Case XVI, aged thirty-three, had been a heavy drinker, and stated that he had pleurisy four weeks before admission, from which he had quite recovered, until four days ago, when he had a severe chill, followed by fever, headache, pain in the right chest, cough with scanty sputum, and dyspnœa. Admitted October 21, in a very apathetic state, with flushed cheeks, pulse 120, full and strong, arteries thickened, breathing shallow, and abdomen quite tympanitic. Temperature 104.4°, respirations 40. Examination showed consolidation of the right lung posteriorly up to the axilla, with pneumonic râles over the lower lobe in front. He was ordered creosotal, 15 grains every two hours if awake. The course of his temperature then became very irregular. The next day, the fifth of his disease, it was 100.2° in the morning, and 102° in the evening, but on the next day it was 105.6° in the morning, when pneumonic râles, followed by dulness and bronchial breathing, were found over the lower lobe of the left lung, both posteriorly and anteriorly. The right lung resolved completely by the thirteenth day, but the left not till the twenty-fourth day.

On the other hand, the patient who died (Case V), who was also an alcoholic subject, though he stated that he had been only moderately so, had the creosotal as freely administered as the others, and at first he did not seem to present a specially unfavorable case of the disease. The temperature, however, continued persistently high, and was quite unaffected by the medication, reaching before death 107°.

The remedy, also, can hardly be credited with the favorable result in Case IV, as the man was admitted on the sixth day of his illness with a temperature of 104°, which was followed in about twelve hours with a crisis drop to nearly normal.

That the drug may exert a special effect upon the course of pneumonia is rendered probable by the peculiar course of the temperature after its administration, a fact which I had noted before in other cases, and which is well illustrated in the present list. Thus the disease terminated here by lysis in twelve, and by crisis in only five. In a number of them a fall in the temperature of from one to three degrees occurred within twenty-four hours after beginning with it, but the next day it would rise again, and so continue with a very irregular course for a number of days before it reached normal.

Carbonate of creosote, or creosotal, seems also to affect favorably that very undesirable complication in pneumonia, tympanites, which was pronounced in five of these patients. As I use this drug freely in the treatment of phthisis, I have been struck with its greater toleration by the stomach for prolonged periods than any other agent of this class, such as creosote itself or the guaiacol carbonate. In pneumonia, I prefer to give it in 15-grain doses every two hours, night and day, or 180 grains in the twenty-four hours, which is about three times the amount prescribed by Dr. Weber.

I have never noted any depressing effect by it on the circulation when so administered, nor need there be any fear entertained of its acting injuriously upon the kidneys, even if they were previously diseased, as in Case XV. In one patient, a lady with general anasarca, hæmaturia, and abundant tubercle bacilli in the urine, whom I saw in consultation three years ago, creosotal was taken continuously by my advice for nine months, after which the bacilli wholly disappeared from the urine, and she is now in good health. My usual formula for administering it is:

℞	Creosot. carbonat........................	ʒiv.
	Glycerini	℥j.
	Aq. menthæ ....ad	Oss.

M. Dose: Tablespoonful in water.

The following is a brief synopsis of these eighteen cases:

CASE I.—Ernest W., aged thirty. Personal history: Non-alcoholic; pneumonia nine years ago, again one year ago. Present illness: Slight cough for one week. No other symptoms until one day ago, then became suddenly weak, and later had severe pain in right side, with shortness of breath. This morning sputum contained blood; no appetite; constipated. Chief complaint: Pain and weakness. Admitted May 13, 1891, on the second day of the disease. Tongue heavily coated and moist; pulse regular and full, and of fair force; breathing rapid and somewhat labored; abdomen distended and tender.

Over right lower lobe, behind and in axillæ, breathing high pitched; voice increased; few subcrepitant râles; slightly sibilant and sonorous breathing over right upper lobe. Temperature 104.4°, pulse 128, respirations 28.

Urine contains heavy trace of albumin and a few granular casts.

W. b. c. 29,200. Treatment: creosotal gr. xv. q. 3 h. if awake. Defervescence by crisis on fourth day. Four days later, comparative dulness over right lower lobe, with bronchovesicular breathing. Five days later, resolution complete. Discharged cured May 26, 1891.

CASE II.—Katie F., aged twenty-eight. Personal history: Non-alcoholic; grippe five months ago; two months ago, dry pleurisy on left side; sick only a few days. Present illness: Three days ago, severe pain in small of back, headache, nausea, chills alternating with fever; no appetite. One day ago, cough mucopurulent, sputum streaked with blood. Admitted May 11, 1901. Cheeks flushed; tongue coated and moist; pulse regular and of good force; breathing rapid and difficult. Temperature 105°, pulse 104, respirations 40. Over left lower lobe behind dulness with bronchial voice and breathing; moderate number of subcrepitant râles.

Treatment: Creosotal gr. xv. q. 2 h. if awake. Came in on third day; temperature fell gradually, reaching normal on the ninth day. Signs over the lungs persisting. Three days later resolution complete. Discharged cured May 26, 1901.

CASE III.—Already detailed.

CASE IV.—George O., aged twenty-six, colored. Personal history: Non-alcoholic; syphilis seven years ago. Present illness: Slight cough for two weeks. Five days ago, chill followed by fever, headache, vomiting, prostration, cough, rusty sputum; pain in epigastrium on right side.

Admitted May 16, 1901. Tongue moist, slightly coated; pulse regular, soft. and weak; breathing rapid and shallow; abdomen distended. Temperature 104.4°, pulse 104, respirations 48.

Physical: Over right lower lobe behind, dulness, diminished voice and breathing and a few subcrepitant râles; over left lower lobe behind and in front, many subcrepitant râles coming in on the sixth day.

Treatment: Creosotal gr. xv. q. 2 h. if awake. Temperature fell by crisis on the seventh day. Resolution complete on the fourteenth (14th) day. Discharged cured May 31, 1901.

CASE V.—Augustus L., aged thirty-eight. Personal history: Moderately alcoholic. Present illness: Three days ago, severe chill, followed by fever and sweating; pain in left side, cough, and slightly bloody sputum; vomiting and prostration. Chief complaint: Pain in side.

Admitted May 29, 1901. Tongue coated and moist; pulse regular and of fair force; breathing rapid and not labored. Temperature 104.6°, pulse 112, respirations 32.

Over left lower lobe in axillæ, dulness, bronchovesicular breathing, bronchial voice, and subcrepitant râles; few subcrepitant râles behind.

Treatment: Came in on third day, was given creosotal gr. xv. q. 2 h. if awake. Temperature remained high, and patient died on the seventh day; temperature 106°.

CASE VI.—William T., aged twenty-six. Personal history: Moderately alcoholic. Present illness: Yesterday morning was suddenly taken with chill, marked prostration, severe pain in left side of chest, vomiting, general body pains. To-day became feverish; cough with blood-stained sputum. Chief complaint: Pain in chest.

Admitted June 24, 1901. Face flushed; tongue moist, heavily coated; pulse regular, small, weak; breathing rapid and irregular because of pain. Temperature 103.2°, pulse 100, respirations 32.

Over left lower lobe posteriorly dulness and distant bronchial breathing and increased voice; few fine râles; slight bronchitis over rest of lungs.

Stimulated vigorously with whiskey, digitalis, and strychnine. On June 25 was given creosotal gr. xv. q. 2 h.

Temperature was highest on the fourth day; fell on the fifth to 101.4°, rose to 103.2° in the evening, then fell to normal on the sixth day, then continued between 100° and 102° till the thirteenth day.

At that time px. showed dulness, with diminished voice and breathing over left lower lobe. Patient was discharged cured July 13, 1901.

Case VII.—Hilda S., aged eighteen. Always well. Present illness: Three days ago had chills and fever; severe pain in right side of chest; cough with yellow sputum, shortness of breath, headache, and restlessness. Chief complaint: Pain in right chest.

Admitted June 27, 1901. Cheeks flushed; tongue coated, moist; pulse rapid, regular, good force; breathing rapid, grunting, somewhat difficult. Temperature 104.2°, pulse 120, respirations 48.

Dulness over right upper lobe behind with few subcrepitant râles, patch of dulness over left upper lobe behind.

Came in on fourth day; was given creosotal gr. xv. q. 3 h.; also whiskey and digitalis. Began to defervesce on ninth day by lysis, temperature reaching normal on the eleventh day of disease. On fifteenth day physical examination showed lungs were normal. Was discharged cured, July 13, 1901.

Case VIII.—Leopold K., aged thirty-five. Personal history: Well till present illness. Present illness: Two weeks ago began to feel tired, weak, and had no appetite; ten days ago went to bed; pain in back; feverish next day; cough, with mucopurulent sputum; nausea; vomited. Pain became localized on both sides of the chest; became much prostrated. Chief complaint: Pain in chest. Admitted July 15, 1901. Cheeks flushed, tongue heavily coated, white; pulse regular, full, soft, good force; breathing rapid, shallow; breath foul; abdomen tympanitic. Temperature 105°, pulse 120, respirations 56.

Over right upper lobe, note hyperresonant, dull from third space downward, marked in axilla, less marked over right lower lobe behind; breathing over middle lobe bronchial, over lower lobe diminished; voice bronchial over middle lobe, increased over lower lobe; fine friction sounds over both middle and lower lobes. Over left lower lobe behind marked dulness, with distinct bronchial voice and breathing; a few friction sounds over upper part of lower lobe behind and in axilla.

He came in on ninth day, and on the next day he was given creosotal gr. xv. q. 2 h., with whiskey ℥ss. q. 3 h.

Temperature ran from 102° in the morning to 104.8° in the afternoon till the twelfth day; then fell to 100°, and continued from 100° to 99° till the twenty-second day, when it remained normal. At this time there were still dulness and distant bronchial breathing over the right middle lobe and the left lower lobe. Discharged cured August 8, 1901.

Case IX.—Charles H., aged thirteen. Present illness: Two days ago had severe chill, followed by high fever, increased rapidity of pulse, headache, nausea, vomiting, pain in left side, cough, with white sputum, later streaked with blood; prostration. Chief complaint: Pain in side. Admitted August 2, 1901. Cheeks flushed; tongue dry, heavily coated in center; pulse regular, soft, weak; breathing shallow, slightly labored; sputum rusty. Temperature 103°, pulse 120, respirations 48. Over upper part of left lower lobe behind there is marked dulness, with bronchial voice and breathing.

Treatment: Came in on third day; was given creosotal gr. v. q. 2 h.; also whiskey ʒj. q. 3 h.

On the seventh day there was dulness over entire left lower lobe, with bronchial voice and breathing. On the sixth day temperature broke to 99°, then ranged from 101° to 104° till the eighth day, then fell by lysis, reaching normal on the tenth. On the fourteenth day, there was dulness over left lower lobe, with diminished breathing and voice to base. Discharged, cured, August 16, 1901.

Case X.—Robert F., aged twenty-six (colored). Good health till present illness. Present illness: For two weeks has had nausea and attacks of vomiting; remained at work; five days ago had a chill, followed by vomiting, fever, pain in side, cough, scanty, white sputum. Chief complaint: Cough, pain in side.

Admitted August 7, 1901. Tongue heavily coated, brown, rather dry; pulse regular, soft, fair force. Temperature 105°, pulse 116, respirations 42.

Px.—Over left lower lobe behind and in axilla marked dulness, slightly diminished fremitus, bronchial voice and breathing, few friction sounds.

Treatment: Came in on fifth day; was given creosotal gr. v. q. 3 h.

Temperature fell on the ninth day by lysis, reaching normal on the tenth day, and remained down. On the eleventh day, there was marked dulness, and bronchial voice and breathing over left lower lobe, with many subcrepitant râles. Discharged cured, August 16, 1901.

Case XI.—James F., aged ten. Past history: Pleurisy and pneumonia for two weeks one year ago; subject to attacks of croup; has been well lately. Present illness: Four days ago, after having been in bathing, woke up with fever; severe pain in side and abdomen; headache; vomited twice; became somewhat delirious; had cough with scant sputum. Chief complaint: Pain in left side.

Admitted August 11, 1901. Face flushed, herpes on upper lip and left cheek; tongue moist, coated; pulse regular, good force; breathing shallow, labored; abdomen somewhat rigid and tender. Temperature 103°, pulse 122, respirations 36.

Px.—Expansion diminished over left lung, marked dulness over left lower lobe behind, bronchial voice and breathing over upper part of left lower lobe; many fine pleuritic râles over entire left lower lobe behind.

Treatment: Came in on fifth day, with temperature 103.4°; was given creosotal ♏iij. q. 3 h. if awake. Temperature fell by crisis on seventh day; on August 11, resolution was complete, and he was discharged cured.

Case XII.—Edward H., aged ten. Past history: Good. Present illness: Four days ago began to have headache; vomited once; felt feverish; had pain in back; no appetite; dry cough; pain in right side, made worse by coughing. Since then fever has increased; cough has been worse; vomited at intervals; has had diarrhœa; continued to get weaker and felt prostrated. Chief complaint: Cough; pain in side.

Admitted August 18, 1901. Tongue moist, coated; pulse regular, good force; breathing rapid, shallow. Temperature 104°, pulse 134, respirations 48.

Dulness with bronchial voice and breathing over upper lobe of right lung; dulness extends to third space in front; many subcrepitant râles, apparently pleuritic.

Treatment: Came in on fourth day of disease, with temperature 104.4°. Creosotal, gr. iij. q. 3 h., if awake, was begun next day. Temperature began to fall on the afternoon of the sixth day, and reached normal in the morning of the seventh day of disease. Temperature remained normal, and he was discharged cured, August 26, 1901.

Case XIII.—Ellen L., aged thirty-six. Past history: Good. Present illness: Six days ago began to have severe pain in left side, made worse by breathing; had headache, pain in back and legs; felt chilly. Next day felt prostrated and vomited food;

was very feverish; slight cough without sputum. Yesterday and to-day pain is better and feels more comfortable. Chief complaint: Weakness; fever.

Admitted September 7, 1901. Cheeks flushed; tongue moist, coated; pulse regular, fair force; abdomen somewhat distended. Temperature 103.8°, pulse 108, respirations 36.

In left axilla from third rib to base, slight dulness and bronchial breathing; bronchial breathing over left interscapular region.

Treatment: Came in on seventh day of disease, with temperature 103.8°. Given creosotal gr. x. q. 3 h. if awake. Temperature ran from 103° to 105° on the eighth day, 101.4° to 103.8° on the ninth day, 99° to 101.2° on the tenth day, 98° to 99.8° on the eleventh day, then remained normal. Discharged cured September 23, 1901.

Case XIV.—Fred H., aged twenty-five. Past history: Pneumonia seven years ago; sick about four weeks. Present illness: Two weeks ago began to cough; mucopurulent sputum; headache and had no appetite. One day ago began to have severe pain in left chest, made worse by coughing and breathing; felt chilly during day and then feverish; sputum became rusty. Chief complaint: Pain in left chest.

Admitted September 10, 1901. Tongue moist, considerably coated, white; pulse regular, soft, fair force; breathing shallow. Temperature 105.6°, pulse 120, respirations 32.

Over left lower lobe from just above angle of scapula to base marked dulness with bronchial voice and breathing; these do not extend to axilla; an occasional subcrepitant râle over both lungs.

Treatment: Came in on second day, with temperature 105.6°. On the third day temperature was 102° in morning, 105.4° in afternoon; on the fourth day 101.6° to 102.8°; on the fifth day 100° in morning, 98.4° in afternoon. For next four days it varied from normal to 100°, then remained normal. On the ninth day there was slight dulness over left lower lobe, diminished breathing, and a few fine subcrepitant râles. Was discharged cured, August 25, 1901.

Case XV.—Already detailed.

Case XVI.—Detailed above.

Case XVII.—Tony L., aged thirty-seven. Past history: Good. Present illness: Four days ago had a chill, followed by fever, pain in head and in right side; cough with no sputum; appetite poor; bowels regular. Chief complaint: Cough.

Admitted October 30, 1901. Cheeks flushed; tongue moist, coated; pulse regular, soft, fair force. Temperature 104°, pulse 96, respirations 24.

Over right upper lobe in front dulness in first, second, and third spaces, and in upper part of axilla behind, over upper part of lower lobe; area of dulness, bronchial voice and breathing; a few crepitant râles; fremitus increased.

Treatment and course: Came in on fifth day with temperature 104°; on sixth day, 102.6° in morning, 104° in evening; seventh day, 104° in morning, 103.2° in evening; eighth day, 102.8° in morning, 100.4° in evening; ninth day, 98.2° in morning, 99° in evening, then remained normal. On day of admission was given creosotal gr. xv. q. 3 h. if awake. On nineteenth day, signs were persisting to a slight degree; otherwise is perfectly well November 13, 1901.

Case XVIII.—Annie S., aged thirty-five. Past history: Good. Present illness: Four days ago had a chill, felt feverish, had headache, no vomiting; lost appetite; pain in right side, especially marked on deep inspiration; moderate cough, but no expectoration; chill not repeated; pain in side severe; considerably prostrated. Chief complaint: Cough; pain in side.

Admitted October 30, 1901. Face flushed; looks prostrated; tongue moist, heavily coated, white; pulse rapid, regular, soft, good force; breathing shallow, slightly labored. Temperature 102.6°, pulse 124, respirations 28.

Diminished expansion on right side. Over right lower lobe behind, dulness from half way between spine and angle of scapula; flatness from angle to base; also in axilla and in front below fourth rib; fremitus diminished; breathing absent over flatness in front, in axilla, and over extreme base behind; voice diminished over area of dulness and flatness; few crepitant râles in front and in axilla; over flatness, also behind.

Treatment and course: Came in on fourth day with temperature 102.6°. Was given creosotal gr. xv. q. 3 h. if awake. Fifth day, temperature 101.2° in morning, 104.2° evening; sixth day, temperature 102° in morning, 103.6° evening; seventh day, temperature 103.4° in morning, 105.4° evening. Temperature fell by crisis in afternoon of seventh day, reaching 99° on morning of eighth day and remained down. Resolution complete on eighteenth day and patient is now, November 13, 1901, up and nearly well.

23 East Forty-seventh Street.

RINGWORM: A NOTE ON ITS TREATMENT.*

By GEORGE THOMAS JACKSON, M.D.,
NEW YORK.

CHIEF OF CLINIC AND INSTRUCTOR IN DERMATOLOGY, MEDICAL DEPARTMENT OF COLUMBIA UNIVERSITY.

Ringworm, like the poor, we have always with us. No matter where a doctor's work may lie, whether in the city or in the country, if he is in general practice, he will, sooner or later, be called upon to treat ringworm. There are few diseases of the skin easier to cure than ringworm of the so-called non-hairy parts of the body. Sulphur, iodine, salicylic acid, mercury—any one of these in ointment or lotion will cure it. Indeed, most of them are not brought to the doctor, but cured by means of domestic remedies.

While it is easy to cure ringworm of the non-hairy parts, it is difficult to cure ringworm of the scalp and beard, especially the former. In many communities a case of ringworm of the scalp will float around from one doctor to another, and will persist in spite of their best endeavors. No conscientious physician will promise a speedy cure. If the patient is well in six months or a year, the doctor can congratulate himself upon his success.

To a certain extent, this is true of ringworm of the beard, barber's itch. While by no means as intractable as ringworm of the scalp, still six months is often necessary for a cure under most methods of treatment. The reason for the intractability of ringworm of the scalp and beard is that the fungus grows down into the hair follicles, and it is very difficult to make our well-recognized antiparasitics penetrate to the seat of the trouble without damaging the skin.

It is not my intention to detail to you the many methods of treatment with which you are all more or less familiar, but to commend to you one that I have used for some years with excellent effect, and to ask you to give it a trial.

In looking for an excipient that would penetrate easily and be bland, goose grease occurred to me as probably just what I wanted. Many of you have been brought up in the country, and remember how your mother used to rub your nose and throat when you had a cold with goose grease, in the belief that "it would loosen up the phlegm."

I have found it better than I had hoped for. If you will add a drachm or more of the crystals of iodine to the ounce of goose grease, you will have a most effective remedy for ringworm.

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*Read before the Medical Society of the State of New York.

At the Vanderbilt Clinic, New York City, where we have many cases of ringworm, this preparation has been used extensively for two or three years, almost exclusively after the first few months, when it was found to be more efficacious than other remedies. It is to be applied twice a day until it produces reaction, as shown by a little swelling of the patch. Then once a day will be sufficient. In two or three weeks the hair falls out of the patch, and it becomes bald, like a patch of alopecia areata. After a time, the hair grows again, and the patch is well. The first applications are apt to be a little painful for a few moments, but after that even little children do not complain of pain. No epilation is necessary

When used on the bearded portions of the face, the applications are more painful than when the scalp is the part treated. If much reaction with swelling is caused, the use of the remedy can be suspended for a few days, and a salicylated oil of 3-per-cent. strength can be used. As soon as the reaction subsides, the remedy should be used again. The result in this form of ringworm is remarkable. A few days ago, I asked Dr. Dade, who has charge of one of the classes for men at the Vanderbilt Clinic, how long it took to cure barber's itch with the preparation. He said just three weeks, as he had noted in a number of cases. This coincides with the results I have had in private practice.

Just one word of caution. Be sure that you obtain the genuine article. I am told by those who should know that the goose grease dispensed by many druggists has never seen a goose, but is manufactured of several fats which, like goose grease, melt at a low temperature. There are some good samples on the market. The finest variety is expensive, as it is made from the fat of uncooked geese.

14 East Thirty-first Street.

PROGRESS IN VETERINARY MEDICINE IN ITS RELATION TO PUBLIC HEALTH.*

By DR. WILLIAM HERBERT LOWE,
PATERSON, N. J.
PRESIDENT OF THE VETERINARY MEDICAL ASSOCIATION OF NEW JERSEY.

The progress made in veterinary medicine in its relation to hygiene, as well as in many other respects, during the last few years, has been constant and amazing, and shows that the two great branches of medical science—human and animal—are inseparable. This fact, I believe, is recognized by scientists the world over. The leading veterinary colleges of America are no longer independent institutions, but have become departments of great universities. Cornell and the University of Pennsylvania has each a veterinary department, and the New York University, also, has recently established a veterinary department. This department is the result of the union of the two oldest veterinary colleges in this country, viz., The New York College of Veterinary Surgeons and the American Veterinary College, and the adoption of the consolidated institution as a school of the New York University, under the title of the New York-American Veterinary College.

Comparative anatomy, comparative physiology, comparative pathology, bacteriology, entomology, animal parasites and parasitism, chemistry, physics, meat and milk inspection, and sanitary science are among the subjects found in the curricula of the recognized veterinary schools of to-day.

Harvey's discovery of the action of the heart, and the circulation of the blood, by experiments made upon living animals; Jenner's discovery of vaccination and announcement that smallpox might be prevented by inoculation with the virus of cowpox, are well-known examples of the inestimable value to mankind of a scientific study of animal life in connection with experimentation. In fact, it might be said that it was by the student entering the domain of comparative or veterinary medicine that many of the now known scientific facts were discovered and demonstrated, and as many of the diseases of animals are transmissible to man, the subject assumes an importance of no small proportion when considered from the standpoint of hygiene or public health. Well, indeed, may the New Jersey Sanitary Association give consideration to this subject.

By investigations and experiments, conducted by veterinarians in Texas fever, it was found that cattle in the infective district carried in their blood the contagion of Texas fever; that it was due to a protozoan organism, *Pyrosoma bigeminum*, analogous to the parasite of human malaria, and that this parasite was transferred to susceptible cattle outside the infected district by the southern cattle tick, *Boophilis bovis*. The experiments alluded to are interesting to the scientific investigator and make a remarkable chapter in the progress of medical science. They have already led to extensive studies of the part played by insects in the propagation of human diseases, and particularly malarial and yellow fevers, opening up a new field in medical research, by which it was discovered that mosquitos are responsible for disseminating these diseases.

No fact has drawn a closer relation between animal and human diseases or the protection of the public health through domestic animals than the introduction of the antitoxin principles of serum therapy. The immunizing of animals against fatal contagious diseases; the rapid and certain diagnosis of latent diseases, which cannot be known by physical symptoms, and their early isolation before they have spread their disease germs among their kind, and to the human family; the cure of some diseases by the administration of repeated doses of attenuated virus, and the prevention of development of disease by their early administration, are phases of veterinary science which make it a preserver of the public health. Contemplate for a moment the importance of tuberculin used for the diagnosis of tuberculosis in dairy cattle; mallein used for the diagnosis of latent glanders in the horse; vaccine employed to protect mankind from smallpox; tetanus antitoxin employed in the treatment of lockjaw; diphtheria antitoxin employed in the treatment of diphtheria, as well as other antitoxins employed in the treatment of anthrax, rabies, and other diseases. It is impossible to estimate the value of animal serums to mankind, employed for diagnostic, prophylactic, and therapeutic purposes.

The position taken by Professor Koch in the recent British Congress on Tuberculosis has awakened a great deal of interest in the question of the transmissibility of the tubercle bacillus from animal to man and from man to animal.

The experiments showing the difficulty or the impossibility of transmitting human tuberculosis to cattle in a fatal form cannot be accepted as evidence that the bovine bacillus, which is far more virulent and fatal for many animals, cannot infect man. On the contrary, the greater disease-producing power of the bovine bacillus would appear to make it more dangerous for human beings as well as for lower animals.

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* A paper read before the New Jersey Sanitary Association at Lakewood, N. J., December 7, 1901.

The evidence showing the practical impossibility of cattle being infected with human tuberculosis under ordinary conditions is a great encouragement for the eradication of bovine tuberculosis, since it proves that the danger so often feared that cattle if freed from the disease would be immediately reinfected from mankind, does not exist in fact, and need not be considered.

Even if it were true that bovine tuberculosis is not communicable to man, it would nevertheless be to the interest of cattle and swine growers to have the disease eradicated as an economic measure; and such eradication would also be to the interest of the public, since it would have great effect as a means of preserving the food supply of the nation and of protecting consumers from the unwholesome products of diseased animals.

The communicability of tuberculosis received its full share of attention at the recent annual meeting of the American Veterinary Medical Association held at Atlantic City last September, and resolutions were adopted expressing the sense of the association as above. I might state that a number of veterinarians are making a series of experiments at the present time that promise to be of no little value to science and mankind. Some of these experiments, I am glad to say, are being made in our own State by the Public Health Committee of the Veterinary Medical Association of New Jersey.

The last New Jersey Legislature enacted a pure food law, and put the execution of the law under the control of the State Board of Health, and I hope that ample provision is made in said law for necessary veterinary inspection of all food animals as well as animal food products. The qualified veterinarian is the expert on this subject. This association can do much to enlighten the general public on veterinary hygiene and sanitation, and I regard the same as an important function of this organization.

All dairies should be regularly inspected by a competent veterinarian. The cattle should be examined as to their health, and the attendants as to their own healthfulness and cleanliness; the stable should have sufficient air space, be well lighted, ventilated, and drained; the quality and kind of food are important, and the water supply should be uncontaminated. Milk is often tainted, contaminated, or infected after it is drawn from the cow. The whole system of producing, handling, and marketing milk is being revolutionized, and great improvement has already been made in many dairies by enterprising producers.

Milk is pure while in the udder of a healthy cow, but the moment it is exposed, impurities soon deteriorate it. It should be conveyed to the milk house as soon as drawn. Care must be taken that the water in which the milk cans and utensils are washed is not polluted, for it is in this way that epidemics of typhoid fever are sometimes started. No dairyman should give medicine to a cow, and allow the milk to be used, especially for children. The use of various preparations of mercury, arsenic, zinc, iron, iodine, purgatives, and other medicines may easily cause fatal results.

I am of opinion that practitioners of human medicine might, in certain maladies of their patients, especially of children, administer medicine to their patients through the agency of a cow by her milk.

The importance of meat inspection is becoming more evident every day. A layman or butcher is not qualified to do work of this character. It requires the services of the veterinary expert. The danger is not so much from meat of inferior quality, or even from putrid meat, as it is from fresh meat containing microorganisms of communicable diseases. Certain parasites (*Cysticercus cellulosæ* and *C. bovis*) are directly transmissible to man through the use of meat. The veterinarian with a knowledge of these worms is able to prevent the spread of their tapeworm stage among human beings by condemning the infested meat, or subjecting it to processes which will render it harmless. The rigid system of meat inspection in Germany has resulted in an actual decrease in tapeworm disease (by *Tænia solium*, and probably also by *T. saginata*) in man and in the frequency of *C. cellulosæ* in the human eye.

Condemnation and destruction of organs infested with certain other parasites (*Echinococcus*, *Cœnurus*, *Cysticercus tenuicollis*) will prevent the spread of these parasites in their tapeworm stage to dogs, and by that means prevent the reinfection of man (by *Echinococcus*) and of domesticated animals (by *Echinococcus*, *Cœnurus*, *Cysticercus tenuicollis*); in this case, prevention of tapeworm disease in dogs, though of comparatively little importance so far as the dogs are concerned, becomes very important, not only in public hygiene (in the prevention of disease in man and animals), but also from an economic standpoint, preventing financial loss to stock-raisers from disease and death in their herds and flocks caused by these worms. The destruction of livers heavily infected with flukes will also result indirectly in decreasing fluke disease in man and animals. I would refer those interested to an exhaustive work on the subject compiled by the Bureau of Animal Industry, some of the data of which I have incorporated in this paper.

Pork before being put on the market should be examined microscopically for a minute worm called *trichina spiralis*, which causes the disease known as trichinosis. As a secondary precaution, no pork should be eaten unless it has been thoroughly cooked throughout, so as to kill any parasites which may exist in it. The pernicious and most unsanitary practice of feeding swine with garbage should be prohibited, as it induces disease in that animal whose carcass constitutes a large portion of our food resources.

Cold storage, cooking, or salting will destroy the parasites of certain diseases. In other cases the meat should be "tanked" and converted into fertilizer. In each city and town the slaughtering should all be done at one abattoir, and that abattoir should be constructed upon sanitary principles. There should be a competent veterinary inspector appointed as director in every slaughter-house, with assistants, if necessary.

Veterinary inspection of meat is now being efficiently carried out on a large scale for interstate and foreign trade by the United States Bureau of Animal Industry. Meat inspection should be carried out along the same lines in every city and town in New Jersey. The State, and every city and township, board of health should have at least one veterinarian officially connected with it. Veterinarians should be appointed on boards of health, as well as physicians and others, for no small part of preventive medicine and sanitary science belongs essentially to the veterinary profession.

I take a deep interest in this association because it brings together members of several professions interested in a common cause.

Pathological Society of Philadelphia.—The second annual exhibition meeting of the society was held on January 9, a large number of gross and microscopic specimens being displayed in the Mutter Museum of the College of Physicians of Philadelphia

CASE OF ACUTE ARTICULAR RHEUMATISM WITH PYÆMIC TEMPERATURE, TREATED BY ANTI-STREPTOCOCCIC SERUM.

By R. J. CHIPMAN, M.D.,
PORTLAND, ORE.

Patient, Miss W., aged twenty-five years, was exposed to cold wind and low temperature in Seattle about August 31, and came home from a street-car ride thoroughly chilled. For a week afterward she complained of great nervousness, general malaise, and anorexia. On Saturday, September 8, she had a severe chill, followed by a temperature of 104°, and general muscular pains. The next day, the finger joints of both hands and the wrist joints became painful on motion, with slight swelling, and a few purpuric spots appeared on the arms and legs. She was immediately put on salicylates internally, and externally in the form of salicylic-acid inunctions, and the joints were wrapped in laudanum and soda fomentations. The pain and swelling traveled from one finger to the other from day to day, and finally subsided at the end of the second week, leaving the midphalangeal joint of the left index finger enlarged and stiffened. The temperature ranged from 102° to 104°, the body was bathed in acid sweats, and the patient experienced a chill with a temperature of 104° every three or four days. The salicylates were tried in different forms, and finally discarded entirely, owing to their intolerance by the stomach. Quinine and other antipyretics were tried without effect, and the patient was then treated expectantly with cold sponging to reduce the temperature, and opiates for relief of pain. At the end of the second week the chills became more frequent and the fluctuations in temperature were greater. The left knee became acutely inflamed, and this was followed by swelling of the dorsum of the foot and great toe joint. The leg was put in a plaster cast from the toes to the hip, the knee remaining tense and swollen, and causing acute suffering. The heart sounds during this time were muffled and indistinct, the aortic note being slightly accentuated. There was no increase of cardiac dulness, and no subjective symptoms were complained of. The pulse range was 110-130-146. There was complete anorexia with flatulent distention of the stomach, which gave continual trouble. The spleen was enlarged and tender. The third and fourth weeks were marked by the increasing number of chills, ranging now from one to three in the twenty-four hours, when the temperature would shoot up to 105° and drop in a few hours to 97°; the patient would be drenched in cold sweats, with lips and finger-tips cyanosed. The beginning of the fifth week saw a slight remission of the symptoms for three days, when there were no chills, and the temperature ranged from 97° to 102°; diaphoresis was still excessive. On October 10, after these three days respite, the chills commenced again with increased severity and greater prostration. An axillary temperature was then taken, the patient being unable to hold the thermometer in the mouth; it ranged from 97° to 103.6°. On October 11, at 2 A.M., the temperature was 98.6°; there was a chill, and in three hours (5 o'clock) it was 104°; there was another chill, and the axillary temperature taken for ten minutes three times was 105.4°. At eight o'clock it was 103°, and at 8.30 there was another chill and the temperature rose to 104°. It was decided to try as a last resort the use of anti-streptococcic serum with the hope that it might antagonize the profound septicæmic condition present, which seemed due to some germ infection, possibly by the streptococcus. On that day, October 11, at 2 P.M., the first injection of 10 c.c. was given under the skin of the abdomen, and the temperature did not go above 100° the rest of that day.

At 9 A.M. the next morning the temperature was 100°; a second injection was given, and at 10.30 the temperature was 97° by the mouth; the pulse was 108 (the previous pulse rate had been 110-130). At 12.40 the temperature was 97°, pulse 98; at 2 P.M. it was 97.2°; pulse 108; at 4.30 P.M. the temperature was 98.6°, pulse 120, and at 6.45 P.M. there was another chill lasting a few minutes, and the temperature at 7.25 was 102°. At 9.45 P.M. a third injection of serum was given—the last that could be obtained in the city.

October 13, at 2 A.M., the temperature was 97.4°; there were no more chills that day, and the highest temperature was 102°. The patient felt well, did not perspire any, and complained of pain in the knee only at night; before that it was almost incessant.

October 14, the temperature ranged from 98.6° to 102°.

October 15, the morning temperature was 100.2°. At 1 P.M., more serum having been sent from Spokane and Seattle, a fourth injection was given. The temperature then fell to 99.6°. At 4 P.M. it was 100°; at 6 P.M., 100°; at 8.20 P.M., 99°.

October 16, the temperature was 98.6° to 101°. A fifth injection was given that night at 10.30.

October 17, the temperature at 1 A.M. was 99°, pulse 104; at 7.30 it was 99.2°; at 12.20, 100.4°, pulse 120; at 3.10, 100.2°; at 5.30, 100°; at 9, 100.8°, pulse 120; at 11, a sixth injection was given, and the next morning (October 18) at 8.30 the seventh and last injection was given, the temperature then ranged from 98.8° to 99.2°.

On October 19, the temperature was 98° to 99°; on October 20, it was 98.2° to 100°, and on October 21, it was 98.4° to 99°.

On October 23, a severe attack of urticaria developed, involving the whole surface of the body and causing great distress. This lasted for six days, being worse at night.

At this time, November 7, being two months from the date of the onset, the patient is sitting up, having convalesced very rapidly. The swelling in the left knee has almost entirely subsided, and only slight stiffness remains. The left index finger is still slightly stiff, and enlarged in the mid-phalangeal joint. The heart sounds are normal.

In reviewing the history of this case it seems impossible to ascribe the sudden remission of symptoms to mere coincidence. The patient was greatly prostrated physically and mentally, and seemed to be rapidly progressing toward a lethal ending; all her symptoms were being intensified, when the serum was commenced and the improvement was marked from the first injection, and her condition was practically normal from the third injection. In looking over the small amount of literature at my disposal, I was able to find case reports of serum being used with marked success in erysipelas, cellulitis, and puerperal septicæmia, and of its signal failure in pneumonia. In the *Philadelphia Medical Journal*, October 19, 1901, one observer reports finding in a case of acute articular rheumatism an organism closely resembling the streptococcus, which, on being inoculated into animals, produced a disease presenting the clinical picture of acute articular rheumatism. Autopsy showed marked inflammatory changes in and about the joints, and the latter contained a small amount of turbid fluid. In one of the guinea-pigs inoculated, a well-developed endocarditis was found. It is noteworthy that the patient from whom this organism was originally obtained had a relapse, and the same organism was found the second time. No mention was made of serum therapy in this case, nor am I aware of its having been used in any case of acute rheumatism.

MACLEARY BUILDING

EARLY MECHANICAL EFFECTS OF ALTITUDE OF THE ROCKY MOUNTAIN PLATEAU IN PULMONARY TUBERCULOSIS.

By J. E. COURTNEY, M.D.,
DENVER, COLO.

Leaving out the ordinary effects of rest, outdoor life, and sunshine, and also the moral effect of change, in cases of pulmonary tuberculosis, with limited involvement of tissue, there is still a most important, immediate, and, at first, purely mechanical effect of the altitudes of from four to six thousand feet on the Rocky Mountain Plateau. The alterative and metabolic effects mentioned later follow as a natural sequence. In low levels, as a result of the catarrhal condition, there is a mucopurulent accumulation in the bronchi; irritation has rendered their walls flaccid, the mucous membrane tumefied, the bronchioles dilated—it is, in short, eminently the precavernous stage of pulmonary tuberculosis. The bronchus and bronchioles leading to this diseased area are quickly dilated by the rarefied air, and the deeper respirations necessary to get sufficient oxygen. The quantity of expectoration may, therefore, be at first increased; indeed, a constricted or choked bronchus may be suddenly dilated, and the accumulated contents quickly emptied by expectoration to the alarm of the patient. The unwonted dilatation of the air vesicles and stretching of the trabeculæ may cause the loss of the expectoration in such a paroxysm to be tinged with blood, or there may even be some hemorrhage. The process may fairly be compared to the stretching and revivifying of indolent surfaces, nature's surgery of the lung, a species of curettage previous to the institution of the healing process.

Weber[*] says that the tubercle bacilli cannot be at once removed by change of surroundings; but the process just described is quite in the direction of accomplishing this. I am convinced that a small cavity even may be emptied by this mechanism. The beneficial effects are plain; quantities of bacilli are removed; the foci for the generation of toxins, for reabsorption of pyæmic material, and the chief source of irritating cough by accumulating mucus are cleaned out. The stagnant and toxin-laden air in the bronchi and vesicles is evacuated, and oxygen admitted.[†]

The various applications of the pneumatic cabinet have been devised with a view to accomplishing something of this sort, but the great defect is that the application is not sufficiently sustained. It is not simply the relative disease of the breathing area engaged in the morbid process, but the partial clogging of the bronchus leading there, which causes the anæmia and dyspnœa. The dilatation of the bronchus opens to aeration this entire area, and it immediately becomes available for respiration, except, of course, the small spot of ulceration, and this is now fully exposed to the dry aseptic atmosphere. The above considerations, I believe, account for the many phenomenally rapid improvements, and even recoveries, seen in this region, and the reverse of the process explains their often rapid relapse on returning to lower levels. In a denser and more moist atmosphere the lumen of the bronchus diminishes, partly from collapse, partly from tumefaction, of the walls; mucopurulent secretion containing bacilli accumulates, toxins form, absorption takes place, and fever returns.

Numbers of persons have related to me the experience of paroxysms of cough, and with large amounts of expectoration, as the first effect of the high altitudes of the Rockies.

310 California Building.

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[*] Cohen's "Physiologic Therapeutics," Vol. IV., Climatology.

[†] Dr. Chas. Denison in New York *Medical Journal*, October, 1901.

Clinical Department.

GUNSHOT WOUND OF THE STOMACH.

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NEW DORP, NEW YORK CITY.
ATTENDING SURGEON TO THE S. I. S. INFIRMARY.

On May 12, 1898, I had just finished making my rounds at the S. I. S. Infirmary, when the police ambulance arrived with a negro who had shot his wife and then himself. He was a burly fellow, of fine physique, and thirty years of age. The shooting had occurred about eight in the morning, at Tottenville, thirteen miles from the hospital, and he had been transported in a steel-tired police patrol wagon and had received no medical attention. He reached the hospital at half-past eleven. He was unconscious and nearly pulseless. I had him taken directly to the operating room, and at forty minutes past eleven he was given a small quantity of ether, which anæsthetic was administered with great care and in very small quantities during the operation, which lasted about half an hour. There was a perforating wound, made by a thirty-two caliber bullet, about three inches to the left of the median line, and two inches below the free border of the ribs. This wound was surrounded by an areola of swollen and inflamed tissue. I made a five-inch incision in the median line, extending from the tip of the xiphoid process to within two inches of the umbilicus. There presented a slight tear in the right lobe of the liver, and a perforation of the anterior wall of the stomach near the cardiac end. The liver had nearly ceased bleeding, and I made no attempt to suture it. The stomach wound I closed with Lambert sutures of black silk, and cutting through the lesser omentum round the stomach closed the wound of exit, in its posterior wall, in the same manner. After leaving the stomach, the bullet passed through the capsule of the left kidney, and buried itself in the muscles of the back. It was removed four weeks later from just beneath the skin, where it was easily located. There were perforations of the transverse mesocolon, but as these had ceased to bleed, they were left alone. There was still considerable hemorrhage from the kidney, and the abdomen was full of clots and loose blood. The larger clots were removed and part of the blood was sponged out, but no attempt was made to flush the abdomen or remove all the blood. The incision was closed with buried catgut sutures, and the skin with a subcuticular suture. A piece of lamp-wick was put through the bullet wound, just to, but not into, the peritoneal cavity. For twenty-four hours the man was given strychnine subcutaneously every three hours, and rectal infusions of eight ounces of decinormal saline solution at about the body temperature every four hours. At five in the afternoon of the day of the operation, his temperature was 100.4° F., his respirations were 52, and his pulse 108. The next afternoon the temperature reached 101.3°, with a pulse of 96, and from that time continued to go down, never reaching 101° again, and becoming normal on the sixth day. At the end of twenty-four hours after the operation, the man was given peptonized milk. On the fifth day he had "soft" diet, and "home" diet on the tenth day. He was taken from the hospital to the county jail nineteen days after his injury, and was eventually electrocuted at Sing Sing. I wish to call attention to two factors which seem to me to have influenced the unusually favorable course of this case. First, the incision was not through the wound of entrance, but through sound tissue, and hence healed perfectly under a single dressing, and eight days after the operation was almost imperceptible. The second point is that there was very little handling or disturbance of the abdominal contents. I feel sure that most of us are tempted to disturb the viscera entirely too much in our abdominal work, and that the peritoneum will take care of large blood clots and an almost unlimited amount of free blood or serum, and can even endure the presence of considerable foreign matter, such as the escaped contents of the stomach or intestine. I do not mean in any way to compare this case with that of our late lamented President, for my patient was a young and unusually robust man, an almost ideal subject for such an operation.

GALLSTONES COMPLICATED WITH EMPYEMA OF THE GALL-BLADDER.

By H. T. MILLER, M.D.,
SPRINGFIELD, OHIO.
SURGEON TO THE CITY HOSPITAL.

This patient, Miss H., aged twenty-three years, had been treated for about three years for what was always supposed to be "stomach trouble." When called to attend her in December, 1900, I found her suffering from a large abscess in the region of the parotid gland, and it was at this time that I was given a history of "stomach trouble." I would here interject that I believe that a large number of cases of "stomach trouble" are, in fact, genuine cases of gallstones, and it is only when there is a volcanic outburst of symptoms plainly characteristic of gallstones that a diagnosis of this condition is ever ventured. It is generally supposed that jaundice must be present in every attack, when, in fact, it is rarely, if ever, present, unless the attack should last from three to four days, when one can arrive at a reasonable conclusion that there exists an obstruction in the duct. It happens quite frequently that we discover postmortem calculi in the gall-bladder which in life were never suspected to exist, though there may have been symptoms of stomach trouble always present. In a case in which the attacks are as frequent as two a week, in which the duration of each attack is twenty-four hours, and in which it is necessary to administer frequently a grain of morphine hypodermically, in addition to chloroform, I have never been able to discover, either before, during, or after an attack, the slightest sign of jaundice.

In the case I am about to relate, the symptoms were never those of an acute attack of gallstones, but rather those of a flatulent dyspepsia. I was called one night in January last and found the woman suffering with symptoms so plainly characteristic of gallstones that a diagnosis was easily made. Though there had been more or less constant disturbance of the stomach, and moments when there would be freedom from all suffering, yet there were never present any symptoms resembling those of an acute attack of gallstone colic. Frequently she would seat herself at the table, feeling that she could eat heartily, and after eating a few mouthfuls be compelled to leave the table and not get any relief until the stomach had been thoroughly emptied of its contents. Not until the night that I was called had any of the attacks been so pronounced as to prompt a diagnosis of gallstones. In this attack, I found her lying upon the floor in the throes of the most agonizing pain, and giving vent to the most pitiful and piercing shrieks; and it was not until I had given heroic doses of morphine that I was able to make a satisfactory examination. I could then define a globular tumor swaying to and fro in the abdominal cavity, like the pendulum of a clock, as the patient turned from side to side. The tumor was so low in the abdominal cavity—on a level with the umbilicus—and the movement was so free, that I hesitated in diagnosis between gallstones and right floating kidney. The sudden ushering in of the symptoms, however, with a distinct chill, rise of temperature followed by a sweat, and the presence of jaundice, prompted the diagnosis of gallstones complicated with empyema of the gall-bladder, and I advised an immediate operation.

The following morning the patient was taken to the hospital and the abdomen opened, revealing the gall-bladder, greatly distended, protruding about three inches below the border of the liver. After the gall-bladder had been isolated from the peritoneal cavity with sterilized gauze, it was opened and gave exit to at least a quart of pus and nearly two handfuls of stones, varying in size all the way from a millet-seed to a hazelnut. The walls of the bladder were indurated to the thickness of a quarter of an inch.

After the bladder had been thoroughly irrigated, it was closed with interrupted sutures of catgut, the lower end being left open for the drainage tube. In closing the external incision, two sutures were passed through the walls of the bladder, one above and one below the tube. At the end of four days, the tube was removed, leaving a fistula which in about ten days closed entirely, the patient being discharged from the hospital about a week later.

It is now nearly a year since the operation, and aside from an occasional pain in the region of the liver, there has been no return of the gallstones; in the meantime, however, the patient has been taking ten drops of the tincture of carduus marianus, three times a day, in alternation with three drops of a solution of the spirits of turpentine in Hoffmann's anodyne (one in twenty) three times a day, being warned to discontinue the drugs should their physiological action become noticeable.

A CASE OF GALACTORRHŒA.

By FREDERIC GRIFFITH, M.D.,
NEW YORK.
SURGEON, BELLEVUE DISPENSARY; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE.

The following case came under my notice at the surgical clinic: F. F., female, aged twenty-three years; married six years; has one child a boy, five years old. The woman is a blonde, five feet two and one-half inches in height, and weighs 116 pounds, being of good figure and muscular.

While of a bright and cheerful disposition, the woman is of a somewhat nervous temperament; she sleeps restlessly at times, and suffers from headache; the appetite is good; the bowels vary between constipated and loose. Menstruation is always regular, appearing at intervals of twenty-eight days and lasting for five days. It is not painful, the woman stating that rather more pleasure than discomfort is felt at these times. The breasts are of good size and well formed, with prominent nipples and a darkened areola surrounding them.

Without apparent cause, for a period of two years the breasts have exuded a milklike fluid. By manipulation the woman is enabled to project a stream of the milky fluid from both breasts, but the left is rather more active than the right one. Excitement seems to increase the quantity, and the woman considers this abnormal functional activity more in the light of an accomplishment than otherwise. She denies having had a miscarriage since the birth of her child, or any irregularity of menstruation.

Intercourse is carried on at irregular intervals, though the woman is of a passionate nature.

Deciding that frequent manipulations must act as a stimulant to the secreting glands, I ordered the woman to let them absolutely alone, but did not give her any medicine. The case continued without change under my observation for several weeks.

805 Madison Avenue.

CIRCUMCISION FOR THE RELIEF OF ACNE.

By W. C. USSERY, M.D.,
PARIS, KY.

Eight months ago a man, twenty-two years of age, applied to me for treatment for an aggravated facial acne of five years' standing. For three years he had been treated by several general practitioners and one dermatologist, but the disease continued to increase in severity. At no time had even temporary improvement been noticeable.

Not long before the consultation, I had read in a medical journal, the name of which I cannot now recall, an article stating that one or two cases of acne had recovered after circumcision. The name of the author has also escaped me.

My patient being an unusually intelligent young man, I explained to him the probable uselessness of attempting to treat him in the orthodox way, because of his inability to accommodate his spare time to mine. I explained the journal article to him, and advised a circumcision.

Although his prepuce was not unusually long, and there were no adhesions, he readily consented to the operation, which was done the next day.

I advised him to discontinue all local treatment, internal medication, and special diet. In fact, I told him to eat and drink what he pleased, so as to give the proposed method of cure a perhaps unreasonable test.

Before the wound was completely healed, there was an improvement in his face. At the end of three months the last of the pustules had disappeared. To-day his face is as smooth as any man's, aside from numerous scars following the incision of pustules several years ago.

I see no reason why one would not be justified in freeing adhesions, if present, between prepuce and clitoris of girls and young women, who so often have acne, particularly in those stubborn cases which resist the usual methods of treatment. I had hoped to have such a case to report with this one, but have been unable to secure the consent of the patient to the procedure.

PROTOZOA IN GANGRENOUS STOMATITIS.

By W. MOSER, M. D.,
BROOKLYN, N. Y.
PHYSICIAN TO THE GERMAN HOSPITAL.

It is possible that in gangrenous stomatitis (cancrum oris, noma) we may not be dealing with the same etiological factor at all times. That mercury may produce a severe stomatitis is well known.

Aside from the ordinary aphthous stomatitis in childhood, which usually improves with borax washings or nitrate of silver applications (gr. 1 to ℥ j), there occurs a severe form of stomatitis with gangrenous ulcerated cheek and disease of the bone, ultimately leading to death through septic venous thrombosis or general septicæmia. Now and then, however, a child severely affected, after a protracted illness ultimately recovers.

A few years ago (1897), while making microscopical examinations of the exudation of a severe gangrenous stomatitis, I encountered protozoa. The microorganism was ovoid in shape and remarkably lively in its movements. It was slightly larger in size than the average red blood cell. If it possessed cilia or flagella, I did not detect them. I have seen these organisms in three cases, and believe they stand in causal relation to the disease. It is possible, however, that they may have been only incidental, although protozoa are not usually found in the normal oral cavity.

It is well known that the mouth is a favorite habitat of microorganisms, and notably of fungi, such as leptothrix, streptothrix, mycothrix, and other thread-like species. The ray fungus (actinomyces) is apt to gain entrance through some decayed tooth and produce the well-known symptoms of "lump jaw." Few of the fungi found in the mouth have yet been artificially cultivated. Miller, however, who has described many forms of fungi and cocci in the mouth, has, in conjunction with other investigators, produced cultures of the Iodococcus magnus and parvus. The Leptothrix gigantea of Miller, an unusually large fungus, probably stands in causal relation with pyorrhœa alveolaris in which disease it has been found.

Without entering into a study of the morphology and biology of the many described forms, we may note that it is easy to demonstrate fungi in most cases of aphthous stomatitis and in mercurial stomatitis. In both conditions they are more abundant than in the healthy mouth.

The spirochæte dentium is an organism having much resemblance to the spirillum of Obermeier. Both have pointed ends, and are regarded by Koch as quite distinctive from other forms of spirilla. I regret to be unable to give a more minute or accurate description of the protozoon seen, or to name it properly, but hope that some investigator who has studied all varieties of protozoa may yet do this.

I would suggest in the treatment of gangrenous stomatitis an application of pure carbolic acid followed immediately by alcohol, as is done in the case of infected abscess cavities.

Ichthyol in Tuberculosis.—Charles F. Spangler considers it doubtful if any climate can be so perfect that it will not bear some additional means of enhancing its efficiency. This he finds in ichthyol, which possesses a wide range of therapeutic utility by reason of the innoxious form of sulphur contained in its composition. It is acceptable to the stomach, promoting its function, is readily absorbed by the alimentary mucosæ, and when administered in quantity is in turn eliminated by the mucous surfaces in general. In the tissues it possesses to a high degree the property of stimulating that function of protoplasmic life concerned in constructive metabolism, resulting in an increase in bodily weight, and aside from the local impression exerted through the process of elimination, accomplishes its chief curative value in tubercular and other forms of wasting disease through this reconstructive property. The chief objections to its use are the odor, taste, and eructations which are neutralized to a considerable extent by the use of capsules. Ichthyol is especially valuable in the treatment of patients who are unable to seek an appropriate climate. —*Proceedings of the Philadelphia County Medical Society.*

The Koplik Spots in Measles.—Emil Feer says that the presence of the so-called "Koplik spots" in the pre-eruptive stage of measles is almost universal and is of great diagnostic importance. These spots vary greatly in size, but the original description of them given by Koplik is amply sufficient for their determination. The time of their appearance is somewhat variable. The author observed seventy-five cases, in sixteen of which they were first noticed one day previous to the eruption; in nine cases, two days previous; in four cases, three days previous; and in one case, four days previous. In thirty cases they were not present until the first day of the eruption, and in seven cases not until the second day. So far as Feer's observations extend, these spots are not found in other diseases. Especially is this the case in German measles. Here their absence or presence is a valuable differential diagnostic sign. They are also of great prophylactic value, as by their means cases may be isolated before the eruptive stage, and the other members of the family protected. —*Correspondenz-Blatt für Schweizer Aerzte.*

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THE AMENDED CHARITIES BILL.

The charities of New York State, and of New York City in particular, are a magnificent and enduring testimony to the generosity and public spirit of the inhabitants. Money is poured forth with a lavish hand to assist the sick and needy, and although the charge has been of late frequently made that undue extravagance has characterized the management of charitable institutions under the existing system, the majority of those versed in such matters believe that, upon the whole, the methods now employed are best suited to the circumstances.

Governor Odell's plan, as sketched in his message, to centralize the management and patronage of the eleven State insane hospitals and to invest their control in a State Commission in Lunacy at Albany has met with stout and determined opposition. The criticism of the opponents of the measure to abolish the boards of managers has had the effect of deciding the Assembly Judiciary Committee to amend the bill, so that some of the opposition may be allayed, but the patronage of the State hospitals will still revert to the State Commission in Lunacy.

The bill in its amended form does away with the local boards of managers, substituting for them a visiting board of five members for each State hospital. The visitors must live within the hospital district to which they are appointed.

These changes would seem to be in the nature of a "sop to Cerberus," and leave the situation, to all intents and purposes, *in statu quo*.

In the first instance, it is cogently argued that a visiting board of five members could not satisfactorily attend to three hospitals, having to visit them once a month.

The Manhattan State Hospital, with its three branches, is to have but one board of visitation, and Long Island State Hospital, with two branches, one visiting board. One superintendent and one steward will officiate at the two hospitals on Ward's Island, and the other hospitals and branches will each have a superintendent and steward. The visiting boards will report to the Governor and to the State Commissioner in Lunacy.

Thus it will be observed that the changes made are trifling, and do not affect the main tenor of the Governor's original suggestions. These alterations will meet some of the objections brought against the bill at the hearing on January 22, but the control of the patronage connected with the hospitals will remain in the hands of the Governor and the State Commissioner in Lunacy, the powers of the local boards of visitation being restricted to visitation and inspection.

In fact, the real authority will be centralized at Albany.

The grounds upon which well-founded objections may be advanced against this scheme are that, if carried out, the State hospitals will be virtually brought within the domain of politics. The boards of managers who have up to the present time supervised the institutions for the insane have been, at any rate, outside politics. They have received no pay, and have performed their duties faithfully and well in the cause of charity alone. Perhaps their management has not been at all times distinguished by close economy, but some extravagance, when it directly benefits the patients and those attached to the institutions, is preferable to cheese-paring methods of conducting such establishments upon political lines.

Again, if reforms be needed, they can surely be introduced under the existing régime, and without proceeding to so extreme a measure as to overturn the entire system.

The boards of managers have done efficient service in the past, and no valid reasons have been forthcoming that their freely given services should be abruptly dispensed with.

SMALLPOX RASHES.

MM. H. Roger and E. Weil, writing in *La Presse Médicale*, on the prodromal and secondary eruption of smallpox, say, that the cases admitted under their care numbered 928, rashes being observed in 171, or 18.42 per cent.

The frequency of such rashes was not the same in the two sexes. Thus of 235 males, sixty-two, or 14.48 per cent., had rashes, and of 493 females, 109, or 22.1 per cent. While rashes occurred in all types of the disease, their frequency increased with the severity of the attack. They were most frequent in hemorrhagic cases, being noted in rather more than 47 per cent. of such cases compared with a percentage of less than 13 in cases of varioloid. In unmodified attacks other than hemorrhagic, the percentage differed but little from 20 in all forms, irrespective of the termination of the cases.

The authors state, with regard to individual rashes, that six varieties were recognized—namely, the erythematous, the urticarial, the morbilliform, the scarlatiniform, the purpuric, and the astacoid. The erysipelatous described in standard text-books was not observed by them. The above rashes are described as follows:

"The erythematous rash is in the form of uniform red patches, disappearing on pressure.

"The urticarial rash consists of slightly raised wheals, white in the center, reddish at the edges, and usually associated with some itching.

"The morbilliform rash, much more frequent in occurrence than the preceding varieties, is an erythema, consisting of blotches, sometimes slightly elevated, in color a delicate rose tint, and peculiarly soft to the touch, the blotches being separated from one another by areas of normal skin. The rash has the exact appearance of measles. The blotches of the rash of smallpox are, if anything, a trifle larger and paler than those of measles, but the difference is in most cases too slight to enable a differential diagnosis to be made between the two diseases.

"In the scarlatiniform rash the skin of the affected parts is colored an intense red, which does not completely disappear on pressure. By a close scrutiny it will be found that the rash consists of two parts: a uniform coloration which disappears on pressure, and a fine speckling of a deeper hue, giving the skin a punctuate appearance which cannot be entirely removed by pressure.

"The astacoid (Greek ἀστακός, color of boiled lobster) rash differs materially from all the former. Those already described may be met with in any type of the disease, but the astacoid rash is never encountered except in cases of the hemorrhagic type, and its appearance is a certain indication of a fatal result, the other rashes, even when general, are practically never seen on the face, while the astacoid is almost always present there as well as in all other parts of the body, so that the patient resembles a boiled lobster. It is not according to the authors, as has sometimes been described, a generalized purpuric eruption, but a uniform coloration, a diffused sanguineous extension. In certain cases, however, parts of the body are free from the rash, and areas of healthy skin may be found on the lower parts of the thighs, on the legs, or on the forearms. In some regions, the color may be of a deep red; in others of a purplish hue, lurid, or even petechial. When it is added that the face is slightly turgid, that subconjunctival ecchymoses soon appear, followed by multiple hemorrhagic spots, or even subcutaneous hemorrhages sufficient to produce large bullæ, it will be understood that the patient presents an appearance the like of which is seen in no other disease."

The foregoing descriptions of the rashes of smallpox are vivid, and doubtless in the main correct, and convey a good idea of the difficulties with which the medical practitioner has to contend in making a diagnosis of smallpox in its early stages.

The fact, however, must be borne in mind that even at MM. Roger and Weil's estimate prodromal rashes are only observed in less than 20 per cent. of smallpox cases, and it is probable that as a rule they do not occur so frequently.

MM. Roger and Weil go on to say that these rashes almost invariably precede the true eruption, appearing on the first or second days after the onset of the attack, lasting for from twenty-four to forty-eight hours, and usually disappearing with the appearance of the eruption. The purpuric rash lasts longer, and does not disappear until it has gone through the changes common to hemorrhages in the process of absorption.

Notwithstanding the comparative infrequency of the occurrence of prodromal rashes in smallpox cases, the subject is important and the physician who is able, with more or less certainty, to differentiate between the rashes which sometimes usher in smallpox, and those of the affections which they simulate, has a great advantage over the practitioner who cannot do so.

Early diagnosis of smallpox is universally allowed to be of vital consequence, and accordingly as accurate knowledge as possible of the prodromal rashes cannot but be of the greatest service in checking the spread of the disease.

THE INJECTION OF SOLIDIFYING OILS INTO THE TISSUES FOR MECHANICAL PURPOSES.

A good deal has been written and spoken of late regarding the injection into the tissues of solidifying oils, the purpose being to effect some mechanical end—occlusion of blood vessels, narrowing of ducts, inhibition of spasm in muscles, filling out of cavities, making good tissue deficiency consequent upon deformity, operation, or disease, the prevention of the union of various structures—nerves, muscles—after section, and so on.

The Medical Record, having already made note of some of the uses to which the principle has been put, has received a number of letters from interested correspondents, requesting that more light be shed on the subject. Agreeable to these requests of our subscribers and contributors, we have had the field carefully gone over, the following being a condensed account of the whole matter.

Oils—liquid paraffin and the like—have been used hypodermically for a long time, as simple vehicles for suspended insoluble medicaments, notably in the management of syphilis. They have also been used for their nutritive value, real or supposed, as any one can find out for himself by consulting the catalogues. These uses, however, while they seemed to show the essentially bland and non-irritating character of the liquid oils themselves, have nothing in common with the employment of solidified oils for mechanical purposes, a later and altogether different idea.

As a matter of pathological interest, it may be noted, by the way, that as long ago as 1889 it became apparent that pulmonary embolism might result almost immediately from injections of liquid oils in this way—doubtless because of the entrance of the non-solidified oil into a vein. This accident, when not promptly recognized, has often been taken for pleurisy; but it is gratifying to note that, despite the threatening character of the symptoms, the outlook, so far as a fatal termination is concerned, is quite favorable. There is no doubt that such accidents deterred many otherwise favorably inclined to it from using this method of administering medicinal substances, especially in the management of syphilis. Möller, however, the chief advocate of it, is inclined—not altogether justly, we think—to perceive in the coarse granules of the suspended mercurials the chief cause of the embolism. Such an accident has, in fact, quite recently been seen to follow the injection of melted vaseline alone.

We come now to a radical departure in the method and purpose of employing oils in the tissues.

As long ago as 1891, Dr. J. Leonard Corning published a paper on the "Localization of Remedies about the Sensory Nerves of the Skin" (New York *Medical Journal*, December 26, 1891). To give effect to his purpose, which is sufficiently indicated by the title of his paper, Corning made use of a double-barreled syringe, the smaller barrel containing an aqueous solution of the medicament (anæsthetic, etc.), the other and larger one a solidifying oil. The aqueous solution was first injected into the skin, and immediately followed (through the same needle) by the introduction of the oil. A spray of ether or other refrigerating medicine was then thrown upon the injected region, which caused the instantaneous solidification of the oil in the tissue, and consequent occlusion of the blood vessels, thereby insuring the prolonged sojourn of the medicinal solution *in loco*.

This procedure, unique and ingenious as it is, is the forerunner of the principle which, now thoroughly established, was later applied by the author in a modified and still more striking manner.

About this time, having ascertained that by employing a firmer fat, *i. e.* a fat with a higher melting point, it (the fat) would remain permanently in the tissues.

This fact aroused in him the belief that if a melted oil of this kind were injected into a muscle affected by spasm, and then precipitated by cold, the convulsive condition might be arrested. In course of time, a proper case presenting (spasm of the splenius), he put his theory into practice with complete success even going so far as to give the procedure a special name—elæomyenchysis (The New York *Medical Journal*, April 14, 1894).

A third, and in some respects, the most ingenious of Corning's contributions in this field was published in the MEDICAL RECORD of December 5, 1896. In that paper, an extension of the principle already enunciated by him, the author introduced the melted oil between the subcutaneously divided ends of sensory nerves (the great and small occipital and the auricularis magnus), and then solidified it as before, by the application of cold. A small knife having a cannula in the back was employed both for the subcutaneous division of the nerve and for the injection of the oil. The results obtained were very satisfactory.

Corning has also successfully injected solidifying oils in and about a small tumor that gave rise to pain by pressing upon a sensory nerve, thus preventing its growth by shutting off the blood supply ("Reference-Book of Practical Therapeutics," by Frank P. Foster, D. Appleton & Co., New York, 1896, Vol. I, p. 356, Article: Elæomyenchysis).

In the *Zeitschrift für Heilkunde* for 1900, surgical number, Gersuny, under the caption "Ueber eine subcutane Prothese," states that melted vaseline, when injected into a yielding tissue, forms a small tumor, which remains *in situ*, causing no appreciable reaction. Profiting by this knowledge he has injected this oil to overcome various adverse conditions—the deformity incident to castration, blemishes due to cavities, depressed scars following bone operations, etc. He has also caused artificial narrowing of orifices in this way.

In the *Centralblatt für Gynäkologie*, 1900, No. 48, Pfannenstiel reports a case in which he resorted to the injections as practised by Gersuny; and not only was there little or no success, but an oil embolism precisely like that described by the syphilographers supervened. The distinctive symptoms were cough, chill, headache, vomiting, and accelerated respiration, followed twenty-four hours later by dyspnœa and cyanosis. The subject remained ill for about a week.

Meyer of Berlin has also commented on Gersuny's proposals. while Moskovicz, on behalf of his chief Gersuny (*Wiener med. Wochenschrift* of June 20, 1901), has given a full account of the procedure, wherein he refers to the mild inflammatory reaction taking place before encapsulation.

More recently the method has been used to obliterate smallpox marks, restore contours of saddle-nose, and to prevent reunion of nerves after neurectomy.

From this testimony, derived from a careful examination of medical literature appearing since the invention of the hypodermic needle, it is clear that the credit for the idea of the mechanical employment of oils in the tissues belongs wholly to Dr. Corning. And not only is this true, not only is he entitled to the honor of originating the principle, but also to credit for developing a method far more scientific than that of any of his followers; for even to the merest tyro in pathology it must be clear that by the immediate solidification of the injected oil by cold, as originally recommended by him, the possibility of the occurrence of oil embolism is immeasurably reduced. In any future application of the principle these facts should not be forgotten.

A BILL TO INCREASE THE EFFICIENCY OF THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY.

AT a recent meeting of the army medical officers stationed in Manila the following bill was adopted, and a committee was appointed to draw up a report to accompany the same, and to transmit the bill and memorandum to Congress for its consideration:

"Be it enacted, . . . that from and after the approval of this act, so much of Section 18 of act 4300, approved February 2, 1901, as provides as follows:

"Eight assistant surgeons-general, with the rank of colonel; twelve deputy surgeons-general, with the rank of lieutenant-colonel; sixty surgeons, with the rank of major; two hundred and forty assistant surgeons, with the rank of captain or first lieutenant, shall be and is hereby amended to provide as follows:

"Ten assistant surgeons-general, with the rank of colonel; twenty deputy surgeons-general, with the rank of lieutenant-colonel; eighty surgeons, with the rank of major; two hundred and ten assistant surgeons, with the rank of captain or first lieutenant.

"Provided, that all the other provisions of the said Section 18, act 4300, shall remain in force, and that nothing in this bill shall be held or construed to change any other portion of said act 4300; approved February 2, 1901."

The memorandum accompanying the bill proposed above is signed by the committee on legislation, consisting of Lieutenant-Colonel P. F. Harvey, Deputy Surgeon-General; Major L. M. Maus, Surgeon; Major L. W. Crampton, Surgeon; Capt. M. W. Ireland, Assistant Surgeon, and First Lieutenant J. J. Reilly, Assistant Surgeon. The memorandum states that the object of the proposed bill is to provide for a more satisfactory rate of promotion, such as would serve as an inducement for capable and desirable young medical men to enter the medical department of the army. The memorandum says: "The law now in force provides for such a large number of the lower grades and small number of the higher that it has been found impossible to induce a sufficient number of candidates to present themselves for admission to the medical corps. There are, at the present writing (November 18, 1901), about seventy vacancies, and although since the passage of the act approved, February 2, 1901, examining boards have lowered the standard of examinations, there appears no prospect of a possibility of attracting a sufficient number of properly qualified young men considerably to reduce this very large percentage of vacancies."

The memorandum recites the fact that the medical department has been severely discriminated against, as regards promotion, as compared with other branches of the military service, and shows that while previous to the act passed last year the medical officer could hope to become a major in eighteen or twenty years, and of becoming a colonel at the time of retirement, under this act the young medical man now entering the army can never hope to attain a higher grade than that of major, even after as much as forty years' service, and that the greater portion of such new appointees would probably retire with the grade of captain. "These facts are fully appreciated by the younger physicians of our country and by the volunteer and contract medical officers, hundreds of whom are now serving with troops, and they are declining to become candidates for a position offering such an unpromising career and so little in the line of promotion and emolument."

The memorandum goes on to state that the regrading proposed in the above bill merely restores the rate of promotion as it existed for many years prior to February 2, 1901, and shows the position in which the officers of the proposed higher grades could be utilized. "The readjustment of grades proposed will provide for satisfactory promotion and induce worthy civilian physicians, volunteer, and contract surgeons to present themselves for admission to the corps, who are now deterred from doing so by the gloomy outlook. It is believed certain that unless the relief asked for is bestowed the corps cannot be filled with well-qualified physicians, and the medical service will be seriously embarrassed."

Printed copies of the proposed bill and the accompanying memorandum have been widely distributed among those who might be interested and in a position to assist in securing favorable action by Congress on the proposed regrading of the medical corps. It is said, however, that the authorities in Washington who secured the passage of the act of February 2, 1901, in opposition to the earnest protests of the medical department, are unwilling to have the matter reopened at this session of Congress, and insist that their plan shall be given trial for a year longer. The military committees of the House and Senate have also announced that there would be no army legislation during the present session of Congress, so that the action of the medical officers in Manila will probably amount, for the time being, to little more than making an existing defect a matter of record.

TITLES FOR MEDICAL OFFICERS.

In this country and in Great Britain there has been for some time much dissatisfaction with the manner in which the medical officers are treated by the authorities.

In both countries military titles have been accorded to the army surgeons, but it seems there still remain various causes for complaint.

Some surgeons in the army are by no means grateful for their recognition as to rank, but would prefer to be styled simply doctor, holding that to grant a medical man military rank is somewhat of an anomaly.

Captain John Stewart Kulp, in the *Army and Navy Journal*, January 18, explains lucidly why it is fitting that an army medical man should have a title.

He points out that in our country the title of doctor is borne not only by graduates in medicine and surgery, but as legally by dentists, veterinarians, preachers, and by the graduates of some schools of science and pharmacy. In addition, it is attached to Christian Scientists, osteopaths, eclectics, faith curists, root doctors, as well as to the magnetic healer, and the good ship's cook. Then, it is also bought and sold.

Captain Kulp also draws attention to the fact that the use of the military title is now universal in the English medical service and in the sanitary service of the French army, and adds: "Some of us think that because we are medical men doing purely medical duty, it is better that the different grades which we have reached by service and real examinations be recognized by our superiors and subordinates, and that it is unwise for the contract surgeon and the officer of thirty years' service to bear the same title."

The conferring of titles upon military surgeons would seem to be warranted in view of the duties which they are called upon to perform. They are an essential part of the military organization of a country, and there is no reason they should clash with or usurp the prerogatives of the army officers pure and simple. To each department are allotted its special duties, and if by giving the military medical officer a title his powers for doing good work are rather increased than diminished, and his *amour propre* is gratified, then any argument against this course falls to the ground.

VACCINATION AND SMALLPOX.

Dr. J. S. Hunt, President of the Board of Health of Easton, publishes in the Easton *Express* a review of the benefits conferred upon the community by the adoption of vaccination.

At the present time, when smallpox is widely spread through the whole country, it is desirable that the facts concerning vaccination and smallpox should be heralded everywhere.

Dr. Hunt gives the following statistics with regard to vaccination in Germany:

"In Germany every child is vaccinated at or before it is two years of age, and again revaccinated when it enters school. It would seem that if we were wise and prudent we would follow the German custom, for there were only twenty-eight deaths from smallpox in Germany in 1900, which has a population of 54,000,000. A good example of the value of vaccination is found in the German and French armies. When Paris was besieged by the Germans in 1873, there were about a hundred thousand men in the German army. Germany required of her soldiers compulsory vaccination, while France didn't. While the French army lost over 23,000 by smallpox, the Germans lost less than 100. Compare the death rate from smallpox in Germany and Philadelphia. Why, in Philadelphia they lose more in a month by death from smallpox than Germany loses in a whole year."

Dr. Hunt then proceeds to insist upon the necessity of efficient vaccination. A most important point and, as suggested in the MEDICAL RECORD recently, a probable cause of the prevalence of smallpox.

Evasion of vaccination is culpable, if not criminal, and the physician should always be firm in his determination to vaccinate thoroughly.

Vaccination is not only a question affecting the individual, but the entire population of a country.

HAVANA, THE HEALTHFUL.

The reproach has been taken from Havana, and in place of being shunned and loaded with obloquy, the capital of Cuba now takes a position among the salubrious cities of the world.

According to the report of Major Gorgas, the death rate of Havana in December last was 20.47 per 1,000. In December, 1900, it was 23.28.

In December, 1899, 534 deaths occurred; in December, 1900, there were 488 deaths, and for the same month, in 1901, the deaths only numbered 463, a very satisfactory progressive decrease. The city was free from smallpox or yellow fever in December last, and Major Gorgas expresses the opinion that it is not likely to appear in the near future.

The work of exterminating mosquitos, however, is proceeding briskly. The "Stegomyia" brigade is pursuing its operations within the city limits, while the "Anopheles" brigade is doing its best to clear the suburbs of the malaria-bearing mosquito.

The condition of the city with regard to mosquitos is reported to show much improvement.

Major Gorgas rightly lays a great deal of stress upon the disappearance of yellow fever during October and the two following months, an event which has not happened within the memory of the oldest inhabitant. This would appear further to substantiate the correctness of the findings of the American army doctors as to mosquitos and yellow fever, for as Major Gorgas points out in the years 1899 and 1900 every known means was employed to destroy fomites, but until this past year, when similar exertions were put forth to exterminate mosquitos, yellow fever was present to a greater or less extent.

The sanitary rehabilitation of Havana is a monument to American science and energy.

SANATORIA FOR CONSUMPTIVES.

All the medical and many of the lay journals have long been urging the crying need of sanatoria for indigent consumptives. The slowness of the United States to follow the example of Europe in establishing such institutions has been made the subject of much unfavorable comment.

Germany has a magnificent sanatorium system, and most of the countries of the European Continent possess some institutions to which the needy sufferer from tuberculosis can betake himself and receive treatment after the most approved fashion.

In Great Britain institutions of this kind are springing up everywhere throughout the land. London has for many years possessed hospitals especially for consumptives, and will soon erect a magnificently equipped sanatorium for the treatment of this disease.

The United States, however, has been up to the present tardy in providing buildings in which those who are unable to pay for treatment may receive the care and nursing which their condition requires.

Dr. Knopf, in the New York *Herald*, January 26, has this to say on the matter:

"A State sanatorium in the United States means an institution for the exclusive treatment of patients suffering from pulmonary tuberculosis, created by the funds of the State, and supported entirely or in part by the State." The first State sanatorium in America was erected a few years ago near Rutland, Mass. Recently other States, New York, New Jersey, Iowa, Illinois, Maine, etc., have projected the building of similar institutions.

Dr. John H. Pryor of Buffalo publishes in the MEDICAL RECORD, January 25, the report of the Committee on Sanatoria for Consumptives, in which the whole question of State care of these sufferers is ably discussed.

New York has been too long negligent of her responsibility with regard to consumptives, but she has yet the opportunity of atoning for her sins of omission.

The question should be attacked in no spirit of niggardliness, for it must ever be borne in mind that tuberculosis is more or less of a public menace, and the truest economy will be to banish consumption regardless of cost.

THE OSTEOPATH BILL.

Opposition to Senator Brackett's bill to legalize osteopathy is assuming large proportions among the members of the medical profession of this State, and physicians are preparing to fight against its enactment tooth and nail.

There is no doubt that if the lay community had a clearer conception of what the passing of such a measure really means, many who now are in favor of osteopathy, or who regard it with lethargic interest, would take active steps to prevent the bill in question from becoming law.

The bill gives to a class of people with no adequate medical or surgical training the right to treat disease, to attend midwifery cases, to sign death and birth certificates, and, with the exception that it restricts them to the practice of their own methods, places them on an equal footing with regularly licensed physicians.

The teaching and training at the osteopath colleges is flimsy and superficial, in most respects farcical, and it would be a gross injustice to place their graduates legally on the same plane as the medical practitioner who has expended much time and money in rendering himself competent to practise.

At the same time, the general public will be, in the long run, the chief sufferers, for the passage of the Brackett bill would enable incompetent men to practise their medical art without let or hindrance upon the bodies of those who might be sufficiently foolish to trust themselves to osteopathic treatment.

The legalizing of osteopathy, too, would assuredly have the effect of encouraging quacks of every description to attempt to gain a license, and might result in flooding the country with persons ignorant of medical knowledge, but with legal qualifications to treat disease.

It would be well that New York State should set the example to other States of refusing to countenance the passage of laws permitting osteopathy to take rank with legitimate medicine.

PRESERVATION OF FORESTS IN MASSACHUSETTS.

The deplorable destruction of forests in the United States is becoming a highly serious matter, and the President's well-timed reference to it in his message should bear good fruit.

Massachusetts has taken time by the forelock, and a few years ago the State joined hands with some public-spirited citizens to preserve sections of beautiful woodland in the vicinity of Boston.

Their efforts have been attended with great success, and large tracts of forest land have been rescued from the ruthless lumberer.

There are also other forest reservations in various parts of the State, outside the jurisdiction of the Boston Metropolitan Park commissions. and which are looked after by special commissions.

Massachusetts, in addition to caring for the preservation of forest tracts for the enjoyment of the public, has regarded the subject from the commercial standpoint.

The Massachusetts Forestry Association, according to the New York *Tribune*, is organized chiefly to secure the preservation of the present forests through the education of the farmers into the knowledge that forestry pays. It is also the aim to secure the enlargement of the present acreage of forests by planting with trees the 250,000 acres of idle land within the limits of the State.

The suggestion has been made recently by an able writer that an immense region of forest land in

Minnesota should be reserved by the Government as a national park.

The MEDICAL RECORD has always advised that trees should be spared as much as possible, from a business as well as a health point of view.

The action of Massachusetts and of some other States would seem to show that the authorities are becoming alive to the necessity of preventing the further wholesale destruction of forests.

SENATOR PLATT'S LEPROSY BILL.

The following are the salient features of a bill to control the spread of leprosy, introduced in the National Legislature by Senator Platt of New York:

The appointment of a leprosy commission, to reside at New York or San Francisco, to get a yearly salary of $5,000.

The setting aside of a mile square for a national leper home, the site to be chosen by a leprosy board.

The appropriation of $50,000 to erect suitable buildings for the habitation of lepers in the United States, not including Hawaii, Porto Rico, Cuba, or the Philippines.

The transportation of lepers who are unable to care for themselves to the National Leper Home.

The injunction of steamship companies or individual vessels or railroads to bring to the United States any leper, or to accept any emigrant from any of the countries known to be leprous without a special certificate.

The strict supervision for seven years of immigrants of leprous families, though they themselves be free of the disease.

The deportation of any leper, who, despite all precautions, manages to enter the United States. No discrimination to be made in behalf of Americans who contract the disease in a foreign country.

The Marine Hospital Service of the Treasury Department to have full charge of the National Leper Home.

This bill should have the effect of checking the spread of leprosy in this country. With regard to the contagiousness of leprosy opinions differ; some believe that it is so in a high degree, while others hold that the disease can only be communicated under certain conditions.

However, in the case of a malady so loathsome as leprosy, it is better to err on the side of caution than by any laxness to run even a risk of disseminating its genus.

Strict segregation is generally believed to be the only effectual way of restricting the scope of leprosy, so that an appropriation of $50,000 for this purpose would be money well spent.

Acute Appendicular Pneumonia in Children.—R. Massalongo reports four cases of pneumonia in children which began with all the symptoms of appendicitis. Five other cases he has heard of, in which operation was performed, only to find a perfectly normal appendix. The differential diagnosis is not easy; pneumonia is often ushered in by ectopic pains, especially in the abdomen, and frequently has a most insidious onset. Moreover, appendicitis is sometimes accompanied by pulmonary complications, and there are symptoms common to both diseases, due to infection of the organism by some microbe—pneumo- or streptococcus in pneumonia, coli bacillus or streptococcus in the majority of cases of appendicitis. A better name for the affection under discussion than the one given in the title would be acute pneumonia with appendicular onset, or pneumonic pseudo-appendicitis.—*La Riforma Medica.*

News of the Week.

The Board of Health Vaccines.—A very healthy discussion has arisen concerning the manufacture of vaccine virus and diphtheria antitoxin by the Board of Health of this city, the disasters following the use of the city antitoxin in St. Louis being the exciting cause. Two societies have recently debated the question, and have come to diametrically opposite opinions. The New York County Medical Association recently appointed a committee to investigate the process of manufacture by the Health Board, and this committee has made a report that everything is done properly, and that the vaccine and the antitoxin furnished are thoroughly reliable and safe. A few days after this report, the New York County Medico-Pharmaceutical League held a meeting in which a number of speakers attacked the Health Board methods, and denounced the sale of city vaccine and antitoxin. It was said that the calves and horses had, until very recently, been kept in underground stables, and that the assistants were incompetent and were frequently changed. The question as to the purity of the Health Board's vaccines seems to have been brought no nearer a satisfactory answer by these reports than it was before. The report of the County Association committee was not at all reassuring, for the investigation seems to have been of a more or less perfunctory character. On the other hand, the attack of the Medico-Pharmaceutical League was weak, and bore the appearance of having been inspired by a bias in favor of private manufacturers. The President of the Board of Health denies the accuracy of the criticism of the department's methods of manufacture, and refers to the report of the other society. The Academy of Medicine might silence some of the criticisms which have been recently brought against it by correspondents in our columns if it would undertake a thorough investigation on its own account by a committee of competent bacteriologists and clinicians, free from any possible bias and courageous enough to state its conclusions freely without regard to the feelings of any one. It is possible that the report of such a committee would be accepted as satisfactory by the medical profession of the city, and the interested and now somewhat alarmed lay public.

The Stony Wold Sanatorium.—At the first annual meeting of the Stony Wold Sanatorium Association, held last week in this city, it was announced that money enough has been raised to warrant the beginning of work. The Lake Kushaqua property, where the institution will be situated, was bought last September. It is in Franklin County, at an elevation of 1,730 feet above the sea, and comprises about 1,200 acres. The style of architecture will be the same as that of the Massachusetts State Sanatorium, which is considered a model of its kind. The plans call for a three-story administration building, on either side of which will eventually be erected four dormitories two stories high, each containing twenty-five rooms. The erection of the administration building will be begun this spring, and it is hoped that this building and one dormitory will be completed by November 1, 1902.

Suggested Changes in Medical Education in Michigan.—The Michigan State Superintendent of Public Education, Professor Delos Fall, makes the following recommendations in his last annual report, concerning medical colleges in the State: "A standard of preliminary education should be required, and a board created to examine all students before entering upon the study of medicine. Some safe, uniform standard for graduation ought to be fixed and insisted upon as a condition precedent to a license to practise medicine.

The financial solvency and stability of each institution should be more carefully guarded and insisted upon. Medical colleges should not be chartered in small towns where clinical and hospital facilities, so necessary to the proper education of a physician, are not ordinarily found. A constant and thorough visitation and inspection of such institutions should be regularly made by a board of visitors competent fairly to judge of their merits. The capital of every medical college should be large enough to warrant the employment of men learned in their profession, and the provision of equipment in all branches adequate to promise a proper medical course."

The Loomis Laboratory.—The Supreme Court has dismissed the suit of the New York University against the Loomis Laboratory to gain possession of its property. Colonel Payne, who gave the money to build and equip the laboratory, testified that his purpose was to build a laboratory for original research and elementary teaching in scientific medicine, and that this laboratory was to be entirely independent of the New York University, being governed by five trustees. The court decided that the fact that the laboratory was for a time used in connection with the instruction given in the medical department of the New York University did not give the latter any right of possession in it, nor entitle the students of the university to its use without the consent of the trustees.

The Health of Immigrants.—In the immigration bill introduced early in the present session of Congress is a section which makes it unlawful for any transportation company or the owners, masters, or agents of any vessel, to take on board for transportation to the United States "any alien afflicted with a loathsome or with a dangerous contagious disease," and imposes a fine of $100 for each and every violation of the prohibition. It also is provided that the decision of the examining officer of the United States Marine Hospital Service shall be final, both as to the fact and nature of the disease, and on the question whether the disease existed at the time of embarkation. At present the only penalty for bringing passengers with any prohibited disease to this country is the necessity of carrying them back if the officials here refuse them admission. Sometimes steamship owners take aboard their vessels persons who they know are suffering from diseases which, if manifest to the inspecting officer on this side the Atlantic, will cause the immigrants' rejection here. In such cases it is customary for the steamship owners to require a deposit from the diseased individual sufficient to pay his way back home if he should not be allowed to land in the United States.

Hypnotic Reformation.—The President of the Board of Children's Guardians in Terre Haute, Ind., is said to have given his consent to a Chicago "professor of hypnotism" to experiment with the children in the home maintained by the board. The experimenter claims that by hypnotic suggestion he can start a train of thought in the minds of the children for better things. Children who have been taken from vicious parents will be experimented upon, and those concerned say it can do the children no harm and possibly will have good results.

New Cures for Consumption.—It is reported from Cracow that an engineer of that town has discovered a gas which he calls "electroid," and which he claims is inimical to the bacilli of tuberculosis. It is stated that several Polish physicians are prescribing the gas by inhalation, the séances lasting from one to fifteen minutes, and claim to have had excellent results, in combating the symptoms at least, if not in actually arresting the morbid process. In London, experiments are being carried on at the Brompton Hospital for Consumption in the treatment of phthisis by means of Tesla's high-frequency currents and the intravenous injection of a bacillicide. Dr. Symes-Thomson, in a recent lecture, said that favorable results have been observed to follow this treatment, and he spoke hopefully of the final extinction of the disease by means of this and other modern methods of treatment.

Insurance Against Smallpox.—In England it is possible to insure nearly everything from a long overdue ship to the life of the king. According to a Liverpool paper, an extensive business is now being done in the larger cities of England in insuring against an attack of smallpox. The premium is 2s. 6d. per cent. on recently vaccinated cases, and 3s. 4d. per cent. on persons who have not been vaccinated since infancy.

Dearth of Vaccinators.—The health commissioner is finding difficulty in getting additions to the corps of vaccinators urgently needed at this time, because of the increase of smallpox. Civil service restrictions prevent the appointment offhand of the necessary number of physicians, but physicians already in the employ of the city can be appointed by being transferred from one department to another. There is a large number of medical school inspectors, and many of these were appointed vaccinators. Most of the appointees have, however, refused to serve; for, although the salary is much larger, the hours of service are longer and the work is more arduous. But the main objection was that by becoming a vaccinator one would cease to be a school inspector, and so would be out of the department upon resigning or being dropped from the vaccinating corps. There is no eligible civil-service list from which the commissioner can draw, and it will be several weeks before examinations can be held and new appointments made. By that time extra vaccinators may not be needed.

The Hydriatic Department of the Riverside Association.—This association is a society in New York organized with the aim "to help the poor to help themselves." It maintains a gymnasium, kindergarten, clubs for boys and girls, a penny provident fund, sewing and cooking schools, and public baths. In the latter is included the "Hydriatic Department," designed for the water treatment of indigent patients sent by physicians or other dispensaries. Dr. Simon Baruch, the medical director of this department, reports that during the past six years 1,848 male and 1,780 female (in all, 3,628) patients have been received for water treatment from 128 physicians and ten dispensaries. The number of treatments administered in 1895 was 2,146; in 1900, 12,945. This sixfold increase in six years, Dr. Baruch says, shows clearly the favorable results obtained, and the consequent rapidly growing appreciation of hydrotherapy in the management of obstinate chronic diseases. There were over thirty distinct diseases treated by this means.

Opposition to a Pest House.—A temporary injunction was granted last week restraining the city of East Orange from receiving smallpox patients in the new portable isolation hospital building, erected on the boundary line between East Orange, Vailsburg, and South Orange. The application was made by the pastor of a Catholic church and orphan asylum in East Orange, who alleged that the isolation hospital was a menace to the children attending his parochial schools, also the 200 and more orphans and caretakers at the asylum. His residence, he asserted, was within 900 feet, the distance required by law. The hospital was built in less than two weeks at a cost of several thousand dollars, and it was expected to take patients there about the time the injunction was obtained.

Pathological Society of Philadelphia.—At a stated meeting held January 23, Drs. S. Solis-Cohen and David Riesman exhibited a specimen of "Primary Carcinoma of the Liver and Thrombosis of the Inferior Vena Cava." The patient was an alcoholic in whom œdema of the lower extremities developed in the absence of evidence of disease of the heart or kidneys, with progressive enlargement of the liver, and the appearance of nodules on its surface, and also hemorrhagic ascites and enlargement of the abdominal veins. Dr. H. D. Jump exhibited a specimen of "Primary Carcinoma of the Liver." Dr. D. J. McCarthy presented a communication entitled "Experimental Osseous Formation in the Brain of a Cat." He cited observations showing that the introduction into the brain of fragments of bone with or without periosteum was followed by the development of bony tissue free from calcareous matter. Dr. D. L. Edsall presented a communication entitled "The Relation Between the Glycouronic Acid and the Benzoyl Esters in the Urine in Diabetes." He cited observations tending to show that together with dextrose there occurred in the urine of cases of diabetes other products of carbohydrate metabolism. Dr. W. G. Spiller exhibited a specimen of "Tumor of the Pons." During life the case had been variously diagnosticated as chlorosis, nephritis, exophthalmic goiter, and brain tumor. Cerebellar symptoms were absent, although the cerebellum was found greatly compressed. Tinnitus had been present as an early symptom, but it was attributed to ear disturbance, and the ossicles were removed for its relief, but without effecting the desired result. A prominent feature, in addition to headache, nausea, and vomiting, consisted in convulsive movements of the face, from the presence of which operation was undertaken over the facial cortex. The patient survived but a few days, and after death a tumor was found displacing the facial nerve, while in the facial cortex marked round cell infiltration was found, and which it was thought was responsible for the convulsive movements rather than the irritation of the facial nerve. Dr. W. M. Coplin exhibited specimens of "Uterus, Liver, Bladder, and Kidney, with Sections, from a Case of Puerperal Septicæmia Due to Mixed Infection by the Cocci of Suppuration and the Bacillus Coli Communis." The patient was a colored woman, with a contracted pelvis, and craniotomy was required for the delivery of the fœtus. In addition to the local lesions, acute dilatation of the stomach was present, and on microscopic examination, fragmentation of the muscular coat of the stomach was found. Dr. J. Alison Scott exhibited a specimen of "Tuberculous Mediastinal Tumor, with Ulceration into the Œsophagus, Bronchi, and Pulmonary Artery."

The Late Dr. Clayton Parkhill of Denver, Colo.—The following resolutions have been adopted by the Medical Board of St. Luke's Hospital, Denver, on the death of Dr. Clayton Parkhill:

"The medical and surgical staff of St. Luke's Hospital is called upon to mourn the death of one of its most prominent members.

"Dr. Clayton Parkhill was appointed attending surgeon to the hospital in 1889, and served continuously in that capacity until his death. As a surgeon, he was painstaking, intelligent, and careful, successful in his work, kind and gentle in the treatment of his patients; as a man, he was courteous and amiable; as a colleague, he was companionable and helpful.

"Dr. Parkhill was one of the most brilliant of operators, and the profession is indebted to him for many useful and practical surgical inventions. His counsel was eagerly sought by students and practitioners. As a writer, he was clear and forcible; as a lecturer, he was eloquent and thorough. He was, in truth, among the distinguished of American surgeons, and did much to shed luster on his chosen profession. At the breaking out of the Spanish-American War he was among the first to respond to the call of duty, and as a military surgeon he deservedly held high rank.

"The staff of this hospital desires to record its appreciation of his long and valuable services to the institution, and of his many endearing personal qualities, and it extends to his bereaved family and friends its profound sympathy.

"Charles A. Powers,
"Walter A. Jayne,
"E. J. A. Rogers,
"Committee."

Homœopaths Express Themselves in Favor of Vaccination.—At a meeting held January 20, the Germantown Homœopathic Medical Society recorded "its unqualified approval of the value of vaccination as a preventive of smallpox," and expressed itself as "heartily in accord with the effort of the Board of Health to secure universal vaccination."

Philadelphia Polyclinic.—Mr. John Scott, Jr., has been elected President of the Board of Trustees in succession to Mr. W. T. Donovan, resigned. Dr. George C. Stout has been elected Professor of Diseases of the Ear in succession to Dr. B. Alexander Randall, resigned.

Philadelphia County Medical Society.—At a stated meeting held January 22, Dr. Jas. P. Mann exhibited "A Case of Multiple Symmetrical Exostoses" in a man twenty-four years old, in whom the abnormality had begun at the age of three years. Major Louis La Garde, Surgeon United States Army, by invitation read a paper entitled "Gunshot Wounds of the Knee by Reduced Caliber Projectiles." He pointed out the reduced mortality and the greater restoration of function resulting from the small-caliber steel missile of swift velocity employed in recent years as compared with the larger caliber, softer missile of slower velocity of an earlier day.

Dr. Sherbourne W. Dougherty has been appointed United States medical inspector in the Philadelphia post office, in succession to Dr. James B. Harwer.

High Death Rate in Philadelphia.—The number of deaths reported to the Philadelphia Bureau of Health for the week ended January 25 was 563, which was 61 more than for the preceding week and 27 more than for the corresponding week of the previous year. Typhoid fever and smallpox exhibit an increase in the number of cases and of deaths, there having been reported 117 cases of the former and 9 deaths, and 90 cases of the latter and 19 deaths. There were, besides, 72 cases of scarlet fever and 3 deaths, and 65 cases of diphtheria and 10 deaths. The principal causes of death were as follows: Pneumonia, 99 cases; pulmonary tuberculosis, 72; nephritis, 42; diseases of the heart and pericardium, 41; inflammation of the stomach and bowels, 27.

Generous Bequests.—By the will of the late Wm. McClary of Philadelphia, the sum of $1,000 is bequeathed to the Protestant Episcopal Hospital, to endow a bed in his wife's name; $5,000 to the Presbyterian Hospital to endow a bed in memory of his sister-in-law; $5,000 to the German Hospital, to endow a bed in his own memory; $5,000 to St. Joseph's Hospital, to endow a bed in memory of himself, and $5,000 to the Samaritan Hospital, to endow a bed in memory of his son.

Obituary Notes.—Dr. Francis Clemens, Jr., of Paoli, Pa., was drowned on January 1 in fording a stream, whose waters had become greatly swollen in consequence of the breaking of an ice gorge.

Dr. Andrew J. Hines died at Doylestown, Pa., on January 21, at the age of 76 years. He was graduated from Jefferson Medical College in 1853.

Dr. Amos B. Lewis, of this city, died on December 28, after an illness of several weeks' duration. He was fifty-nine years of age, and was a graduate of the Cincinnati College of Medicine and Surgery, in the class of 1871. He was visiting dermatologist to the Fordham Hospital.

Dr. Charles George Sproull, of this city, died after an operation for ileus on January 25. He was thirty-four years old, and was a graduate of the New York University Medical School, in the class of 1893, and served for two years as an interne at Bellevue Hospital.

Dr. Lachlan Tyler, of this city, died after an operation for appendicitis on January 26. He was fifty years old, and was a graduate of the College of Physicians and Surgeons, New York, in the class of 1876. Dr. Tyler was a son of former President John Tyler.

Dr. Dominick George Bodkin died at his home in Brooklyn, on January 26, at the age of sixty-nine years, after a long illness. He was born in Ireland, and was brought to this country by his parents in his childhood. At the breaking out of the Civil War he was a student in the New York University Medical School, but broke off his studies and volunteered in the army, and served as assistant surgeon on the staff of Gen. Canby. At the close of the war he resumed his medical studies and was graduated in the class of 1866. He resided for thirty years in the same house, which was known in that section of the city as "the doctor's house," and had a very large practice, his waiting patients, it is said, sometimes forming a line extending out into the street. He was a member of many local and national societies, and for many years was a member of the attending staff of St. Mary's Hospital.

Dr. Robert B. Grimes died at his home in Cheyenne, Wyoming, on January 27. He was a graduate of the St. Louis Medical College in 1869. Dr. Grimes was a veteran of the Civil War and an Indian fighter. He was a member of the Thornburg party that went to the relief of the White River Agency in September, 1881, and was one of the few who survived the massacre.

Case of Resection of Two-thirds of the Liver for Angio-adenoma.—Carl Beck describes the case of a young man, twenty years of age, suffering from a tumor in the left epigastrium, which was of the size of a man's head. It was movable to a certain degree, solid, somewhat irregular, and not especially tender, and by percussion was found to extend into the liver. The diagnosis was between tumor of the kidney, pancreas, omentum, or stomach. But when the abdomen was opened, the tumor was found to be continuous with the liver, taking in entirely the left side of the liver, the right lobe being extremely small; with some difficulty half of the tumor was removed, the other half being left to slough off. The after-treatment consisted in removing the sloughing portions gradually until there was nothing left but a small pedicle. From all spaces of the sloughing tissue there escaped bile for two or three weeks. The patient made a good recovery, and the right portion of his liver is enlarging, so that it may yet give him good hepatic function. The tumor was found to be an angioadenoma. The prognosis as regards recurrence is favorable, neither adenoma nor angioma being tumors that recur, as a rule. —*Chicago Medical Recorder.*

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

KING EDWARD'S MODEL SANATORIUM FOR TUBERCULOUS PATIENTS—POSTPONED HONORS—CORTICAL LOCALIZATION IN THE HIGHER APES—LADY HOUSE SURGEON RETIRES—SUGGESTION FOR A CANCER CONGRESS—SMALLPOX.

London, January 3, 1902.

An anonymous philanthropist has placed at the King's disposal for charitable or utilitarian purposes a sum of about £200,000, and His Majesty has decided to apply it to the establishment of a sanatorium for tuberculous patients.

To carry out his purpose, the King has appointed an advisory committee of medical men, and has already sanctioned the expenditure of £800 in prizes for the three best essays and plans of a model sanatorium. The prizes of £500, £200 and £100, respectively, will be open for competiton to the medical men of all nations.

It is intended that the King's sanatorium shall provide one hundred beds, fifty for each sex; of these twelve beds are to be set apart for well-to-do persons, who desire to try sanatorium life, while the others will be at the disposal of persons who can contribute only a small proportion of the cost of their maintenance. The institution will be fully equipped with all requirements for research, it being understood to be the desire of the King that his sanatorium should be as perfect as our present knowledge can make it.

I hope a firm hand will be kept on architects' ambitions, so that the money may not be all squandered on buildings. There are several object lessons on the extravagance of architects standing, which the advisory committee might profitably study.

There was no distribution of honors on New Year's Day—to the disappointment of some aspirants. But it will make little difference. The change in the custom will be merely a change of dates. The King's birthday being in November, it is almost too soon for another set of honors, and the next will most assuredly be at the Coronation. Those who are sure of being on the list can very well wait till then. Those who are not, have a little longer to prove their worth to their country.

Localization in the motor cerebral cortex was brought before the Pathological Society on the 17th ult., in a paper by Professor Sherrington and Dr. Grünbaum. These experimenters have investigated the subject, using the higher apes, and in some points have been obliged to correct some statements of their predecessors, at any rate, so far as these animals are concerned. They have laid all the known species of anthropoid apes under contribution, but the majority of their experiments were on the chimpanzee. In this animal the extent and arrangement of the motor area certainly differs from that described by other observers in the lower apes and the orang. They examined nineteen hemispheres. One point clearly results: that the anterior limit of the motor region does not coincide with any fissure. The value of the fissures as landmarks to the topography of the functional centers is thus impaired so seriously as to become useless. The patterns exhibited by the convolutions and sulci of these richly convoluted brains differ so much that hardly a pair are exactly alike. The fissures, therefore, are not physiological boundaries.

The ease with which faradism elicits movements from this cortical region of anthropoids at first surprised the experimenters, considering the intensity reported to be required in man, and it is suggested that if that intensity is really required, it constitutes a difference between the motor region of man and that of the anthropoid and lower apes.

Another interesting difference from former observations relates to the production of epilepsy. Drs. Sherrington and Grünbaum found this easily produced in the majority of the animals on which they experimented, though in some individuals the tendency was slight, in others it was strong, the condition being the same.

The sequence of representation of movement observed followed a plan more in accordance with the order of the spinal segments than that previously obtained.

Another notable discrepancy, the experimenters have never seen anything to lead them to include any part of the surface of the postcentral convolution in the motor area of any of the apes they employed. Strong currents on the postcentral showed no movements. Weaker currents on the precentral evoked widespread movements. Small lesions in the precentral convolution caused marked paralyses and regenerations; similar larger lesions in the postcentral gave rise to neither.

Miss Clark has at length given up the contest with the honorary staff of the Macclesfield Infirmary. I told you that she was appointed by the committee to a house surgeoncy against the unanimous recommendations of the staff, and that these gentlemen at once resigned their offices. As the governors could not supply their places, they condescended so far as to ask them to return for the sake of the infirmary, but refused to dismiss Miss Clark. At once a certain number of newspapers defended the governors, and abased the doctors as actuated by jealousy and trades unionism against women. Knowing the absurdity of this charge, the staff stood firm. The talk about the rights of women to enter the profession is all "leather and prunella." That right has been conceded long ago. The propriety of a woman taking charge of certain male wards is another question, and very closely affects the physicians and surgeons who would have to superintend her work. I should have supposed a refined woman would hardly care to put herself into such a position, or that, finding the whole staff unwilling to coöperate, would be eager to retire from it. But some extreme advocates of women's rights raised an outcry, and declared Miss Clark must fight on principle. Happily, the most important section of woman doctors repudiated this. Happily, too, the staff were not intimidated by the abuse of sensation papers, and, standing together, refused to be ridden over roughshod by the board.

Miss Clark may herself have learned a useful lesson and will perhaps not again be made a tool of by extremists. She may have a defective imagination with the majority of the people. If she could imagine herself a medical *man*, who in some way had occupied a position in which all his colleagues refused to recognize him, she might further imagine what a man would do in such case. If so, she will congratulate herself that she has withdrawn from an untenable position.

The Cancer Society wants to get up an international congress on the lines of the recent tuberculosis congress. Perhaps it is rather too soon for another congress to succeed, and the society has not, I believe, at present sufficient pabulum. By waiting a little, its members will have a better opportunity.

The march of smallpox continues. There were twenty-four fresh cases yesterday, and thirty-nine the day before. Fresh districts are being invaded. There are now over 800 cases under treatment. An unfortunate error of diagnosis has in one or two instances caused the infection to spread in a family. One borough council has ordered chickenpox to be notified, with a view of preventing mistakes. A return case from one of the isolation ports is reported to have renewed the infection in one family. In another instance a case was at first treated as "blood-poisoning" by a doctor who was not familiar with smallpox, and visitors were admitted to the patient's room, adding to the difficulties of prevention. At Reigate there has been quite a run on government lymph, in which the antis joined. I hope this return to reason will not be a mere lucid interval.

LETTER FROM NEW ZEALAND.

(From Our Special Correspondent.)

ABORTIONISTS—OPIUM SMOKING—VITAL STATISTICS.

AUCKLAND, N. Z., December 20, 1901

THE police in this colony are making a dead set at the abortionists. Every criminal assize sees three or four brought up; but it is very rare that a conviction can be obtained. Popular sympathy is entirely on the side of the accused, and, however clear the evidence may be, an acquittal is certain in the large majority of cases. The case I mentioned in my May letter, in which a well-known and fully qualified surgeon was accused of causing the death of a young woman by an operation which was followed by acute septicæmia, broke down entirely after three trials, when the jury found a verdict of not guilty. On two previous trials, before the Supreme Court, the jury had disagreed, eleven being for an acquittal, and only one for a conviction. The accused, who is seventy-five years of age, had been subjected to what were equivalent to five public trials, extending from May 18 to November 27, and involving three separate incarcerations, for a night at least, in the police cells and the common jail. The evidence given on behalf of the accused clearly proved that the deceased could not have been present at the offices of the accused on the only afternoon on which the operation could have been performed. The case was of the most flimsy description, and rested solely on what was said by a woman of very bad character, suffering agonies of pain, and most probably affected by brandy, which is invariably given by the lower classes for any abdominal pain. She was asked if she had seen Dr.——, and, after first denying, then affirmed that she had, and that he had operated on her. There was not the slightest trace of any operation.

The silly bill to prevent the smoking of opium passed our sapient legislature in the closing days of the session. One conviction has already been obtained against a man for importing opium for smoking. He was fined £200—about a thousand dollars. This system of making *mala prohibita* into crimes is destroying all respect for the criminal law. What can we think, when we see men heavily fined, probably ruined, for doing that which is absolutely harmless in itself?

The act is aimed at the Chinese, and no search warrant is required to enable a police constable to enter the premises of a Chinaman whom he may suspect of smoking opium. Of course, this means plenty of blackmail to the police, and the opium smoking will go on as before. I think these Australian colonies had better beware how they provoke the Chinese. I should not at all be surprised if in ten years' time a Chinese fleet, officered by Japanese, were to come down here and demand compensation for all the insults and wrongs inflicted on the Chinese.

The New Zealand Official Year Book for 1900 has been issued since I last wrote. It is an admirable compendium of statistics and other information, on every subject connected with New Zealand; but we could spare some of the information to enable it to be issued earlier. It is never out until at least nine months of the following year have elapsed.

The birth rate for 1900 has very slightly increased from 25.12 per 1,000 in 1899 to 25.60 in 1900. It was 25.74 in 1898. It is still the lowest in the Australasian colonies.

The handbook goes on to say: "With a falling birth rate, the census taken in 1896 showed lower numbers of each sex living at the period under five years than at the next quinquennial period, which is unsatisfactory, indicating, as it does, that there are not now sufficient children living at the earlier years to maintain the number of those of 5–10 years now found in the tables. . . . That the fertility of women in New Zealand is decreasing, further facts will tend to show. Taking the number of married women in New Zealand at what may be considered the child-bearing ages (*i. e.* from fifteen to forty-five years, inclusive) as shown by each census since 1878, and for the same years the number of legitimate births (excluding plural) registered, the birth rate per 1,000 married women of the above-stated ages is easily found, and is shown to be steadily declining. In 1878 the rate was 337 per 1,000, and in 1896 it had fallen to 252, or, in other words, in 1878 one married woman of the ages specified in every three gave birth to a child, while in 1896 the rate was 1 in 4 only. The figures for each census year are given below, and are followed by a table showing the declining birth rate, and the increase in the marriage rate, in the United Kingdom.

BIRTH RATES (LEGITIMATE) PER 1,000 MARRIED WOMEN AT CHILD-BEARING AGES FOR EACH CENSUS YEAR, 1878 TO 1896.

Year (Census).	Number of Married Women between 15 and 45 Years of Age.	Number of Legitimate Births (Confinements)	Birth Rate per 1,000 Married Women of from 15 to 45 Years of Age.
1878	50,995	17,196	337.2
1881	57,458	18,003	313.3
1886	62,704	18,532	295.5
1891	63,165	17,455	276.3
1896	69,807	17,596	252.1

Of course, this decrease is in by far the greater number of instances voluntary and artificial; but I am inclined to think that partial or complete sterility is increasing. Certainly a very large number of married women have only one or two children, and deny utterly that they take any measures to restrict the number.

One thing that lessens the birth rate is the entire absence of a class of women who are numerous in Europe—those who work on the land, and who are generally very fertile. Our women almost invariably wear corsets, and wear them too tight. This, producing uterine and ovarian diseases, causes sterility. Our young women are almost all more or less anæmic, and suffer from dysmenorrhœa.

SALT DIET AND CANCER.

TO THE EDITOR OF THE MEDICAL RECORD:

SIR: I note in the January 11th number of the MEDICAL RECORD, that Dr. Braithwaithe thinks salt a causation of cancer. Whether this is so or not, the fact that a man has ever been a whaler, I now believe is sufficient reason for supposing him to be predisposed to cancer of stomach. Having seen several cases of carcinoma of the stomach in men that had been whalers in earlier years, has often made me ask myself the question, Has the fat or salt diet anything to do with the etiology of the disease in those cases? N. B. ALDRICH, M.D.

FALL RIVER, MASS.

SANE OR INSANE.

To the Editor of the Medical Record.

Sir: No better case offers for the discussion of this much-mooted and debatable question than that of Czolgosz. The medical experts on this notable case sum up their opinions, according to the daily press, thus: "Czolgosz was in all respects a sane man, both legally and medically, and fully responsible for his acts." "There has been found absolutely no condition of any of the viscera that could have been at the bottom of any mental derangement. Taking all in all, the verdict must be socially diseased and perverted, but not mentally diseased." Accepting that to be the verdict of the competent alienist and pathologist, still it is an open question whether, from a strict scientific point of view, and not that of accepted precedent, it be correct? Even though present methods of the investigation of viscera, especially the central nervous organs, yield no pathognomonic conditions in such cases, and perhaps may never be developed to that wished for perfection, it is a most debatable question if molecular changes of a most subtle kind do not really exist, manifest only in the "insane" deportment of the individual. If a person's sanity is so "socially diseased and perverted" as to lead him to acts which, taken by themselves, must be called insane, shall it be said that he is "not mentally diseased," or that he "is in all respects a sane man?" With all due respect to learned authority, its position is a *conditio ad absurdum;* no person can be "socially diseased and perverted" and "not mentally diseased" at the same time. There is "a great gulf fixed" between the position of the alienist, and the social scientist. The one goes to precedent, to accepted definition, for his verdict, the other seeks the truth, the fact, as it is, utterly regardless of precedent. The one turns to the law, the other to the deportment of the individual as a social unit. Let us ignore the law and precedent, and following advice once given by Thomas Paine, "turn to the book of nature," to the individual, and think as if our own sanity were the question at issue. If we turn to precedent, to alienistic authority, we shall find no really definite ground to stand on. We must turn to nature. Now, what is the natural standard, the only ethical basis, of sanity? The natural or ethical standard of sanity is that the individual is at all times in that condition of mental equilibrium as to be master of his environment to that degree of being mentally equal to self-maintenance, without, at any time, losing or weakening his mental balance so as to threaten in any way his self-maintaining abilities. In other words, the environmental or individual ethical standard of to-day is that a person shall, at all times, possess such mental abilities as to render him self-supportingly useful to others, and at all times be so mentally self-controlled as in no way to weaken his self-supporting abilities by acts of his own, or even want of action, inability to make use of self-maintaining opportunities presented in existing social conditions, or environment. The standard of nature is the ability to survive in the environment one finds himself in. Can it be said that the man Czolgosz was ever in that ethically sane condition? The expert verdict, "socially diseased and perverted," is all-sufficient evidence that he was not. It is true that on this ethical basis—the only scientific basis to judge such a question by—the oft reported assertion that "all men are partially insane, more truly often temporarily insane, is justified.

Insanity, *per se*, is of an emotional nature, very often acute, frequently a more or less continuous perversion of the emotions. The sexual pervert in all its varied perversions is a fitting example. Insanity is an emotional perversion, or loss of control of the self-preserving faculties. Czolgosz is an example in *optima forma*. The prevailing social madness for mental perversion, emotional excitement to "drive dull cares away," is another. Alcoholism has the same basic foundation. Many deeds of so-called "heroism" are of the same form of acute emotional madness. Insanity invariably assumes some degree of mentality, intelligence. Total self-control in all directions, total loss of intellectual self-maintaining ability, is not lost. When that is lost, the person approaches or has entered upon imbecility. Imbecility, idiocy, is total loss of mental excitability. The idiot is without self-maintaining ability in any environment. The insane possesses some. When Czolgosz attacked the President, he was emotionally insane; he had temporarily lost all control of his self-preserving abilities. In another sense, and because others benefit thereby, the hero, who sacrifices his life to save another's, entirely forgets self, and from the natural ethical standpoint is in the same condition. The emotionally insane person who so loses control of his self-maintaining abilities as to be dangerous to the life or property of others, is in a criminal condition from the social standpoint, and must be so treated. The assassin, the incendiary, and often the thief, are emotionally mad, and under circumstances must be treated with that kind of justice meted out to mad dogs, in order to save the lives and properties of others. They may be as mentally irresponsible as the imbecile, and yet, because they seek to escape, to justify their deeds, they do show an equivalent degree of sanity. Czolgosz' emotional insanity went to that degree of perversity as to be on the danger line of mental imbecility, and for that reason, and in all such cases, merited the treatment received as a safeguard to others, and the general social equilibrium. These few remarks will suffice to introduce the discussion of the question "Sane or Insane" from the ethical, or strictly scientific, point of view, in contradistinction to the alienistic, or forensic, medical.

Frank S. Billings, M.D.

Sharon, Mass.

THE REPORT ON THE MORTON CURRENT.

To the Editor of the Medical Record:

Sir: My attention has been called to a report appearing on page 710 of your issue of November 2, 1902, in which it appears that I served on a committee of the Electro-Therapeutic Association to consider a question in controversy between Dr. A. D. Rockwell and Dr. W. J. Morton regarding certain currents obtained from the static machine.

Permit me to state that although originally appointed on this committee, I withdrew from service upon the same and had no connection with the report. The fact that I had the pleasure of being personally acquainted with one of the gentlemen, and not with the other, disqualified me from service. The retention of my name on the committee in the published report was doubtless an oversight.

A. E. Kennelly.

THE PRIVILEGES OF THE ACADEMY OF MEDICINE AND THE DUES QUESTION.

To the Editor of the Medical Record:

Sir: Although Dr. A. Jacobi speaks so slightingly of anonymity in his letter in the Medical Record of January 18, I must beg your leave to preserve mine, for reasons which will be appreciated. I have only a word to say in reply to the writer's strictures. In the first place, what is, is not always right, as Dr. Jacobi himself contends in the matter of what he calls the "Filipinoverbuchen," and if the by-laws of the Academy of Medicine prevail, the humiliation of publicity for delinquents, many of whom are so through misfortune and against their will, then it is time to amend the by-laws.

One can readily believe that the writer is correct in his observation that the prompt-paying members—those who are so prosperous as not to feel the spending of $20 in charity, or who get full value of their money in the sweets of office, delight at the multitude of outsiders. The managers of a dispensary are always pleased to see the waiting-room crowded with beneficiaries—it makes them feel so philanthropic. The talk about the honor of belonging to the Academy is absurd, for everybody knows how eagerly an applicant of the prescribed professional age, with a double eagle in his hand, is taken in. As for the rest, Dr. Jacobi advances no argument, but writes simply from the standpoint of a man of means with no sympathy for the self-respecting poor man, when he sneers at his less prosperous colleagues who cannot afford to pay $20 for an empty privilege, as fit only for "some money-making or money-shaving (*sic*) trade." If he himself has not striven all his life to get full money equivalent for services rendered the sick, then he is really different from (shall I say better, than?) his more humble professional brother, who must collect his bills or else let his Academy dues go by default.

A Mortified Listener.

LIBERTY AND THE SANATORIUM QUESTION.

To the Editor of the Medical Record:

Dear Sir: In your issue of January 11th, over the signature of J. C. L. Whitcomb, M.D., appears a statement as follows: "Within the last four months an attempt was made to operate surreptitiously a sanitarium within the village limits. It was a sort of branch to an out-of-town hospital." . . . This statement is without foundation. There has been an attempt on the part of certain people to claim that the so-called sanitarium within the village limits was a branch of the Loomis Sanitarium. In the first place, it is doubtful whether the statement is correct that the village doctor under consideration attempted to run a sanitarium; but even allowing that he did, there never has been the most remote connection between his place and the Loomis Sanitarium.

Yours very truly, J. Edward Stubbert, M.D.,
Physician in Charge, Loomis Sanitarium.

PROLAPSE OF THE KIDNEY.

To the Editor of the Medical Record:

Sir: In your issue of January 11, Dr. Mark I. Knapp—referring to my paper on "Some Points in the Diagnostic Palpation of Prolapsed Kidney," presented at the Obstetric Section of the New York Academy of Medicine—says he does not see how I can diagnose prolapse of the kidney in the first and second degree with the patient in the erect position. I am accustomed to designate prolapse of the first and second degree as "loose kidney," and apply the term prolapse only to those cases where the upper pole has descended below the border of the ribs in front. I thought I made it clear that the lesser degrees of prolapse (loose kidney) could be detected by grasping the right loin with the left hand (if it is the right side that is to be examined), the thumb in front, and depressing the thumb under the ribs when the patient expires, the fingers of the same hand behind depressing the lumbar region at the same time, so as to narrow the space through which the kidney may move. Then, as she is made to take a deep inspiration, the kidney is driven down between the thumb in front and the fingers behind, and the degree of mobility is easily recognized. It is certainly easier to dislodge the kidney when the patient is in the erect position than when she is on her back.

I quite agree with Dr. Knapp that prolapse of the kidney in the first or second degree seldom produces symptoms. The only treatment required is a well-fitting abdominal belt with pad, or a properly adjusted corset, to prevent or delay exaggeration of the degree of prolapse.

But prolapse of the kidney below the border of the ribs is quite a different thing. It does produce symptoms, though they are not always recognized. But if such a degree of malposition of so important an excretory organ as the kidney does not produce recognizable symptoms at the time it is observed, it should by no means be neglected. For the prolapsed kidney is always more or less congested in consequence of interference with its circulation, and the discharge of the urine excreted through the urethra, and this must in time result in serious disease of the organ.

Those who can speak from experience must admit that any form of artificial support for prolapse of the third and fourth degrees is most inefficient and unsatisfactory, and, though it may for a time alleviate the symptoms, never results in a cure.

In view of the foregoing facts, then, and also that the technique of the operation for fixation of the kidney has been so perfected that the results are permanent, and that it involves no risk, I hold that every kidney prolapsed with its upper pole below the border of the ribs in front demands operation for its permanent fixation.

The operation is not so necessary to relieve the symptoms which are often insignificant, but to obviate serious structural disease of the organ.

Augustin H. Goelet, M.D.

2030 Broadway, New York.

THE GOOD OF PHTHISIOPHOBIA.

To the Editor of the Medical Record:

Sir Dr. S. A. Knopf's article on "Official and Private Phthisiophobia" shows him to be a man of practical clinical ability and great tenderness of heart; but, unfortunately, the problem of tuberculosis cannot be solved by giving the patient the benefit of the doubt, or by making him the prime object of attention. From the sociological standpoint, we cannot with our present therapeutic attainments or expectations, make a very strong plea for institutions for the treatment of the tuberculous. On the other hand, we are justified in demanding any reasonable sacrifice and expense for establishing institutions whose prime object shall be the protection of the non-tuberculous part of the community. Secondarily, such institutions can be made to bear as strongly on the interests of the consumptive class as if this were the main reason for their establishment.

Now, there is just one way to obtain institutions for isolating and treating tuberculosis. Is this by appealing to the humanity of the public? By no means. You can touch in this way only the philanthropist and the voter who is tuberculous himself, or who has or recently has had tuberculosis in his family. Even then he will not vote to sustain such an institution unless you can convince him of the relative curability of the disease, and unless his own or his consumptive relative's sentiments are favorable to institutions. What is the best claim that can be made for the curability of recognizable consumption? Probably most medical men will agree with me that 25 per cent. is a liberal estimate, although some statistics, with unusually favorable circumstances, are better. Of course, I have no regard to the pathological evidence that "every one is a little tuberculous," but refer only to cases clinically recognizable. Go to the average citizen with the proposition to maintain sanatoria for the relief of the tuberculous, with the prospect of curing one patient out of four, and what will be the result? He may not say it, but he will think about as follows: "This institution is going to cost a good deal, and we have taxes enough now. It isn't going to cure enough people to make much difference, and those that are cured will be delicate and may become consumptive again." Go to the consumptive or the consumptive's relative, and what will be the result? The majority will consider that, without the sanatorium, the chances for recovery are about 10 per cent., with it 25 per cent., and that the comfort of staying at home more than counterbalances. This, of course, is irrational, but it is "human nature."

I fancy that the reader has been objecting that the sanatorium is practically an assured fact for New York State, but this is so only because the self-interest of the average citizen has been touched. Rightly or wrongly, the idea has become prevalent that tuberculosis is a disease which is communicable and which has no source except in diseased human beings and certain animals. This phthisiophobia is the strength of all reform by public action in regard to this disease, which kills more human beings than any other. Destroy phthisiophobia, and you might as well abandon the fight. If it is absolutely impossible to prevent infection—or rather if the term infection applies to tuberculosis only in a theoretical sense, as Dr. Knopf and the school which he represents, seem to believe—then let us drop all attempts at preventing tuberculosis except by personal hygiene. The people cannot understand fine discriminations, neither can that part of the profession which thinks as I do, and they must be dealt with consistently and without sentiment. If the people of the whole State vote for a sanatorium for consumptives, with the idea of limiting a specific infection, the people of the particular locality in which it is proposed to erect that sanatorium are bound to oppose it on account of the same argument, magnified by proximity. They can be appeased by showing them just what precautions will be taken against the development of local fomites, but we cannot expect to secure sanatoria on the ground of the infectiousness of tuberculosis, and then disarm local opposition by explaining that it is not so very contagious after all.

As a matter of sentiment, I like to think of Dr. Knopf pleading against the United States Marine Hospital Service, for the admission of a poor consumptive foreigner. But from the standpoint of the issue involved, nothing could afford a worse precedent. The majority of our population now realize, whether they came here two hundred and eighty years or one year ago, that we have absolutely no selfish interest in immigration, unless the immigrant is far above the average human being in material wealth or intellect. We have population enough for all practical purposes, and, not to mention other reasons, the very basis of this discussion is the best possible reason for desiring to avoid overcrowding and for maintaining large tracts of land without permanent habitation. Setting aside purely personal and sentimental reasons, what earthly excuse can there be for admitting to this country an individual who is not only a source of disease, but who is almost inevitably destined to be dependent on some one and very probably on the public? Here is one of the most brilliant of the advocates of State assistance in regard to the problem of tuberculosis arguing by word and deed against the ultimate necessity of such assistance.

Again, Dr. Knopf argues for a national health board in the same breath in which he protests against the only institution which can perform such a function. Theoretically, I agree perfectly with Dr. Knopf in his condemnation of our State system. I would go further and deplore the fact that in America we have some forty-five legislatures, governors, sets of laws, and nests of politicians. I wish we might wipe State lines off the map, as was seriously proposed when our constitution was framed, but we can't do it. Our only possible hope of securing anything like national unity on matters of public health is to support in every possible way the tendency to enlarge the scope and powers of the United States Marine Hospital Service. Even if we disagree with some of the regulations of this department—and some one will always disagree with any proposition—the future interests of the country demand that the medical profession shall uphold it until it is established on such a basis that dissent with certain of its expressions can be made without threatening the very existence of a national health board.

A. L. Benedict, M.D.

Buffalo, January 13, 1902.

Progress of Medical Science.

The Boston Medical and Surgical Journal, Jan. 23, 1902.

Notes on X-Light and Radio-Active Substances in Therapeutics.—William Rollins has made experiments with radio-active substances in the hope of finding a substitute for *x*-light. He found that some of the radiations retained their activity after passing through animal tissues as thick as the body of a guinea-pig. He is anxious to have radium tried on lupus, superficial cancer, and diseases of the skin in which *x*-light has been found useful. Radio-active substances can be used in sealed capsules held against the body by adhesive plaster, or they can be made to cover larger areas by mixing them with rubber or celluloid to form moisture-proof plasters. These plasters may be still further protected by being coated on the side nearest the body by aluminum foil, and on the opposite sides by lead foil. They could be kept in stock by the yard by druggists and given to patients by prescription with proper directions as to the length of application. They could be worn at night. They could be used by the poor at much less expense than sittings for the use of *x*-light from a vacuum tube.

Lymphatic and Portal Infections Following Appendicitis.—John C. Munro says that these infections, singly or combined, are not so rare as many would have us believe. He himself has previously reported fourteen cases, and now adds six more which establish the following conclusions: The degree of lymphatic infection is not dependent on the extent of the appendiceal inflammation, a mild chronic appendicitis at times giving rise to a severe lymphangitis. The lymphatic disturbance may date its origin from an appendicitis occurring many months beforehand. Persistent fever without any other evident cause should suggest one or both of these infections. Spasm, tenderness, and fulness (spasm of the quadratus lumborum) indicate a retroperitoneal infection, possibly due to appendicitis. Chills and hepatic tenderness, associated at times with jaundice, may be of appendiceal origin, and this origin, especially in obscure cases, should be sought for most carefully in physical examination, in the personal history, and, if necessary, in abdominal exploration. Prompt and thorough drainage of the liver, together with the removal of the inflamed appendix, offer the best means for recovery. Finally, abdominal section, with definite free exploration of all abscesses within reach, is far more satisfactory, not more difficult, and less dangerous than aspiration.

Journal of the American Medical Association, Jan. 25, 1902.

Blood Examination from the Standpoint of the General Practitioner.—F. W. Higgins makes a plea for a more thorough consideration of the clinical problems of blood conditions, and says that, while few general practitioners may hope to make any original discoveries, each one can follow out without great expense or so very elaborate apparatus many of the technical methods. He gives some of the formulæ used in staining preparations, etc., and describes some of the simpler procedures. He also adds certain statements to the significance of the more common blood findings.

Climatology of Arizona with Especial Reference to the Climatic Treatment of Pulmonary Tuberculosis.—C. F. Craig thus enumerates the peculiarities of the Arizona climate: (1) The temperature of Arizona is higher than in some regions of the Mississippi Valley, by an average of 15 to 20° in summer, and by 30 to 40° in winter. Yet the relative humidity is so low in summer that the sensible temperature is 5 to 10° lower in Arizona; that is, the sensibility of the human body to heat is really less in Arizona than in Illinois. The nights throughout the winter are apt to be cool enough for open wood fires and for blankets. Generally, overcoats are not needed during the day, even in midwinter; (2) The variations in altitude are very pronounced, and this is a striking advantage in some respects, as with the same general conditions as to temperature and dryness of air the physician is able to select nearly any altitude he may desire, ranging from sea level at Yuma to 6,800 feet at Flagstaff. The improvement in nutrition, particularly the great increase of red blood corpuscles, that sometimes occurs upon removal to a higher altitude is remarkable; but the intense expansion of the lungs in these cases is detrimental rather than otherwise. That an enlargement of the thorax follows a residence at a high altitude there is no question, but the increased resonance of the percussion note is generally due to an emphysema produced by the altitude rather than to increased lung power; (3) A low percentage of humidity is a most important essential in the elements that go to make up the ideal climate for the treatment of pulmonary tuberculosis. Other conditions being equal, tuberculous cases improve much more rapidly, and a greater percentage of recoveries is found where the relative humidity is lowest. The lack of moisture in the atmosphere, as reported by the United States Weather Bureau at Phœnix, is truly surprising. On several occasions during the month of June, 1900, the relative humidity fell as low as 1 per cent., as compared with 50 and 60 per cent. in Chicago, and Eastern cities. One especially noticeable effect of the dry air is the great diminution in the amount of sputum in those cases in which there is excessive bronchial catarrh accompanying the tubercular lesion; (4) The value of a maximum of sunshine can hardly be overestimated, as the relative humidity and the temperature depend to such a large extent upon it. Its mission cannot be fulfilled by the model comfortable house, and, as the love of sunshine is proverbial, its influence in inducing patients to live outdoors is perhaps greater than any other climatic feature.

Death from Chloroform Anæsthesia.—Bayard Holmes says that his anæsthetizers have been trained to give chloroform on two thicknesses of cheese-cloth held over the left index finger or spread on a wire mask. It is given drop by drop from a bottle with a notched cork. But in the case reported the anæsthetizer was a physician with whom the author had had no experience, and the operation was done under unfamiliar surroundings. There was no oxygen at hand. The patient was a woman of thirty-eight years. The presumptive diagnosis lay between (1) Extrauterine pregnancy and hemorrhage; (2) Tumor arising from the pelvis with twisted pedicle, or (3) Pregnancy with some complicating intrauterine hemorrhage. Abdominal section revealed a multilocular cyst of the left ovary, which was removed in the usual manner. The patient apparently stood the anæsthetic well. Operation required twenty minutes and no stimulants had been required. On account of the small amount of fluid in the peritoneal cavity, and on account of the slight contamination of the wound edges with the cyst contents, the abdomen was now washed out with warm normal salt solution. This much revived the patient, and she resisted and threw her body and legs about. This led the anæsthetizer to administer more chloroform, and she became quiet again. Suddenly it was noticed that she had stopped breathing. The operator left the care of the abdomen to an assistant and immediately opened the mouth, drew out the tongue and compressed the root of the tongue forward. The assistants elevated the foot of the table and artificial respiration was performed. This resuscitation was very tardily begun; the heart was beating and the blood became aerated. The abdomen was closed and artificial respiration was continued. There seemed to be occasional efforts at automatic respirations, but it was necessary to keep up the mechanical breathing. Dressings were applied and the patient removed to her room, placed crosswise of the bed on a stretcher, and artificial respiration kept up. Although the woman was in better position for this procedure, it became less and less effective. She became cyanotic, the heart stopped, and she died more than an hour after the first recognition of danger. There was no post-mortem examination. The heart continued to beat for three-quarters of an hour after all automatic respiration was suspended. The aeration of the blood was for a long time quite perfect, as shown by the red lips and disappearance of all signs of cyanosis. There is no evidence that the patient died of thrombosis, enzyme poisoning, or any other effect of the simple and rapid operation.

New York Medical Journal, January 25, 1902.

Curettage of the Puerperal Septic Uterus an Inexcusable Procedure.—W. R. Pryor notes that in curettage of the uterus, septic from streptococcic infection, the mortality rate is 22 per cent. He states that he has personally followed a certain method of treatment (already published) which has given no mortality either in his own hands or in those of the gentlemen who have adopted it, except in one class of patients, namely, those who had been curetted before coming under observation. There were ten such patients, three of whom died, a mortality of 33⅓ per cent.; and the lesions remote from the pelvis and in the pelvis which were found at the time of operation were in these curetted cases far more general and of a more serious nature than in any others seen. In the light of such experience the author holds that curettage of the septic puerperal uterus is most mischievous. Such being the case, it is imperatively necessary that gentlemen who attend cases of puerperal fever should be able either from clinical symptoms, or, better still, from bacteriological examination, to determine what cases are septic and what cases are not septic; for if mistakes are made, valuable lives are lost.

Paratyphoid Fever.—S. J. Meltzer calls attention to a series of cases presenting the general features of typhoid fever, but negative as to the Widal test. On the other hand, the sera of these patients agglutinate promptly specific bacilli, which are isolated either from the blood or the fæces of the same patients. These bacilli belong to the intermediary group, are closely related to the meat-poisoning bacilli, but can be distinguished from these especially by the serum reaction. As to the symptoms of this disease, they resemble those which occur in true typhoid fever. All cases recover and there is, therefore, no pathological anatomy of the affection. It is very likely that this paratyphoid condition is due to a specific organism, but testimony on this point is still indefinite. Meltzer believes that even cases of typhoid with a positive Widal reaction in one to twenty may in reality be paratyphoid, followed by a secondary invasion of a small number of typhoid bacilli. The solution of this problem can be brought about in two ways: (1) By searching the blood, fæces, and urine for organisms which will give a strong reaction with the blood of the patient; (2) By testing the blood of such patients with paratyphoid bacilli obtained from established cases of partyphoid.

Transitional Displacement of Purulent Fluid of an Empyema by Saline Solution at the Time of Operation.—Dr. A. I. Boyer describes a typical case of pleural empyema, in which he resected the seventh rib at the angle of the scapula, chloroform anæsthesia being employed. Simultaneously with the cutting away of the rib with the bone forceps, prior to slitting the pleura, he introduced the glass nozzle of a fountain syringe, containing saline solution at 100° F. The moment the cavity was opened, the solution was turned on with good pressure from a height of at least six feet. By an adjustment of compresses the too rapid expulsion was prevented, the saline solution gradually displaced the purulent effusion, and he was enabled to flush the cavity out entirely without stopping, at the same time obviating the danger from hemorrhage (the saline solution doing away with the necessity of leaving part of the purulent fluid in), thus insuring a clean cavity from the start. A simple gauze dressing was applied and the saline solution, by the aid of a gauze wick, was gradually absorbed by capillary attraction. After the pus had been removed, the adhesions existing were broken down and the lungs expanded perfectly. On the second day, after the lung had expanded, the wick was removed and a small drainage tube put in its place. This was removed on the fourth day. The best part of the case was that a complete recovery took place in three weeks and four days, and the soldier returned to "light duty." The only other treatment consisted in the syringing out with hydrogen peroxide, followed by the saline solution. A collodion seal was put on on the tenth day. In this connection the author notes that the degree of rapidity or retardation of the absorption of the saline solution is entirely in the hands of the operator. An oiled silk sieve-like pad can be put next the skin.

Medical News, January 25, 1902.

A Case of Spontaneous Rupture of the Eyeball.—W. Whitehead Gilfillan reports a case of this kind in a woman of eighty-seven years. When first seen she had a slight catarrhal conjunctivitis of both eyes. Senile cataract in each eye was also observed. Nearly a year later she was seized with a severe pain in the left side of her head, which was followed by rupture of the eyeball. There had been a large hemorrhage from the globe of the left eye, the crystalline lens was lying on the left cheek, much vitreous humor had escaped, and a part of the iris was prolapsed. This is an unusual case from the fact that there was no traumatism, nor was there any ulcerative process of the cornea. There was no staphyloma. There was marked arteriosclerosis, and it is possible that straining at stool caused the rupture of one of the vessels of the eye, and so gave rise to the hemorrhage.

On the Use of the Opiates, Especially Morphine.—Oscar C. Young declares that for the relief of intense pain in any disease under ordinary conditions, there need be no hesitancy in giving a moderate dose of morphine hypodermically. Or it may be given by mouth, or by enema. Inflammation, especially of the serous membranes, is especially benefited by its use. For excessive cough, unless it increases the number of râles, it is most useful. In cases of muscular rheumatism, and an ordinary "cold," so-called, there is no greater relief obtainable than by hot internal and external applications, and four or five 2-grain doses of Dover's powder, one every hour. Opiates are indicated in serous diarrhœa, diabetes mellitus, and in over-secretion of any part except the skin. In mucous diarrhœa, after the intestinal canal has been cleansed by a purge, opiates may be used to check the diarrhœa. Unless there are some ill-effects from the drug after the first or second administration, ⅛ to ¼ of a grain can be given once a day or even twice, for one or two weeks without hesitation. However, one injection every second or third day will often be sufficient. Morphine is chiefly eliminated by the stomach. For intense neuralgias, there is nothing so powerful to relieve the pain as morphine. Opium must not be used in cerebral congestion or in cerebritis. There are certain untoward effects of opium to be guarded against. But these may often be obviated by the administration at the same time of 1-200 grain of nitroglycerin. The writer believes the present danger of the physician's inducing the opium habit in a patient is exaggerated.

American Medicine, January 25, 1902.

What Reliance Can Be Placed upon the Image Produced by the *x*-Ray from a Medicolegal Standpoint?—Charles Lester Leonard declares that when due care is taken that skiagraphs are made by competent professional experts, and are fully explained, their importance in expert testimony will be very great, as their mechanical method of production assures a degree of accuracy that can be attained by no other method of diagnosis. The position of the courts is defined by the following decision: "It is within the discretion of the trial judge to admit in evidence an *x*-ray photograph; and his determination of whether it is sufficiently verified, appears to be representative of the object portrayed, and may be useful to the jury, is not open to exception." The employment of this method should be demanded wherever it is feasible.

Hemorrhagic Typhoid Fever; Report of a Case Ending in Recovery.—C. B. Longenecker and Joseph Akerman, from their experience with the case which they report, believe that it is a question whether more than a very few of the many drugs which have been recommended for the hemorrhagic diathesis are of use in this condition. Oil of turpentine holds a firm place; it seems both to control hemorrhage and to serve as a prophylactic in typhoid fever and in other hemorrhagic conditions. Calcium chloride favors more rapid coagulation. Gelatin is undoubtedly making for itself a place as a hæmostatic. Decinormal salt solution may be called for in lowered blood pressure or to stimulate a lagging or weak heart. Whiskey, ammonia, or strychnine will generally suffice for a cardiac stimulant. Adrenal in chloride solution is now demanding attention. In diseases of the vessel-walls it would undoubtedly be of great service. The local use of astringent washes is often beneficial. Statistics seem to show that about two-thirds of the patients die.

A Rapid Method of Detecting Bacillus Coli Communis in Water.—B. H. Stone describes a method which requires only seventy-two hours to be sure of the presence of this organism, while specimens which do not contain glucose-fermenting bacteria can be declared negative in twenty-four hours. (1) A Smith's tube filled with a 2 per cent. glucose bouillon is inoculated with one cc. of the water to be examined, and grown twenty-four hours at 38° C. If no gas is formed, the absence of the colon bacillus is shown. (2) If from 25 per cent. to 70 per cent. of gas is formed in the closed arm, a tube containing 10 cc. of neutral broth, to which has been added 0.3 cc. Parietti's solution, is inoculated with 0.5 cc. of the contents of the Smith's tube, and grown twenty-four hours at 38° C. (3) A second Smith's tube is inoculated with 0.5 cc. of the contents of 2 and grown twenty-four hours at 33° C. If there is no gas, it is certain that the gas producer in 1 was not the colon bacillus. If, on the other hand, gas is produced in this tube, it is reasonably certain that the bacillus coli communis is present. The gas formula may be ascertained from 3.

Philadelphia Medical Journal, January 25, 1902.

Remarks on Vaccination in Relation to Skin Diseases and Eruptions Following Vaccination.—Arthur Van Harlingen declares that the shields which have been so widely employed this autumn have served to retain moisture and keep in the secretions, thus acting as a cultivation house for all pathogenic germs. They have at present nearly fallen out of favor but have their place. As a protective for the first few days a shield is almost indispensable, but as soon as the vaccine virus has invaded the system, as the condition of the areola will indicate, the shield should be cast aside and antiseptic dressings with frequent changes should be applied. This is undoubtedly the proper way of treating a vaccination sore.

Gastroptosis and Gastric Motor Insufficiency.—J. Dutton Steele, in speaking of the treatment of this condition, says that tight lacing and the hanging of heavy clothing from the waistband should be absolutely forbidden. Any of the health corsets may be worn that do not compress the waistband, and that have an arrangement by which the weight of the clothing is supported from the shoulders. After pregnancy or operations upon the abdomen corsets should not be worn too soon. The manner of the patient's life should be carefully directed. Rest for at least an hour after meals, flat upon the back with the clothing loosened, is most useful. Large amounts of food should not be taken at one time. The food should be easily digestible.

Any stated diet cannot well be given, but it must depend upon the amount of hydrochloric acid secreted, and upon the presence or absence of dilatation. A milk diet is not usually well borne. The patient should wear abdominal bandage.

A Case of Pneumococcic Arthritis Accompanying Acute Croupous Pneumonia.—D. J. Milton Miller reports the case of a laborer who was attacked by acute croupous pneumonia. The only infection outside of the lungs was a rather extensive pleurisy, which, however, was not attended with a demonstrable effusion. On the eleventh day of the pneumonia the right wrist became swollen and painful. Cultures from the joint fluid were taken later, and a pure culture of a lancet-shaped diplococcus was obtained, and in the water of condensation a few short chains were observed. The inflammation was confined to the single joint. The prognosis of this form of arthritis is grave, for the high mortality is well known. The wrist in this case at the last observation was still stiff and of little use, and the prospect of complete restoration of function seemed very doubtful. The treatment consisted in fixation upon a splint and the application of lead water and laudanum; later, massage and similar measures to restore the function of the joints were employed. In suppurative cases the treatment should be by incision, flushing, and drainage.

The Lancet, January 19, 1902.

Observations on the Nature and Treatment of Pernicious Anæmia.—A. McPhedran gives unhesitating adherence to the theory of gastroenteric toxæmia as the cause of this affection. As to treatment, the use of arsenic has been largely abandoned. The gastroenteric theory has suggested intestinal antiseptics, but those tried have not been found to offer any definite results. Decinormal saline solution has been used subcutaneously with benefit, but it is so painful that it cannot be continued. In other cases, antistreptococcus serum was of great value. McPhedran does not believe that at the present time we have any remedy acting with certainty for the cure of this malady.

Fibroma in the Male Breast.—A. Webb Jones reports the case. The patient, an Egyptian soldier, aged thirty-five years, came to hospital complaining of a gradually increasing swelling of the left breast which he first noticed four months previously. Latterly he had also been troubled with slight pain. On examination the left breast was uniformly enlarged to about twice the size of the right. The outline stood out in marked contrast to the opposite side, but retained its general shape. On palpation the mass felt soft and elastic, but no indication of lobulation—as in a lipoma—could be obtained. It was freely movable on the chest wall. The breast was removed without difficulty by Thomas' incision. Microscopically the growth proved to be a pure fibroma.

Ocular Pain; Its Significance, Varieties, and Treatment.—Percy Dunn says that generally speaking pain is an invaluable symptom. It teaches us many an important lesson and provides us with many a clue to treatment. This is especially the case in glaucoma and in iritis; so, also, to a great extent in ocular affections generally, except in diseases of the fundus of the eye which are not painful. Very little pain occurs in connection with conjunctival troubles. The cornea, on the other hand, is exquisitely sensitive, and the slightest irritation evokes great pain. Corneal lesions leading to photophobia give rise to pain, and in most of these cases we find blepharospasm due to a minute corneal ulcer. In these latter cases the patients should be encouraged to open their eyes voluntarily as far as possible. Locally, the eye should be cleansed twice a day with a 1-4000 chinosol solution, and atropine with cocaine be dropped in. Internally we should order arsenic and quinine. The pain of specific iritis calls for leeches to the temple, early use of atropine to prevent posterior synechiæ, and for the constitutional mercurials. For rheumatic iritis, nothing relieves the pain so quickly as the old-fashioned bran poultice. Pain in eyes which are atrophied may call for enucleation of the affected globe. The pain of glaucoma calls for iridectomy.

Note on the Blood Relationship of Man and the Anthropoid Apes.—Albert S. F. Grunbaum reminds us that the serum from an animal—*e. g.* a rabbit—which has been injected intraperitoneally several times with any given organic fluid will, if mixed in small quantity with a dilute solution of the fluid used for injection, produce a more or less marked precipitate. To such a serum has been given the name "anti-serum." Hence, the serum from a rabbit that has been treated in this way with human blood which gives a precipitate with human blood may be, although somewhat paradoxically, called "human anti-serum." Adopting the general mode of application of the test, the author finds that "human anti-serum" gives a precipitate with three species of anthropoid apes, and to him this precipitate is practically indistinguishable from that obtained with human blood either in quality or quantity. Occasionally it has seemed that the blood of the orang gave a more gelatinous precipitate as compared with the granular precipitate of the other bloods, but this may have been due to accidental circumstances. The granular precipitates from other bloods are also liable to become sticky when shaken up. But it is not only by the action of "human anti-serum" on anthropoid blood that this close relationship of the various bloods may be demonstrated. He has prepared gorilla, orang, and chimpanzee anti-serum. Tested in the way described they all react, not only with their own blood, but with each of the others, and also with human blood. Here again, in the absence of definite standards, he is unable to assert that there is any difference of reaction among the many combinations of anti-serum and blood which can be made with the four above-mentioned bloods and sera. He has not noticed any record of a microscopical application of this test applied in the same way as in serum diagnosis. By this method, using one drop of 1-per-cent. blood solution with one drop of anti-serum, a result is produced reminding one very much of the clumping of bacteria, and in this way, too, it is possible to differentiate human and anthropoid blood, because there is an earlier and more complete reaction when the anti-serum is used on its own blood.

British Medical Journal, January 18, 1902.

Two Cases in Which the Activity of Phthisis Was Excited by Operations for Local Tuberculosis.—A. J. Rodocanachi reports these cases. The first was that of a man aged forty years, with extensive disease of the metatarso-phalangeal joint. This was operated on, and the cough which he had had became much worse, and he died in less than a month. The second case was that of a man aged twenty-two years. Suppurating inguinal glands were excised, and the patient grew rapidly worse, dying in less than a month. The patients were poor, and could not go away for any change, and a refusal to operate would have condemned them to a lingering death in either a poor cottage or a city workhouse. So the operation was risked in the hope of benefiting the patients.

The Relation of Glaucoma to Thrombosis of the Retinal Veins, with Notes of Cases.—E. Harries Jones quotes several cases in which glaucoma occurred as a sequel to unilateral thrombosis of the central retinal vein, associated with arteriosclerosis, but without albuminuric retinitis. In three of the cases the glaucoma was acute, and followed the retinal condition in about six weeks. In the fourth case, the glaucoma was chronic, and did not occur until nine months after the retinal vessels were affected. In two of the cases, glaucoma occurred also in the eye unaffected with thrombosis. The clinical significance of this complication in cases of thrombosis naturally lies chiefly in the direction of prognosis, which is really not bad in many cases of simple thrombosis, as, after the circulation is established again and the hemorrhages are absorbed, the patients often retain some useful vision.

Observations on the Surgical Treatment of Obstructive Jaundice from an Experience of Over 200 Cases.—A. W. Mayo Robson declares that the treatment of this affection depends upon the diagnosis. If the diagnosis is doubtful an exploratory operation is advisable, providing the general condition of the patient renders it probable that such a procedure *per se*, apart from what is to follow, will not hasten death. If malignant disease is positively diagosed, operation can, with some few exceptions when it is possible to remove it completely, do little good, or, at the best, can probably prolong life for only a short time. If a diagnosis is made of gallstones, common duct cholelithiasis, chronic pancreatitis, simple stricture of the common bile duct, inflammatory adhesions causing pressure on, or stenosis of, the hepatic or of the common bile-ducts, or hydatid disease of the liver pressing on or discharging into the bile-ducts, operation is decidedly advisable if the patient is at all in a condition to bear it.

A Possible Predisposing Cause of Cancer.—Harold Mason from his investigations concerning the cause of cancer has collected some valuable statistics: Out of 175 houses, deducting one in which two cases occurred, 117 are upwards of thirty years old and fifty-seven are less than thirty years old; *i. e.* 67 per cent. of these cases occurred in the older houses. All these observations seem to point to the conclusion that whatever the ultimate cause may be cancer will be found to be due to some germ, whose habitat is a sewage-contaminated subsoil, and that it gains entrance to the organism through one of the mucous membrane-lined apertures of the body. This would account for various facts which have been noted in the study of this disease. That the cancer death rate has increased during the last sixty years—a time synchronous with the development and extension of the water closet system of drainage, the first style of which was simply unglazed drain pipes laid end to end, sometimes joined with clay and sometimes not. That the infection of the alimentary system is as high as 55 per cent. That people over forty years old are more subject to it. That females are more subject to it than males. That consecutive houses in the same street are found often to be cancer houses. That a large proportion of these cancer houses are end houses of rows. That the older houses are more apt to become cancerous than the modern ones. That the houses which are built on a porous subsoil are more likely to become cancerous than those built on clay.

Berliner klinische Wochenschrift, January 6, 1902.

Formation of Anti-Bodies Against the Bacteriolytic Immune Bodies of Cholera.—R. Pfeiffer and E. Friedberger, in experimenting with anti-cholera serum, have convinced themselves that, under certain circumstances, anti-bodies against the bacteriolytic immune bodies of anti-cholera serum are formed, although, according to Ehrlich's theory, the formation of anti-immune bodies is very improbable. They took old anti-cholera goat serum and inoculated it into rabbits. The serum of these rabbits was then mixed with fresh anti-cholera goat serum, which had a marked bacteriolytic action, and it was found that such bacteriolytic action was entirely destroyed. This phenomenon can be explained in three ways: (1) In the ante-immune serum there were present anti-complements which nullified the action of the complements in the anti-cholera goat serum; (2) In the anti-immune serum there were present anti-complements, which owed their origin to the presence of complementoids present in the old anti-cholera goat serum used, and thus indirectly acted upon the complements of the fresh anti-cholera goat serum; (3) The action was due to the presence of anti-immune bodies produced by the inoculation of the old anti-cholera goat serum. Pfeiffer and Friedberger think that in our present knowledge the last view is the most tenable. In regard to cholera-immune bodies two questions are of interest: (1) Are the cholera-immune bodies of different species of animals identical? (2) Are such immune bodies, present in normal and specific goat serum, identical? The first question is to be answered in the negative; the second, in the affirmative.

Blood Examinations in Pulmonary Tuberculosis.—L. Appelbaum considers the blood changes which occur in pulmonary tuberculosis in the various stages of the disease. In the first stage, cases may be divided into two groups. First, those persons who have shown a marked predisposition to tuberculosis and who possess the characteristic cachectic appearances, and second, those in whom such is absent, and in spite of the tuberculous lesions the general condition has remained good. In the first class of cases there is present hæmoglobinæmia, a reduction in the number of erythrocytes and leucocytes, together with a decrease in the specific gravity. These changes are principally brought about by the poor nutritive conditions present. In the second class of cases, the blood condition does not perceptibly vary from normal. In the second stage of tuberculosis, the blood condition in the first class of cases above mentioned shows apparent improvement; the amount of hæmoglobin, the number of red blood cells and leucocytes, and the specific gravity are all increased. At first thought it seems paradoxical that, with the increase in the severity of the disease, the condition of the blood should show improvement. It is certain, however, that this improvement is merely apparent, and in reality means only that a marked concentration of the blood has taken place, thus giving the increase in the constituents mentioned above. This concentration is brought about by many factors prominent among which are night sweats, diarrhœa, and fever. In the third stage of the disease all the constituents of the blood, with the exception of the leucocytes, are markedly decreased. The leucocytes are considerably increased in number, usually from 15,000 to 20,000 being present. The peculiar characteristic of this leucocytosis is the percentage increase in the polynuclear neutrophiles. They often constitute from 84 to 85 per cent. of the total number of leucocytes.

Münchener medicinische Wochenschrift, January 7, 1902.

Treatment of Melæna Neonatorum by the Subcutaneous Injections of Gelatin.—Dr. Holtschmidt reports five cases of melæna neonatorum which were successfully treated by subcutaneous injections of gelatin. As the mortality from this disease when treated by other methods is about 50 per cent., these results are very gratifying. Fifteen cubic centimeters of a warm 2-per-cent. gelatin solution were used in each case. In only one case was a second injection necessary. As a rule the quantity injected was divided into two portions, which were separately inoculated into the anterior thoracic wall or outer surface of the thigh. Great care must be taken that the gelatin solution employed is absolutely sterile, and the inoculations must be carried out under all possible antiseptic precautions.

Silk Tendons.—Fritz Lange reports fifty-six cases as illustrative of a new method of tendon transplantation and the utilization of artificial silk tendons. The tendon of the muscle to be employed is divided, and if it is not long enough to reach the desired place for insertion, onto the free end a strong silk ligature is attached. The extremity of this ligature is inserted as desired. In order that satisfactory results may be obtained from the use of this method it is essential, first, that the artificial tendon be of a length sufficient to give the employed muscle its normal degree of tension, and second, that the operation be conducted under antiseptic precautions, so that primary union shall take place. Observation has shown that in time the silk threads are completely surrounded by a layer of connective tissue, and thus practically converted into a normal tendon. By this means the author has been enabled to correct many paralytic deformities even after marked contraction had taken place.

Hæmolysis.—Max Matthes undertakes to throw some light upon the point of contention between Ehrlich and Bordet as to whether the immune body prepares the red blood cells for the action of the complement or whether it unites with the latter before the erythrocyte is attacked. In order to settle this question in some measure, it is necessary to decide whether or not the immune body destroys the life of the red blood cell. It has been established that active pancreatic extract only digests red blood cells which are dead, and that it has no effect upon them so long as they remain alive. By the application of this principle the author shows that the immune body does not in any way reduce the vitality of the erythrocyte. The supposition, therefore, that it prepares this cell for the action of the complement is not well founded. Another interesting fact ascertained was that Hayem's solution when added to red blood cells, acts as an immune body, and when the complement subsequently is added, hæmolysis promptly occurs.

French Journals.

Syphilitic Chancre of the Lower Eyelid in a Little Girl of Six Years.—Lagrange describes this patient who, when she was first seen, was supposed to have purulent ophthalmia; but the development of enlarged submaxillary and preauricular glands, with the presence of mucous plaques in the mouth determined the diagnosis. The pathogeny of this very rare affection cannot be determined in this particular case.—*Gazette Hebdomadaire des Sciences Médicales*, January 12, 1902.

Maladies of European Children in Hot Countries.—Crombie compares the mortality of children in England and European children in India in the year 1899: It stands as 18.31 to 1000 in England to 41.09 in India The difference is 26 in every 1000. Diarrhœa is more frequent and severe in India. Enteritis is twice as frequent and severe in India. The mortality from dysentery is 9.8 to 100 in India. Pneumonia is more frequent in India. Abscess of the liver is unknown in children. In twenty-six years in India the writer has not seen one case of abscess.—*Gazette Hebdomadaire de Médecine et Chirurgie*, January 12, 1902.

Compression of the Umbilical Cord.—Maygrier states that there are cases of compression of the cord, the cause of which may be definitely determined, and also other cases in which the cause remains doubtful, or indeed unknown. In general this accident can be avoided by carefully keeping watch of the infant's condition. It is not so easy during pregnancy to guard against, but in labor the constant use of the stethoscope will surely give timely warning. If the fetal heart sounds become feeble for any length of time, or if compression of the cord is only suspected, intervention to rapidly terminate the labor should be instituted at once for the sake of the child's life.—*La Médecine Moderne*, January 8, 1902.

Two Cases of Restoration of the Nose for Hypertrophic Acne.—Baudon describes these two interesting cases. The first patient was an Italian workman, whose nose was so deformed by this tumor that he had to raise the whole mass when he ate, as it hung so far down on his lip that it offered an obstruction to the introduction of food. The tumor was very soft, jelly-like in consistence. It was composed of two large lobes, separated by a central groove, while there were smaller lobes besides. The patient was anæsthetized and the operation performed by means of the thermocautery. There was no bleeding. There were various cavities filled with sebaceous material with friable walls. Within three or four weeks after the operation the wound was healed. The result was excellent. The second case was operated on in the same manner, only on account of a weak heart no anæsthetic was given. The writer prefers the cautery to the knife, as the operation with the former is bloodless. The operation, whatever the method, is easy, without danger, and productive of excellent results. The cautery should not be too hot; then hemorrhage and inflammation of the fat which forms such a large part of the tumor will be avoided.—*Archives Provinciales de Chirurgie*, December 1, 1901.

Laryngeal Syphilis.—Desplates relates his observation of a case of this nature. The patient, a woman, had suffered from aphonia for several months, had coughed for ten or fifteen years, was much emaciated, was partly deaf, and also showed ocular troubles, chief of which was a unilateral ptosis. It seemed to be a case of tuberculosis in the last stages. This diagnosis had already been made in a special throat clinic, which the patient had attended for a year. On the second examination, the writer found nothing in the lungs upon percussion, and almost nothing on auscultation. He made out cicatricial lesions on the epiglottis and on the aryepiglottic folds; the vocal cords were destroyed by large ulcerations that were on the way to cicatrization; the ventricles were a little affected. The trouble was evidently syphilis and not tuberculosis. There were no other lesions apparent, except those of the larynx. Radioscopy also confirmed the absence of tuberculous lesions of the lungs. Mixed treatment was instituted. At the end of three weeks the ptosis had disappeared, the eye had almost completely recovered its power of motion, pain had stopped, and the general condition was very good. It seemed unfortunate that the correct diagnosis could not have been made sooner, for the vocal cords can not be restored, and there is danger of stenosis of the larynx.—*Journal des Sciences Médicales de Lille*, January 11, 1902.

Annals of Surgery, January, 1902.

Mechanical versus Suture Methods for Intestinal Approximation.—J. Frank offers the following conclusions: (1) With no other method can be obtained all the excellent qualities in such an ingenious combination as with the mechanical devices of the Murphy type; (2) None of the suture methods can show such a low mortality; (3) The perfect holding together of the intestinal ends throughout their entire circumference with the button or coupler, obviating the danger of leakage, has been demonstrated by von Chlumski, who subjected all methods to the hydraulic-pressure test, and demonstrated the inferiority of the suture methods; (4) For end-to-end approximation, the button and coupler are the only devices that will achieve their greatest triumph, for it is in this operation that the suture methods yield the largest mortality.

The Cause of "Stitch Abscesses" and Their Prevention.—A. E. Maylard discusses the elements of septic infection under the circumstances suggested by the title of his paper, and makes a plea for the disinfection of the skin by mercury, according to the following method: (1) Cleanse the skin in the usual way by soap and water (turpentine and alcohol, or ether, if necessary); (2) Anoint freely and widely with hydrated lanoline-oleate of mercury (20 per cent.) and rub in; besmear a piece of lint with the same and leave on until a second inunction is performed twelve hours later. Every case should be treated for at least twenty-four hours before operation; preferably forty-eight hours should be given, with at least two separate periods of "rubbing in" for about ten minutes on each occasion; (3) On the operating table the piece of lint is removed, and the superfluous ointment rubbed off with a piece of sterilized gauze. The part is now ready for operation.

Intussusception of Meckel's Diverticulum.—The patient of J. M. Wainwright was a boy of seventeen years with abdominal symptoms calling for exploratory laparotomy. No tumor was made out, but there was great tenderness all over the lower zone of the abdomen with considerable pain. On opening the peritoneum there was a gush of about eight ounces of clear serum. The small intestine immediately presented in the wound. It was distended and showed a very marked general injection of its peritoneal coat. The sigmoid colon was then found to be collapsed and the cæcum sought. This was also collapsed with the appendix normal. The terminal collapsed ileum was then caught and followed up, and an intussusception about three inches long was found about three feet from the ileo-cæcal valve. There were as yet no adhesions, and the invagination was easily reduced by pressure on the apex. When the lumen of the bowel was restored, it was found that there was in addition a diverticulum, which was itself inverted. It was not until this moment that the true condition was known. This diverticulum, the inverted apex of which had evidently formed the apex of the intussusception, in its turn was easily reduced and found to be about one inch long and somewhat less in diameter. The diverticulum was clamped and cut away, and the wound in the intestine closed with silk Lembert sutures. The abdominal wall was sewed without drainage. Recovery was rapid and uneventful. Flatus was passed freely the night of the operation, and the bowels moved without cathartics the second day. Microscopical examination of the removed diverticulum showed a complete investment of both muscle layers, even at the tip, but otherwise was not noteworthy. That the case was one of a true omphalo-mesenteric remnant was proved by the presence of its muscular coat, as well as by its situation at the circumference of the gut opposite from the mesentery and by its distance from the cæcum.

Bristol Medico-Chirurgical Journal, December, 1901.

The Quiet Production of Anæsthesia.—J. Freeman considers this question along the usual lines. So far as the initial steps are concerned, he says that in his experience asking the patient to take deep breaths is a frequent source of trouble. It at once prevents any imitation of natural sleep, and it often produces reflex holding of the breath or coughing, because a vapor which can be breathed readily with quiet respiration may not be inhaled so well if deep breaths are taken. Imagine, however, a case where these troubles have not arisen, but the patient goes on rapidly taking deep breaths. Now this forced breathing is hard work; and besides that, in a minute or two a condition of apnœa is produced. For these two reasons the patient takes a rest, which is to a great extent a physiological one. A practical anæsthetist is able to see that this is not at all like respiratory failure from paralysis of the center; but the beginner, thinking the patient has "stopped breathing," commences shouting to him to go on breathing, slaps his face, or may even apply tongue forceps. Any rough treatment of this kind with a patient only partly unconscious should be carefully avoided, as it is frequently followed by alarming symptoms.

Some Surgical Aspects of Meckel's Diverticulum.—W. Sheen calls attention to the fact that the vitelline or omphalo-mesenteric duct usually becomes obliterated in the eighth week of fetal life, or a little earlier, and then disappears. It may persist under various aspects, the commonest of which is where its proximal end develops into a blind sac of gut some three inches long, attached to the ileum near its lower part, forming the ordinary Meckel's diverticulum, and usually giving no signs of its presence during life. Other lines of development or partial failure of involution may give rise to conditions of both clinical and pathological interest, and examples occur with sufficient frequency scattered through surgical literature to make the subject appear worthy of summary and comment. Closely associated with the duct, and producing various phenomena as a consequence of their persistence, are the omphalo-mesenteric vessels. Experience has shown that these cases may be divided into seven classes: (1) The common form of Meckel's diverticulum is a free tube of intestine, ending blindly, springing from the convex border of the ileum usually about three feet from the ileo-cæcal valve. It usually has no mesentery, and varies in length from three to ten inches. It may be strangulated in a hernial sac, may be ulcerated or perforated, may become knotted and produce strangulation; (2) The end of the diverticulum is connected with the posterior aspect of the umbilicus by a fibrous cord, which may be partially pervious. It may cause intestinal obstruction in various ways, the gut being thrown over it or drawn under it, or pushed through its mesentery—as in the case above detailed—or under certain conditions, especially much distention of the bowel, the diverticulum may drag upon it at its point of attachment, producing kinking; (3) The end of the diverticulum may be simply attached to the posterior surface of the umbilicus, giving the same series of conditions as in class two. (4) The most important class is that in which the diverticulum, having been continued for a variable distance into the cord, is pervious throughout at its separation. The mucous membrane at the umbilicus, prolapsing and proliferating, often forms a little polypus in the center of which is a minute channel through which fecal matter exudes; (5) There may be a large thick-walled, pear-shaped sac passing downward and backward, and adherent by a band of fibrous tissue to the small gut. In such a case the vitello-intestinal duct has become obliterated, and the remainder has become distended by secretion; (6) Closure of the process at its proximal and distal extremities will give rise to cysts in or behind the umbilicus; (7) The duct may exist as a fibrous cord from umbilicus to intestine. Illustrative cases are given under the foregoing headings.

The Edinburgh Medical Journal, January, 1902.

Treatment of Tuberculosis of the Bladder.—P. J. Freyer urges treatment of such a case on general principles, as if it were tubercle of the lungs or other organ. Cases are on record in which patients suffering from tubercle of the bladder have entirely recovered. Cod-liver oil, iron, strychnine, carbonate of guaiacol, and other tonics should be employed, together with a nutritious diet, and the patient should live in the open air as much as possible. As there is pus in the urine, urotropin will be administered in from 5 to 7 gr. doses three times daily, freely diluted with water. Salol and boric acids are also important drugs. Instillations of iodoform have not proved useful, and nitrate of silver is actually injurious in tubercular cystitis. Corrosive sublimate is the most efficacious drug for injections, and should be used in a 1 to 10,000 solution to begin with, graduallyincreased to 1 in 2,000. Morphine and belladonna suppositories should be given for relief of pain. As a final resource, cystotomy by the suprapubic route is recommended.

On the Treatment of Nervous Indigestion or Gastric Neurasthenia.—George Herschell says that the diagnosis of this condition is mainly to be made by a process of exclusion. We have the presence of indigestion in a patient who has evidently not gastritis, ulcer, myasthenia, nor cancer, but who just as evidently is a neurasthenic. In regard to treatment, we must first make sure that the condition does not depend upon the absorption into the system of toxins from the alimentary tract. If by examination we can exclude myasthenia retention, we may give the frequent small meals which are best for neurasthenia. If HCl. is in excess, we must give such foodstuffs as combine with it, yet do not greatly stimulate its secretion, and these will be sweetbreads, calves' brains, oysters, egg albumen, and milk. We should give toasted bread and converted starch, For deficient HCl. the author gives a dietary. For giving tone to the system, he recommends static electricity and the sinusoidal bath. The most valuable drug in the treatment of gastric neurasthenia he considers to be nitrate of silver given in ½ gr. doses in palatinoid form, diluted with a vegetable inert powder. It acts as an astringent, diminishes abnormal irritability of the nerves of the stomach, and is a tonic to the nervous system. The author gives in detail the local treatment, which may have to be applied to the interior of the stomach.

The Causation of Paralysis in Diphtheria.—Alexander C. R. Foulerton concludes from his experimental observations that in some cases of diphtheritic paralysis a descending affection of the neuron occurs, commencing in the portion lying in the motor ganglia; and it is not unlikely that the peripheral affection in these cases is not so much caused by the action of the toxin itself as by nutritive changes following on the lesion of the central portion of the neuron. On the other hand, in the common palate paralysis of diphtheria, for instance, there is distinct evidence of a peripheral affection, the muscles paralyzed being those in connection with peripheral nerve fibers, which come into close relation with the seat of toxin formation in the throat and naso-pharynx. In other words, the concentrated action of the toxins at the seat of their formation may, in some cases, be sufficiently powerful to affect the peripheral segment of the neuron; whereas, in cases in which the paralysis is obviously caused by the action of diluted toxin circulating in the blood, as in paralysis of the lower limb muscles, we conclude that the more susceptible ganglion cell may be affected by a degree of toxæmia which is not always sufficient to set up a primary change in the peripheral nerves. With the affection of the motor cells, a descending lesion, due to nutritive disturbance, occurs, and so we get the peripheral neuritis at a later stage.

Archives of Pediatrics, January, 1902.

Sun Play-Rooms on City Roofs.—W. P. Northrup describes sun play-rooms which he has had some of his patients construct for delicate children or those suffering from incipient tuberculosis. The roofs of the houses in New York, or sometimes the roofs of extensions, can be utilized in this way, and give fine air free from dust and remoteness from the noise, confusion, and dangers of the street. These rooms are chiefly treated by the sun, but on cold days can be warmed by a gas stove. Their usefulness is beyond dispute, and in case of needed rigorous isolation would be additionally useful in providing a place where the patients might be treated through any of the contagious diseases without contact with others.

The Malnutrition of Tuberculosis.—Floyd M. Crandall says that wasting, anæmia and other evidences of malnutrition are constant accompaniments of tuberculosis. These symptoms may occur in infants long before local disease can be detected. In infants, tuberculosis shows a special tendency to be disseminated or to conceal itself in the deep tissues, as the lymph nodes. In some cases fever follows the anæmia and wasting, and then local lesions appear, usually in the lungs. In other cases, tuberculosis in children begins with well-marked local manifestations, particularly pneumonia. Anæmia of tuberculosis is usually simple anæmia. A diagnosis of tuberculosis cannot be made alone from anæmia or malnutrition, but when persistent and increasing without known cause, suggests it. Anæmia in adolescents should receive prompt and active attention, for it increases the danger of tubercular invasion common at that period of life.

University of Pennsylvania Medical Bulletin, Jan. 1902.

The Pathogenesis of Lacunar Keratosis of the Tonsil.—George B. Wood concludes from his study of the subject that the disease commonly called mycosis pharyngitis leptothrycia is a true keratosis of the epithelium lining the crypts of the tonsils. The leptothrix buccalis maximus, the bacillus buccalis maximus, and like organisms do not possess any etiological importance, but are present simply as saprophytis. The disease is probably the result of a moderate degree of inflammation of the parenchyma of the tonsil, causing an increased growth of the normal epithelium of the crypts.

A Review of the Literature of Ovarian Transplantation.—William R. Nicholson states in conclusion of his review that transplantation of the ovaries either homo- or hetero-plastically is possible, and that pregnancy will follow in a small proportion of cases. Furthermore, there is without doubt an influence in the ovaries beyond the mere process of ovulation which is very important for the development of the genitalia and also for their conservation. Whether this is strictly an internal secretion or not, remains to be proved, but certainly many facts seem to point to this as the solution. There is some evidence that the influence of transplanted ovaries may be most beneficial in the prevention of degenerations of the genitalia. Finally, all the evidence adduced tends to strengthen the position held by the so-called conservative school that the whole ovary, or if that be impossible, at least a portion of it, should be left in all operations in which such conservatism will not tend to subject the patient to a greatly increased danger.

Observations of the Nature and Diagnosis of Acute or Infective Endocarditis.—Aloysius O. J. Kelly says that as this disease is rarely, if ever, a primary disorder, it is important to search for the possible source of infection. He gives the differential diagnosis from septicæmia, acute tuberculosis, typhoid fever, malaria, etc. He emphasizes the diagnostic importance of leukocytosis, of the results of bacteriological examination of the blood, and of a perculiar arhythmia or instability of the heart. The leukocytosis may not be marked, but will be a polymorphonuclear leukocytosis. The blood to be examined bacteriologically must be drawn from a small vein under strict aseptic precautions, and allowed to flow over the surface of agar or blood-serum slants and placed in an incubator at 37° C. Pyogenic organisms have often been found in the blood in many cases of sepsis of obscure origin. The arhythmia of the heart manifests itself by the sudden developing and almost equally sudden ceasing of extreme rapidity of the heart's action.

The Penetration Power of Formaldehyde through Various Substances.—Saverio Buonanni found (*a*) that the dried vapor of formaldehyde, 20 grams per cubic meter, applied for twenty-four hours, does not sterilize the spores of anthrax. (*b*) Their destruction can be accomplished by means of 8 grams combined with 92 c.c. of water vapor to the cubic meter, for twenty-four hours. (*c*) Moist formaldehyde vapor in the quantity mentioned penetrates through ordinary cotton textures up to a thickness of 0.37 mm., linen 0.63 mm., wool 1.18 mm., and silk 0.16 mm., destroying anthrax spores beneath. (*d*) Formaldehyde vapor, up to 20 grams, with 182 c.c. aqueous vapor to the cubic meter, and for twenty-four hours, does not penetrate through dry paper, even though it be as thin as 0.06 mm. (*e*) Moist formaldehyde vapor, in the same amount and under the same conditions, penetrates moistened paper, and through writing paper (0.06 mm.) and some other varieties of paper it sterilizes spores placed underneath.—*Annali di Medicina Navale.*

Society Reports.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-sixth Annual Meeting, held in Albany, N. Y., January 28, 29, and 30, 1902.

Henry L. Elsner, M.D., of Syracuse, President.

FIRST DAY—TUESDAY, JANUARY 28.

The meeting was held in the Common Council Chamber of the City Hall, and was called to order at 10 A.M. by the President, Dr. Henry L. Elsner, of Syracuse, who then delivered the inaugural address.

Inaugural Address.—Dr. Elsner briefly sketched the work of the year, and in so doing pointed out the danger of accepting unreservedly the views propounded by Koch. In this connection the speaker said that had these views emanated from lesser light than Koch they would have received little attention. He recommended that the society, as a body, should insist upon keeping up the effort to secure a good, wholesome milk supply. The president also recommended that the president-elect and the secretary be empowered to take such steps as would further the establishment of a national bureau of health. The speaker also declared that the profession in this State demanded the abolition of the delegate system of the State Society.

Proposed Union of the Medical Profession of the State.—Dr. Elsner called attention to the fact that the American Medical Association had been practically reorganized on a broad and liberal basis. The old disagreement on a point of ethics, he said, had become a dead issue because of changed conditions and a more liberal spirit of the profession. The unification of the profession was demanded, not only by the profession, but by the thinking public. A reconciliation must and could be accomplished with dignity and without sacrifice of principles. The time had come for a final effort to gather the profession of this State under a single banner and upon a liberal platform which would secure representation in the American Medical Association. The Medical Society of the County of New York had taken the initiative by resolving to appoint a committee on conference, provided the New York County Medical Association did the same. It was found, however, that the latter body could not act in such a matter independently of the State Association, although it formally expressed itself as heartily in favor of bringing about a union of the medical profession in the State. The president recommended that the Medical Society of the State of New York appoint a committee of five, to confer with an equal number representing the New York State Medical Association, such committee to confer regarding the formulation of a plan which would unite the two State medical organizations into a body which should have representation in the American Medical Association. This committee should report at the next meeting of the State Society, and it should be understood that, in the event of a failure to bring about such reunion, the committee of the State Society should have the power to send delegates to represent that body in the American Medical Association.

Committee on Hygiene.—Dr. Henry R. Hopkins of Buffalo, chairman of this committee, presented a report in which he called attention to the prevalence of typhoid and smallpox, and the notable work done in the investigation of the relation of mosquitos to malaria. The meagerness of the salary of the State Commissioner of Health, as compared with the remuneration of the commissioners of game and fisheries and the State architect, was commented upon, and the folly of such a penurious policy pointed out.

Committee on Legislation.—Dr. Frank Van Fleet of New York presented the report of this committee. He said that no laws seriously affecting the medical law had been enacted during the last session of the Legislature. During that session 379 bills had received the attention of the committee.

The Osteopathy Bill.—On motion of Dr. Van Fleet, the Society adopted resolutions protesting against the passage of the osteopathy bill. The chief reasons presented were: (1) That osteopathy is now legal in the State of New York in the hands of licensed practitioners, and requires no regulation; (2) That the class of people calling themselves osteopaths seek, not the right to introduce a new method of treating disease, but the right to treat disease without complying with the laws regulating all other practitioners, and (3) That the medical laws of the State are enacted for the protection of the community, and should apply to all practitioners or to none.

State Board of Medical Examiners.—Dr. M. J. Lewi of New York presented this report. He said 749 candidates had applied for license, and 150, or 20 per cent., had been rejected. There had appeared before the board of the State Society 671 candidates, of whom 139, or 20.7 per cent., had been rejected; the Homœopathic Board had examined fifty-eight and rejected six, or 10.3 per cent., and the Eclectic Board had examined twenty candidates and rejected five, or 25 per. cent. Up to the present time, 6,349 candidates had appeared before the State Examiners, and 1,379, or 21.7 per cent., had been rejected.

Goitre; Its Medical and Surgical Treatment.—Dr. M. J. Lewi of New York presented this paper. He said that he had treated forty-seven cases of goitre. In the use of electricity, whatever success was achieved was in the parenchymatous, hemorrhagic, and exophthalmic forms of goitre. Iodine, applied externally in the form of the tincture, was comparatively useless, and if employed at all it should be internally. Much could be said both for and against parenchymatous injections of iodine. In many instances, death had followed such injections. In no case should such an injection be given until the part had been rendered surgically clean. After the injection, the site of the puncture should be immediately painted with iodoform collodion. His results had been more satisfactory with a mixture composed of equal parts of tincture of iodine and a 5-per-cent. solution of carbolic acid. From ten to thirty minims of this mixture should be injected once a week, each time in a different place. There was much less pain after the injection of this mixture than where iodine alone was used. Galvano-puncture was useful in parenchymatous goitres, but in the cystic form both electricity and drugs were useless. Such cases should be treated surgically, and in this connection it was reassuring to recall the fact that Professor Kocher had operated upon 2,000 cases, many of them exophthalmic or malignant, with only 1 per cent. mortality. The chief surgical procedures included ligature of the thyroid arteries, division or resection of the thyroid isthmus, and partial or complete excision. Professor Kocher employed local anæsthesia in all cases. This was advantageous because the patient was apt to suffer from dyspnœa during the operation, and if by chance the recurrent laryngeal nerve were included in the literature, the change in the patient's voice would indicate to the surgeon what had happened. Another advantage was the absence of nausea and vomiting which in such cases might interfere with the healing process.

What Shall Be Done with the Professional Midwife?—Dr. M. J. Lewi of New York read this paper. As an indication of the extent to which midwives practise, the records of the health department of New York City were quoted. These showed that in the past year out of 80,735 births reported, 42,253 were by physicians and 38,482 by midwives. The author recounted the well-known abuses incident to the custom of allowing ignorant midwives to practise, and advocated such legislation as would exclude ignorant women from acting as midwives.

Dr. Simmerman of Amsterdam, Drs. Fronziac and Lucien F. Howe of Buffalo, Dr. A. Jacobi of New York, and Dr. Henry of Kings County discussed the paper, and were practically in harmony with the views expressed in it. On motion, the Committee on Legislation was requested to draft a bill for the Legislature in accordance with the views expressed.

Human Asymmetry.—Dr. W. S. Ely of Rochester was the author of this suggestive paper. He called attention to asymmetry of the testicles and the veins of the scrotum; to asymmetry of the pelvis, to inequalities of the lower extremities, as shown by both longitudinal and circular measurements, and to many evidences of asymmetry in other parts of the body. The feet, he said, were never symmetrical by nature, and these asymmetries were intensified by the bootmaker. Most of us had our best eye or our best ear, and many persons would admit that when fatigued, one leg leads and the other lags. The lungs were certainly far from being symmetrical, and were comparatively rarely involved in the same disease process. The heart itself was far from symmetrical, and the kidneys might be said to be never symmetrical. As no two individuals were alike and the two sides of the body were not identical, doubts arose in making deductions from the results of physical examination. Again, symptom asymmetry was a common mark of neurological conditions.

Dr. Henry R. Hopkins of Buffalo said that modern educators were urging the importance of child-study—a subject which naturally came within the province of the physician—and therefore this paper was exceedingly timely and suggestive.

Dr. Lucien F. Howe of Buffalo said that he had had occasion to look up the literature with reference to asymmetries. He found that the left tear-duct was much more frequently diseased than the right; that deflections of the nostril were more often to the left; that the left lung was apt to be first involved in disease; that certain forms of degeneration were much more common on the left side; that the left lobe of the prostate was more often enlarged than the right—in short, and in a general way, that the left was the weaker side and the right was our "better half."

Dr. Carlos F. MacDonald said that this paper was in striking contrast with the views held by that modern school of scientific dreamers who were always seeking for signs of degeneracy as an excuse for the acts of criminals. He would venture to say that a perfectly symmetrical brain did not exist, and that marked asymmetry was observed in persons of the highest character and greatest mental attainments.

A Case of Sarcoma of the Tonsil.—Dr. Arthur G. Root of Albany reported this case. The patient was a male of twenty-three, in whom the whole of the tonsil was involved in a sarcoma. The only procedure available was lateral pharyngotomy, and it was successfully performed on January 17. Most of the cases reported had been in persons forty years of age, or older.

Dr. R. H. M. Dawbarn of New York spoke of his work in the line of complete double extirpation of the external carotid and all its branches for malignant growths in the region supplied by this artery. His experience comprised about forty of these operations, and other surgeons had done the operation about an equal number of times. He hoped this would be considered a sufficient warrant for his urging the more general trial of this method.

Dr. N. Jacobson of Syracuse said that two years ago he had presented to the Central New York Medical Association a patient upon whom he had, five months previously, performed lateral pharyngotomy for a very large sarcoma of the tonsil. Recurrence did not take place for eighteen months, and then it was in a part of the larynx which made a second operation impossible. He had reported also a case of epithelioma of the tonsil, in which he had removed the growth twelve years ago, and there had been no recurrence.

Dr. A. Jacobi said that he knew of one case in which a sarcoma of the tonsil had been removed ten years ago, and the man was still in perfect health.

The Treatment of Pelvic Suppuration.—Dr. Charles P. Noble of Philadelphia, Pa., was the author of this paper. It was based upon 200 cases of pelvic suppuration in women. In fifty-five cases, treated prior to 1895 by the surgical methods then in vogue, the mortality was 16.3 per cent.; whereas, since 1895, in ninety-one cases, the mortality was only 6.5 per cent. If fifty-four cases treated by incision and drainage were added, the mortality would be reduced to 4.8 per cent. Most of the latter cases were treated by incision through the vault of the vagina; in a few the incision was in the groin, and in a few others both incisions were employed. Incision and drainage should be the operation of election in puerperal cases.

The Sideroscope.—Dr. Thomas R. Pooley of New York exhibited this instrument, the purpose of which is to demonstrate the presence of particles of steel and iron in the eye. Dr. Pooley claimed to be the first to employ the magnetic needle for the purpose of determining the presence of such bodies in the eye. In June, 1880, Dr. Pooley said he had read before the Section on Ophthalmology of the American Medical Association a paper on this topic. His attention had been directed to this method by his brother, the late Dr. James H. Pooley, but it was found that the underlying principle was not new. The instrument exhibited was an improvement on his own devised by Hirschberg. A glass tube has a magnet suspended within it by a very fine fiber of silk. In front of this and attached to the magnet is a concave mirror. The reflex of this mirror is thrown upon a graduated scale, and a deviation from zero points to the presence of a fragment of iron or steel. The eye must be brought as closely as possible to the glass tube in which the magnet is inclosed.

Gonorrhœa of the Prostate.—Dr. John Vander Poel of New York read this paper, which will appear in a future issue.

Fractures of the Nose.—Dr. John O. Roe of Rochester read this paper. He said that replacement of the fragments should be effected as early as possible. This was best done by the introduction of a smooth and slightly flattened sound, aided by the finger externally. He made use of a splint of aluminum or copper molded to the nose, covering its whole extent and resting on the superior maxilla. It is held in place by a strip of adhesive plaster. To prevent undue irritation, it was well to place adhesive plaster on the nose underneath the splint. In simple cases he used for the internal support a spring covered with rubber. In the more complicated cases it was sometimes necessary to pack the interior of the nose with gauze or cotton for three or four days. Before the introduction of any support the interior of the nose should be thoroughly cleansed, and then anæsthetized with cocaine or eucain. The dressing, if properly applied, would be painless; the only discomfort should be that arising from the cutting off of nasal respiration.

Dr. Leonard Weber of New York described two cases of severe compound fracture of the nose, successfully treated by the internal support obtained by the insertion of two large rubber tubes in the nose.

Dr. Wendell C. Phillips of New York said that those having the care of children should be impressed with the importance of attending immediately to even apparently slight injuries of the nose.

Dr. Roe, in closing, expressed his belief that the internal support was merely an accessory to the external support, the latter being of the first importance.

The Constitutional State Versus Catarrhal Deafness.—Dr. Sargent F. Snow of Syracuse presented this paper. He insisted that very little could be done if the skin were inactive, and that personal hygiene must be considered of paramount importance. Cold baths and frictions were exceedingly useful; they would so toughen the body surface that the latter would no longer constitute an ever-present menace to the internal organ. A torpid liver not infrequently thwarted all our best efforts to get medicaments through the Eustachian tube. It was Dr. W. C. Phillips who said that any one who undertook to treat the catarrhal diseases of the middle ear simply by the usual mechanical methods would surely fall far short of the possibilities of such treatment.

Dr. A. Jacobi said that middle-ear catarrh was very rarely primary, and hence local treatment of the nose and throat was almost everything in the treatment of disease of the ear. A most important prophylactic measure was the systematic daily washing out of children's noses. The iodides, when given for a long time in small doses, would certainly do away with a good deal of infiltration of the nose, throat, and ear. The ear should be treated principally through the nose and throat.

Dr. J. O. Roe said he believed nine-tenths of the cases of common "colds" arose from internal systemic derangements rather than from the influence of external causes, such as a cold draft.

The Educational Management of the Neurasthenic.—Dr. Edward B. Angell of Rochester was the author of this paper. He said that fatigue and exhaustion necessarily affect the higher mental faculties. The very weakness of the neurasthenic patient's volition made it easy for such a person to follow authoritative routine, and the physician should map out every detail of life for the whole twenty-four hours. By a carefully graded system of education or suggestion the neurasthenic could be most satisfactorily treated.

Dr. E. D. Fisher of New York said that as every chronic disease had its functional disturbance, where suggestion was carried on by wrong persons, such as Christian Scientists, a hold on the patient would naturally be secured because of the consequent improvement of the functional disorder.

Discoveries in Pathology.—Dr. Mary Dixon Jones of New York expressed in this paper some of her personal views concerning what is generally described as endothelioma, and also spoke of certain other pathological conditions which she claimed to have discovered.

A New Method of Bisecting the Uterus.—Dr. C. H. Richardson of Albany described the method. With the patient in the Trendelenburg posture, the uterus is separated from the rectum, brought well up, and one corner is then seized with forceps and drawn upon. An incision is then made into the median line of the uterus, through the body and the uterine cavity as well. With the fingers the adhesions of the tubes and ovaries are separated, and this is very easily done by following the lines of cleavage from below. The incision is then carried along the border of the broad ligament, and clamping the vessels as they are divided.

An Epidemic of Typhoid Fever in the Backwoods of Maine.—Dr. E. F. Brush of Mount Vernon described in great detail the conditions present in this region. The "fever" existed sixty miles up the river, and the boy who first became sick in the camp must have contracted the disease from picking up some of the flotsam. The interest of these cases was that they were so completely isolated. The family did not drink the water of the river, but the boy did swim in this river. His family used water from a barrel supplied from a brook which could not have become infected. The boy first taken sick drank from this barrel, and threw the water back. By this mouth contamination the other members of the family became infected.

A Case of Strangulated Hernia of the Left Ovary and Tube.—Dr. A. T. Bristow of Brooklyn reported this case. He said that he had been able to find about one hundred recorded cases. Congenital herniæ of the ovary were always accompanied by hernia of the tube. In very many of these cases other congenital defects exist, notably of the genital tract. The inguinal variety of ovarian hernia was the most common. In all cases of hernia of the ovary an operation was demanded. He had found the record of only one fatality after this operation. This low mortality, even in pre-antiseptic days, was probably to be explained by the fact that the operation was extraperitoneal.

Toxic Dosage in the Treatment of Some Nervous Diseases.—Dr. William C. Krauss of Buffalo read this paper. He said that failure in the treatment of many nervous disorders was dependent on the use of too small doses, even of appropriate remedies. The dose of bichloride of mercury, for example, was put down as from 1-20 to 1-10 of a grain, yet such doses would have no good effect in cases of brain syphilis. Such cases should receive hypodermic injections of one or two grains daily, and although these might cause toxic symptoms, gummata would be found to melt away quickly under their influence. Hypodermic administration was preferable in nervous disorders, and was less likely to cause excessive ptyalism. The usual dosage of Fowler's solution of arsenic was one to ten minims, yet in some cases of chorea he had given from thirty to sixty minims three times a day without causing toxic symptoms, and with an abortive effect upon the disease. He had not found the newer preparations of arsenic superior to the old ones. Nux vomica should be given in doses of 10 to 50 drops, after meals. In the treatment of neuralgic and neuritic disturbances he had found no other drug so satisfactory as nitroglycerin. The dose is rapidly increased until the pain ceases. The only unpleasant results from large doses were a throbbing headache, readily relieved by the bromides, and an increase in the size of varicose veins.

Dr. Henry R. Hopkins said that, *à propos* of large doses and vigorous treatment, he desired to say that for the past year he had adopted a plan of treatment for desperately severe cases of delirium tremens, which had been most successful. This consisted in removing at once from the patient one or two pints of blood, and at once transfusing double the quantity of normal salt solution. Under this treatment the mortality in these cases had been reduced from about 80 to less than 2 per cent.

Dr. A. Jacobi said that the doses used by Dr. Krauss were not "toxic," but simply large and effective. In cases of pneumonia, associated with cyanosis and dilatation of the right ventricle, he had obtained excellent results from giving 10 or 12 grains of good digitalis every three or four hours for several doses.

The Pathology of the Tissue Changes Caused by the Röntgen Rays.—Dr. Carl Beck of New York said that it might be assumed that, if in chronic inflammatory processes constriction of the vessels took place, the papillæ starve. A hair, extracted after prolonged irradiation, would be found altered in structure. Integumental specimens showed thickening of the tunica intima of the small blood vessels, a process tending to a narrowing of their caliber. Fibrous tissue was deposited in a reticular arrangement. The tunica muscularis, and adventitia were affected in the same manner. The tissue change taking place in neoplasms was also of a similar type of chronic inflammation. The nutrition of their superficial strata was disturbed, the cells starved, and if over-irradiation were continued necrosis might result. It was easy, therefore, to understand the curative influence of the Röntgen rays on lupus, carcinoma, and sarcoma when confined to the integument. Reference was made to a case of lupus erythematosus in a woman of twenty-five, who was irradiated for twenty-five minutes every two days. It was not until the twentieth exposure that the redness decreased and some of the nodules began to shrink. Complete recovery was not expected for several weeks. In this work, it was well to have the vacuum tube as near to the diseased area as possible; it should certainly not be more than four inches away, and might even be placed as near as two inches.

Glioma of the Retina.—Dr. Edward S. Peck of New York reported an interesting case of this kind coming under his observation, and briefly outlined the differential diagnosis.

The Position of the Eyes at Rest.—Dr. Lucien Howe of Buffalo presented a paper on this topic. He also exhibited a head-rest, in which exact fixation was secured by having the patient grasp a piece of soft wood with the teeth and indent it. This strip of wood was preserved as a record of that individual, and by its aid this person could, at another time, be placed in exactly the position occupied at the first examination. Dr. Howe made the point that the way to find the position of the eye was to allow the light to come on to the macula of one eye, and then to put some appliance, usually a prism, into position, thus throwing the image of the other eye off the macula. Then, there being no tendency to fusion, the eye swings into the position which it occupied with the greatest comfort.

Dr. Francis Valk of New York objected to this method, because, as he understood it, the fusion power of the eye was eliminated. No method of testing, in his opinion, was worthy of confidence which did this.

The Civilized Indian; His Physical Characteristics, and Some of His Diseases.—Dr. A. D. Lake of Gowanda read a paper with this title. He said that the Iroquois Indians, before they felt the influence of civilization, were a type of perfect manhood and physical development, because they lived close to nature. They were now, on the contrary, extremely sensitive to changes of temperature, and were unable to do much work. Many of them die young, and if they reach the age of puberty, the women particularly show a high rate of mortality. They are very susceptible to tuberculosis, whole families often succumbing to this disease. Pneumonia is especially fatal, and if they recover they are apt subsequently to develop tuberculosis. Twenty years ago, the evidences of the former ravages of syphilis were often observed, but at the present time they are apparently immune to this disease. That there are abundant opportunities for venereal infection is shown by the prevalence of gonorrhœa. There is a steady increase in the diseases peculiar to women. There are about 1,800 Indians on the Cattaraugus reservation.

The Smallpox Problem.—Dr. Ernest Wende of Buffalo read this paper. He said that the first obstacle to prophylaxis was to be found in the lamentable ignorance of the masses regarding the measures necessary for the prevention of this disease. A constant menace to public health was the unreasonable and demagogic opposition of the antivaccinationists, who prate in season and out of season about the infringement of personal liberty. Health officers should be prepared for their work by a course of study in sanitation before being allowed to qualify for office. Instability and variations had characterized the present epidemic, and it was not to be wondered at that serious errors in diagnosis had occurred.

Symposium on Paresis.—A symposium on paresis was presented in the following papers:

Etiology.—Dr. Arthur W. Hurd of Buffalo opened the symposium with this paper. He said that probably a percentage of at least sixty had suffered from syphilis in former years, which was about ten times the percentage of syphilitics in other forms of insanity. Nine paretics had been inoculated with syphilis abroad, yet not one of them developed the disease. The records of one institution showed that only 3 per cent. of the priests admitted were paretics, and it was well known that syphilis was rarely found in this class of persons. Again, in the rural portions of Ireland, where syphilis was very rare, paresis was also rare. Four adult men were affected with paresis to one woman, while the disease was equally frequent in children of both sexes. This was to be explained by the fact that men have four times the opportunity of women for acquiring syphilis, while girls and boys have an equal chance of inheriting this disease. In his experience, paresis was one of the least transmissible of mental diseases. Paresis had been called the disease of the nineteenth century, yet if syphilis were the sole cause this disease should have been recognized and recorded much earlier. It was probable that the increasing mental strain, incident to the march of civilization, was an important factor. This theory found some support in the fact that the increase of the disease had been most rapid in those countries in which the national life had been the most strenuous. In a certain small proportion of cases mental stress might be the sole ascertainable cause, and in a still smaller number, traumatism might be the chief factor.

The Early Diagnosis.—Dr. Francis X. Dercum of Philadelphia, Pa., presented this paper. He said that early symptoms of paresis often resembled, though only superficially, those of neurasthenia. In the neurasthenic the symptoms were almost exclusively subjective, and he was anxious to describe his symptoms in minute detail. On the other hand, rarely did the paretic come to the physician of his own initiative, but he was usually brought by his relatives, who also are the ones to describe the symptoms. The neurasthenic was usually at his worst in the morning and at his best in the evening. In the paretic the reverse was the rule; he was apt to be somnolent toward night, and to exhibit defects of speech and mental action which were hardly noticeable earlier in the day. The paretic early exhibited evidences of fatigue, and a true impairment of memory and an indifference to everyday details of life were apt to be observed, together with certain occasional lapses in decorum. These symptoms served sharply to differentiate paresis from neurasthenia. When physical signs appeared, both neurasthenia and melancholia would be set aside. Changes in the reflexes, tremors of the tongue, and speech disturbances might be present, but their order of appearance varied greatly. The physical sign of the most importance was the peculiar manner of the paretic—the slight and almost infinitesimal changes in the facial expression and gestures, which showed that the patient was not in close touch with his surroundings. It was during the initial period—the neurasthenoid stage—that the diagnosis should be made.

Comparative Frequency.—Dr. Charles G. Wagner of Binghamton discussed this topic. He said that paresis had been recognized for about eighty years. Dr. Bell of the McLean Asylum in this country stated that while he had seen many cases of paresis abroad, he had not met with it in this country up to 1840, although on the lookout for it. During the last half of the nineteenth century 18,843 insane persons had been admitted to the Utica hospital for the insane, of whom 865, or 4.5 per cent., were cases of paresis. The proportion of women to men was 1 to 7½. In thirty years there were admitted to the Hudson River State Hospital 10,434 persons, of whom 672, or 6.4 per cent., were paretics. According to the reports of the Lunacy Commission, there had been admitted into all the hospitals for insane of the State a grand total of 49,787 persons, of whom 3,307, or 6.6 per cent., were cases of paresis. All the walks in life were represented. The records of one of the divisions of the Manhattan State Hospital show that in 1,300 cases the average duration of the disease was 15¾ months. They also show a remarkable preponderance of the disease among native Americans in an institution in which more than two-thirds of the inmates were of foreign birth. From the same source it was learned that paresis rarely occurred before the age of twenty or after the age of sixty. General paresis constitutes about 8.75 per cent. of all cases of insanity. The disease was gradually increasing in frequency.

Treatment of Paresis; Its Limitations and Expectations.—Dr. Edward Cowles of Boston, Mass., was the author of this, the last paper of the series. Tonics, a generous diet, and the interdiction of alcohol were well recognized elements in the treatment. Hydrotherapy was often beneficial. Hospital experience was opposed to the use of anti-syphilitic treatment in cases of general paresis, except when active syphilis was present. The limitations of treatment were suggested by the lack of a rational basis for our therapeutics in this disease. The modern conception of the intervening factor between syphitis and paresis was a grave nutritional disorder of the nature of a toxæmia.

SECOND DAY—WEDNESDAY, JANUARY 29.

Prize Essay.—Dr. A. Jacobi reported that the committee on prize essay recommended that the prize be awarded to Dr. Lucien Howe of Buffalo, the author of an essay entitled "A Study of the Connective Tissue of the Orbit by a New Method."

Ringworm; a Note on Its Treatment.—Dr. George Thomas Jackson of New York presented a brief communication on this topic. (See page 164.)

Dr. Baum of Syracuse said that he had tested this method for a long time, and now used it almost to the exclusion of all others.

A Case of Epilepsy, with Possible Medico-Legal Complications.—Dr. Frederick Sefton of Auburn presented this report. The patient was a candidate for admission to a college secret society, who was savagely tortured during the ceremony of initiation. He was taken home unconscious, but shortly afterward was apparently as well as ever. Months afterward he suddenly became morose and irritable, and without any reason shot a his sister, but fortunately missed her. In his flight from the house he fell collapsed, and was taken home unconscious. On awakening the following morning, he had no recollection whatever of what had happened, and to this day was skeptical when told of the occurrences of that night. Shortly before coming under the observation of the speaker he had taken Paris green, apparently with suicidal intent, though on his recovery he averred that he had no recollection of the act, and had no desire to die. On Dr. Sefton's recommendation he secured a position as purser on a ship, and still occupied that position, having had no further convulsions. The case was reported chiefly because of its medico-legal interest, and the ease with which testimony could have been obtained to prove the man's responsibility for his acts. The lesson to be learned was the need for such change in the taking of medical expert as would make it partake less of an *ex parte* character.

Dr. William Browning of Brooklyn said that while undoubtedly fright was occasionally an efficient cause of epilepsy, but in all the cases of this kind with which he was familiar the epilepsy had developed within a few hours or days. When the interval was very much longer, as in the case just reported, he would doubt very much whether the fright had had any material effect in producing the epilepsy. In these cases of psychic epilepsy, the patient does not usually do violence to others except when in some way disturbed or interfered with.

Report of the Committee on the President's Address.—The committee recommended: (1) That the question of holding a semi-annual meeting this year, and subsequently, be left to the judgment of the president-elect and the comitia minora; (2) That the question of a separate examination in internal medicine, to be held by the State Board of Medical Examiners, be referred to the Regents; (3) That the questions involved in Koch's paper regarding the communicability of bovine tuberculosis should be looked upon as inviting still further experimentation in this field before conclusions could be drawn, which would warrant any modification of existing methods of dealing with the disease; (4) That the various health boards of the State imitate, as far as possible, the work of the Milk Commission of the Medical Society of the County of New York; (5) That the Society favor the establishment of a national board of health, with representation in the President's Cabinet. After careful consideration of the recommendation to appoint a committee for conference with the New York State Medical Association, the committee gave it its unqualified approval, and suggested that the gentleman, from whom the recommendation had emanated, be made the chairman of the committee, and that he be empowered to associate with himself four representative members of the society. These recommendations of the committee were unanimously adopted without debate.

Nominations to the State Board of Medical Examiners.—For vacancies in the current year: Dr. A. Walter Suiter of Herkimer and Dr. George R. Fowler of Brooklyn; Alternates, Dr. James Spencer of Watertown and Dr. H. A. Fairbairn of Brooklyn.

Acute Lymphatic Pseudoleukæmia, with Report of a Case and Autopsy.—Dr. John L. Heffron of Syracuse discussed this subject. He said that although since 1832 this disease had been known as Hodgkin's disease, there was still a lack of agreement regarding its pathology. He agreed with Sternberg in the belief that it is a lymphatic tuberculosis, and the case he reported afforded an additional confirmation of this view.

The Changes of the Leucocytes in Disease as an Aid to Diagnosis and Prognosis.—Dr. Thomas R. Brown of Baltimore was the author of this communication. He considered the normal number of leucocytes to be 6,500 to the cubic millimeter. Physiological leucocytosis, the speaker said, was met with during the digestion of food—in pregnancy in primiparæ, in the new-born, and after violent exercise. The blood should never be examined for leucocytes during digestion, but in the fasting condition. The leucocyte count had been found most useful in such acute infectious diseases as typhoid, malaria, tuberculosis, influenza, whooping-cough, measles, scarlet fever, diphtheria, and pneumonia. Leucocytosis in typhoid fever pointed at once to some complication, often a perforation. In diphtheria, according to Engel, a high percentage of myelocytes was a very bad sign. The absence of leucocytosis in an uncomplicated tuberculosis was of value in differentiating it from other diseases; its presence pointed at once to a secondary infection with pyogenic organisms—a matter of much importance in cases of bone tuberculosis. A mild leucocytosis after ether anæsthesia was of special interest to the surgeon. A marked leucocytosis was sometimes observed after the administration of large doses of the coal-tar products, and it was probable that further study along this line would elicit information of value in connection with the diagnosis of secret drug habits. One could no longer doubt the very great value of eosinophilia as a diagnostic sign, even in sporadic cases of trichinosis. There was probably no surgical disease in which the leucocyte count was of more practical value than in appendicitis. It might be the only means of diagnosis in the fulminating cases.

An Unusual Case of Abscess of the Liver.—Dr. Edgar A. Vander Veer of Albany reported this case. The patient was a soldier who had had a severe attack of dysentery five months after reaching the Philippines. He returned to light duty in five weeks. He stated that about one-fourth of the men who were attacked with dysentery at the time this man was ill, developed abscess of the liver. This man continued to have many loose movements daily up to the time of his admission to the Albany County Hospital. At that time, physical examination suggested abscess of the liver, and on puncture three and one-half pints of a chocolate-colored pus were withdrawn. A rib was then resected and 1,000 c.c. more of this pus evacuated. The latter was examined at the Bender Laboratory, but no distinct microorganisms were detected. The patient's temperature fell after the operation, but the dysentery subsequently returned, and was checked with great difficulty.

Gunshot Wounds of the Liver, with Report of a Case.—Dr. E. W. MULLIGAN of Rochester read this paper. He said that even as late as 1887 the prognosis, for all but the slightest wounds of the liver, was hopeless. Of ruptures, gunshot wounds, and cuts of the liver, ruptures were the most dangerous. The case reported by Dr. Mulligan was that of an Italian male, twenty-eight years of age, who, in a fit of homesickness, had placed a revolver almost in contact with the abdomen, and shot himself through the liver. He was operated upon six and one-half hours later. The wound of entrance was clean, but the wound of exit from the liver was large, ragged, and was bleeding freely. The bullet had lodged in the muscles of the back. The hemorrhage was checked by packing in a large quantity of sterile gauze. The patient made a good recovery, leaving the hospital after about one month.

The Surgical Treatment of Peritoneal Tuberculosis.—Dr. JOHN W. WHITBECK of Rochester reported in this paper two cases, one of which recovered. He left it still an open question as to whether or not light, air, and friction serve to kill the tubercle bacilli in cases of this kind subjected to operation.

Unusual Herniæ, with a Report of Complete Hernia of the Bladder, Complicating a Strangulated Hernia, Requiring Resection of the Bowel.—Dr. JOHN B. HARVIE of Troy presented this paper. He said that while many cases of hernia of the bladder had been reported, there were very few, if any, on record in which the whole bladder had been involved.

Dr. R. H. M. DAWBARN of New York reported a similar experience, in which his first impression, that the entire bladder had prolapsed, was only corrected by a rectal examination proving that the prostatic portion was still in its proper place. In view of the almost immovable attachments of the prostate, he felt that it was hardly possible for the whole bladder to become prolapsed into the scrotum. Careful examination in his own case had proved the large sac, which he had taken to be the bladder, was in reality a large diverticulum.

Dr. HARVIE replied that in his case the fact, that the entire bladder was prolapsed, had been verified beyond any doubt.

President's Address. The Value to the Physician of Modern Methods of Diagnosis.—Dr. HENRY L. ELSNER of Syracuse delivered this address. He said that Leube's recommendation of the stomach tube in 1871 had cleared the way for accurate gastric diagnosis and scientific treatment. The diagnosis of cancer of the stomach should never be made solely upon the results of the tests for free hydrochloric acid. Henry's observation, that the reduction of the red blood corpuscles does not keep pace with the cachexia was also of great diagnostic value. The recognition of hyperacidity and hypersecretion, and the information obtained from inflation of the stomach were valuable additions to our knowledge. The benefit derived from the administration of the iodides in syphilitic disease of the stomach, and the intolerance to the iodides under ordinary circumstances, were diagnostic points too often overlooked. The speaker then dwelt upon the great value of the centrifuge to the general practitioner and the insurance examiner, as well as to the laboratory worker. Extended reference was made to the new science of hæmatology, and the assertion made that a positive dignosis of the simplest form of anæmia could not be made without the data obtainable from blood examination. It was difficult at the present time to compute the gain to the profession from the ability to diagnose malaria and differentiate allied conditions by the presence of the plasmodium in the blood. Absence of leucocytosis, with the absence of other objective features, would often justify a diagnosis of typhoid before positive results could be obtained from the Widal reaction. On the other hand, a sudden and persistent leucocytosis in typhoid fever and certain other disease often gave timely notice of some complication. The diagnosis of trichinosis had been corroborated by the presence of eosinophilia, and an eosinophilic increase might aid in the recognition of scarlet fever in doubtful cases. By improved technique the time required for making a blood examination no longer placed this method of investigation beyond the reach of the ordinary physician. The practical value of serum diagnosis had been exemplified during the Spanish-American War in connection with the differentiation of malaria, typhoid, and dysentery. To show the application of this method to everyday work, Cabot was quoted as saying that the whole process could be easily carried out in the physician's office with less skill and labor than were required for the examination of urinary sediments. The speaker touched very lightly upon the use of the Röntgen rays in medicine, and appeared to "damn it with faint praise." The address concluded with the statements that "there is a feeling abroad which calls for thoroughness from those charged with the recognition and treatment of disease," and that "the moral force of scientific methods in medicine is the greatest factor in modern medical practice."

A New Symptom in the Diagnosis of Dystocia, Due to a Short Cord.—Dr. SAMUEL M. BRICKNER was the author of this paper. He said that hitherto the existence of a short cord had not been associated with any very definite symptomatology, but he thought he had succeeded in recognizing a characteristic symptom. This consisted in frequent urination in the intervals of the pains of the second stage, this being kept up until the fœtal head reached the vulva. During this stage the bladder became tightly pressed against the symphysis, and the urethra elongated. When the head receded, as occurred in cases of short cord, the bladder could readily empty itself; hence the explanation of this symptom was obvious. Two illustrative cases were reported, one a case of absolutely short cord, and the other a case in which the cord was twisted several times around the neck of the fœtus. It was interesting to note that when the pains succeeded one another very rapidly, there was no escape of urine from the bladder. It was now quite generally agreed that ten inches was the minimum length of the cord which would allow labor to go on without liability to certain accidents, such as rupture of the cord. Another very significant symptom was the marked and jerky recession of the head of the child with the cessation of each pain.

Dr. GEORGE SEYMOUR of Utica recalled two cases of short cord, in one of which this frequent urination was present. In the other case, the woman had had no frequent desire to empty the bladder.

Dr. BRICKNER replied that the urine, in these cases, escaped entirely by reflex action, and without any desire on the part of the patient.

Symposium on Diseases of the Pancreas.—This symposium comprised the following papers:

Physiology of Pancreatic Diseases.—Professor R. H. CHITTENDEN of New Haven, Conn., read the opening paper, taking the above as his theme. He said that we might well believe to-day that pancreatic digestion was not absolutely essential to the human economy. In 1848, Claude Bernard had begun his studies on the digestive properties of the pancreatic juice. The secretion of this juice was undoubtedly controlled by true secretory fibers, and these fibers were contained in both the vagus and the sympathetic. A study of experimental pancreatic diabetes led one to the belief that in the pancreas there were probably located certain specialized cells which manufacture an internal secretion, the latter exercising a special influence on certain metabolic processes in the body. There was a complete inability of the body to utilize sugar in the absence of the pancreas. When pieces of pancreas were well grafted, the entire pancreas could be extirpated without the occurrence of glycosuria. This glycosuria was not wholly due to increased transformation of the glycogen stored up in the liver. The blood of an animal from which the pancreas had been removed, showed no toxic substances, and when injected into another animal had no power to cause diabetes. Again, feeding raw pancreas did not check or prevent the usual symptoms dependent upon extirpation of the gland. To the physiological chemist the autointoxication theory of diabetes seemed especially attractive. There were indications that some forms of so-called pancreatic diabetes were to be explained, not through a simple disturbance of the pancreas, as from an injury, but by a physiological disturbance of the interrelation of several allied glands or structures.

Diagnosis of Diseases of the Pancreas.—Dr. W. S. Thayer of Baltimore discussed this topic. He said that in suppurative pancreatitis a tumor would be found situated deeply behind the stomach and colon, which is immovable. It was to be differentiated from a renal tumor mainly by its immobility and the fact that it does not extend into the flank. Its deep position could be revealed by inflating first the stomach and then the colon. In eight out of sixteen cases of diabetes coming to autopsy at the Johns Hopkins Hospital, Dr. Opie had detected pathological changes in the pancreas, chiefly a hyaline degeneration of the islands of Langerhans. Every case of disease or destruction of these islands had been found by this observer associated with glycosuria. In cases of acute pancreatitis there might be an increased quantity of fat in the stools. Interference with the digestion of albuminoids was suggestive though not characteristic of pancreatic disease. Acute pancreatitis was apt to occur in corpulent persons of middle age. It was associated with intense and agonizing epigastric pain in the median line, and the abdomen in this region would be found distended, rigid, and tender. The pain was, in some instances, augmented by pressure on the lower ribs, communicated through the spleen to the tail of the pancreas. The pulse was usually accelerated. Cyanosis might be a striking symptom. These symptoms were often associated with profound prostration, and were followed by collapse and death in four or five days. The symptoms might be ushered in with the symptoms of gallstone colic. In connection with the differential diagnosis, the possibility of mesenteric infarctions should be considered. It was rarely, if ever, possible to feel the pancreas in cases of pancreatitis, owing to the existing tenderness and the tenseness of the abdominal walls. In every case of severe epigastric pain with collapse, acute pancreatitis should be thought of. If it were possible to demonstrate the presence of a fat-splitting ferment in the urine, as had been claimed, we should have the first definite sign of pancreatitis. The diagnosis of chronic interstitial pancreatitis was rarely possible, though it was to be suspected, if occurring in connection with cirrhosis of the liver. The diagnosis of pancreatic calculi was hardly to be expected *intra vitam*, and could only be made when calculi were found in the stools. Cysts constituted the largest tumors of the pancreas. They were usually proliferating glandular cystomata. The smaller retention cysts were usually impalpable. These cystic tumors appeared as retroperitoneal growths extending well past the median line. They were to be differentiated mainly from cystic renal tumors, hydatid cysts of the liver and spleen, retroperitoneal sarcomata and large abdominal aneurysms. Secondary involvement, in cases of malignant disease of the pancreas, was rarely detected during life; out of ten cases of cancer of the pancreas occurring at the Johns Hopkins Hospital, in which a positive diagnosis had been made, either at operation or post mortem, in only three was a palpable tumor present. Acute pancreatitis should be recognized in many instances, and the importance of an early recognition of the cases going on to suppuration was obvious.

Surgery of the Pancreas.—Dr. Roswell Park of Buffalo discussed this subject. He said that the pancreas might be reached in various ways, viz.: (1) Through the gastrohepatic omentum above the stomach; (2) Through the gastrocolic omentum below the stomach; from the loin behind the peritoneum, and (4) Through the liver with the thermocautery. The danger of wounding important vessels and nerves, as well as the ducts of the gland, had had much to do with deterring the surgeon from interfering with the pancreas. In acute traumatism, the indications were to stop the bleeding, prevent the escape of the juice by suture, disinfect the cavity, and repair the injury. The route usually selected for attacking the pancreas from in front was through the gastrocolic omentum. If posterior drainage were amply provided, it probably would be desirable to close the peritoneum in front. The opening made through the omentum should be closed around the drain with sutures. Prolapse of the pancreas had been noted in a few cases. He had collected eight instances of this kind. For malignant tumor of the head of the pancreas, there was probably nothing to be done; but in abscess of the splenic end of the pancreas the removal of that portion of the pancreas should be practised. He had collected nine cases of removal of tumors of the pancreas, of which six had recovered. Acute pancreatitis was characterized, in individual cases, by fat necrosis, hemorrhage, suppuration, or total gangrene. There was some mysterious connection between pancreatic disease and hemorrhage. This tendency to bleeding was always intensified in the presence of jaundice. The treatment of acute pancreatitis was virtually that of peritonitis of the upper abdominal cavity, and consisted mainly in prompt drainage. Once the diagnosis was established, posterior drainage should preferably be made. If the pancreas were found necrotic, as much as possible of it should be removed. Posterior drainage was almost always necessary. Most cases of chronic pancreatitis were brought about by conditions having their origin in the biliary passages. The author closed his paper with an earnest appeal for early surgical intervention, applying the rule, "When in doubt, operate."

Pathology of Pancreatic Diseases.—Dr. George Blumer of Albany in this paper discussed only the more recent pathological work in this field. He said that the relation of the organ to the digestion of carbohydrates suggested that the pancreas possessed an internal secretion. When one-fourth or one-fifth of the gland was left intact, glycosuria did not occur. It was probable that in a certain proportion of the cases reported by the older writers the failure to discover disease of the pancreas was due to the fact that very little attention was given to the islands of Langerhans. It was now known that in many cases of diabetes the pancreas appeared normal, except for a hyaline degeneration of these islands. It had been shown that it was possible to cause pancreatitis by the introduction into the duct of irritants known to be present in the body. Pancreatic fat necrosis was formerly assumed to be the result of bacterial products, or of the presence of trypsin. The presence of microorganisms was not constant, and attempts to produce fat necrosis experimentally, by means of bacteria or their products, had been almost uniformly unsuccessful. It was now believed that the true cause of fat necrosis was the presence of the fat-splitting ferment, steapsin. The lesion consists in the splitting up of the fats into glycerin and fatty acids. Any pancreatic lesion which allowed of the escape of this fat-splitting ferment, might give rise to fat necrosis.

Clinical Indications for Surgical Interference in Acute Pancreatitis.—Dr. Joseph C. Bloodgood of Baltimore spoke on this topic. He said that in the first stage of pancreatitis, before abscess formation, little had been accomplished by operative interference, except a confirmation of the diagnosis. Most authorities now agreed that operative interference at this stage was contraindicated. On the other hand, the onset of the abscess stage should be recognized early, for then operation was urgently demanded, and the successes were usually in proportion to the promptness with which incision and drainage were instituted. The correct diagnosis of the first stage of pancreatitis had rarely been made, and operation had often been undertaken, under the supposition that the case was one of intestinal obstruction. The abscess stage, which presented less urgent symptoms, had, in the majority of cases, not been recognized at once, and the result had been a delay which had commonly proved fatal. The author had collected and studied ninety-six cases of acute pancreatitis, and had drawn the following conclusions: (1) Experimental work and clinical experience demonstrated the possibility of recovery from acute pancreatitis without operation, or further extension into the abscess stage; and (2) Every case of pancreatic abscess should probably be considered as a recovery from the first stage of the disease. Out of thirty-nine cases of pancreatic abscess that he had studied, in twenty-three the onset had been very acute, and had presented the same symptoms as acute pancreatitis. A number of cases of pancreatic cysts had given a history of one or more attacks, which could not be differentiated by the symptoms from the first stage of acute pancreatitis. He had found eleven cases of acute pancreatitis that had recovered. Six out of the twenty-four operative cases recovered. Death occurred without operation in twenty-one cases of acute hemorrhagic pancreatitis. In the light of our present knowledge, delay seemed justifiable in the first stage of acute pancreatitis.

The Traumatisms of Pregnancy.—Dr. Denslow Lewis of Chicago read a paper with this title. He said that many years ago his attention had been directed to this subject by a physician's attempting to produce an abortion upon his wife by the introduction of a male silver catheter. The instrument suddenly slipped out of his grasp and disappeared. On examination, it could not be found, and it was only after abdominal section and evisceration that it was discovered lying up under the liver. The patient made a good recovery. The speaker reported other cases, such as the finding of glass rods, laminaria tents, and other foreign bodies in the abdominal cavity. In one case, a wooden spit, twelve inches long, remained in the uterus for two years. In two others, a knitting needle and a hair-pin were respectively forced through the navel in a desperate attempt to produce an abortion. Both mothers recovered. Many of these cases, even when the traumatism was severe, did well without interference. Dr. Lewis said he did not approve of the frantic efforts made by many physicians to remove the secundines after an abortion, for while no doubt these tended to cause infection, it was after all the infection itself that was to be feared. The entire uterine parenchyma had been torn out by manual interference. The speaker then went on to describe cases of severe falls in pregnant women, of knife-wounds of the uterus, and of injuries self-inflicted in the effort to do a Cæsarian section.

Tendon Transplantation in the Treatment of Paralytic Deformities.—Dr. Arthur W. Elting of Albany gave a sketch in this paper of the work previously done in this field, and commented upon the fact that this method had attracted more widespread attention abroad than in this country. Tendon transplantation was adapted for the following conditions: (1) Traumatic loss of muscles and tendons; (2) Spinal, infantile paralysis; (3) Spastic paralysis, Little's disease and hemiplegia, and (4) Congenital deformities, especially club foot. So long as there was evidence of spontaneous improvement, tendon transplantation should not be done. The simplest method of transplantation was by dividing the tendon of a healthy muscle and suturing to the tendon of the paralyzed muscle. The method of suture advocated by Goldthwaite was the one most generally employed. In his own cases of tendon transplantation the results had been very satisfactory.

Pneumogalactocele of the Breast, with an Unidentified Organism.—Dr. J. Milton Mabbott of New York reported this case. He said that the term "pneumogalactocele" signified a tumor containing both air and milk. The patient was a young primipara, who had received a saline infusion under both breasts in an effort to resuscitate her from a collapse into which she had gone on giving her chloroform immediately after delivery for the purpose of doing a perineorrhaphy. She developed a suppurative mastitis on the left side, which was treated by incision. At the end of the third week a distinctly localized tumor was found in the right breast. It measured 4x2 inches, and as the fever had gone the tumor was naturally thought to be an ordinary galactocele. However, the percussion note was tympanitic, and on shaking the breast, succussion could be easily elicited. The gas was drawn off, collected, and sent to a laboratory; but the quantity proved not to be sufficient for a satisfactory examination. There was no re-accumulation of the gas. All the physicians who saw the case agreed that the gas had been generated in the tumor and had not been injected. The creamy fluid contents of the tumor were also sent to a laboratory for examination. Bacteriological examination showed the presence of a microorganism which could not be identified. Animal inoculations seemed to show that it was an unimportant, non-pathogenic organism. By incision, irrigation, and packing the galactocele was quickly cured, and another specimen of the fluid could not be obtained for examination.

A Simple Method for Determining the Percentage of Milk in Home Modifications.—Dr. Rowland G. Freeman of New York said that there was nothing original about his method, but it had been made as simple as possible, and algebraic formulæ had been eliminated. The first thing was to decide upon the formula, the number of feedings, and the quantity to be given at each feeding. Then the proportion between the fats and proteids should be noted, and a cream should be selected containing the same proportion. The desired strength of cream could easily be obtained because, roughly speaking, gravity cream contains 16 per cent. of fat. Two parts of gravity cream, with one part of simple milk, containing 4 per cent. of fat, would yield a cream containing 12 per cent of fat. With the formula, fat 3, sugar 6, proteids 1, the proportion between the proteids and fats is 1 to 3; hence 12 per cent. cream was needed for this formula, the required dilution being made with water. The quantity of sugar required for the whole twenty-four hours' supply should be calculated and this quantity put up in packages by the druggist.

Puerperal Hemorrhage.—Dr. George Seymour of Utica presented this paper. He spoke of the causes of antepartum hemorrhage, such as excessive cohabitation, criminal or accidental abortions, ectopic pregnancy, hæmatometra and abnormal implantation of the placenta. Cases of postpartum hemorrhage, caused by placenta prævia, inversion of the uterus, or by fibroids, might severely test the powers of even a skilled obstetrician. Recently Cæsarian section had been ably advocated as a means of treating placenta prævia. If it could be done as safely for the mother aspodalic version, and with a reasonable assurance of saving the life of the child also, it would be a distinct improvement upon the present treatment.

Malignant Tumors of the Periphery; Their Pathology and Treatment.—Dr. Thomas H. Manley of New York gave a brief description of a variety of tumors, but owing to lack of time, read only a portion of his paper.

THIRD DAY—THURSDAY, JANUARY 30.

Officers Elected.—*President*, Dr. Henry R. Hopkins, Buffalo; *Vice-President*, Dr. William A. Moore, Binghamton; *Secretary*, Dr. F. C. Curtis, Albany; *Treasurer*, Dr. O. D. Ball, Albany.

A Unique Case of Double Dacryo-Adenitis.—Dr. D. H. Wiesner of New York reported this case. The chief features of interest were the picture presented, the activity of the disease, the treatment, and the complete recovery. He said that while most writers advised hot fomentations, he had made use, in this case, of ice cloths continuously, and recovery had taken place without breaking down or suppuration of the glands.

The Treatment of Pneumonia.—Dr. Reynold W. Wilcox of New York was the author of this paper. He said that the fact had been lost sight of that, while salicylic acid was itself an antiseptic, this was not true of any of the salicylates. We had in the treatment by creosote a fairly good means of combating the toxæmia, and by its aid the mortality in private practice should reach only 3 or 4 per cent.

Obesity of Adolescence.—Dr. Heinrich Stern of New York read this paper. He said there were two different forms of obesity during the adolescent period, one disappearing at the approach of maturity, the other continuing after the individual had attained full development. This circumstance seemed to be of etiological importance. The cases of obesity subsiding after maturity he designated as "transitory" or "specific," those continuing as "metabolic" cases of obesity. The metabolic as well as the transitory variety occurred in both sexes. The former was more frequent among boys, the latter among girls. Metabolic obesity of adolescence was a juvenile modification of what Dr. Stern had described as metabolic, or common, obesity. By this was meant a condition in which polysarcia concurred with a normal or slightly subnormal degree of body density. There was little doubt that transitory obesity of adolescence was caused by certain anomalies appearing at puberty, and declining at or before maturity. Such conditions might also prevail at the time of the menopause or after castration, in both sexes. The frequent occurrence of this form of obesity in girls was due to the more pronounced changes occurring in the female at puberty. The catabolic disorders were caused by faulty thyroid or parathyroid activity. Both forms of juvenile obesity demanded treatment only when the surplus weight was very excessive, and when complications were present; uncomplicated cases should not be treated, as the youthful organism was always weakened by it; the treatment in the advanced instances of metabolic obesity should mainly be a dietetic one. Thyroid medication and physical treatment in any of its branches might avail much in the therapy of the transitory obesity of adolescence.

Observations on Broken Necks.—Dr. Reginald H. Sayre of New York presented a number of photographs from cases of fracture of the cervical vertebræ. In making the diagnosis the position of the head was of extreme importance; if the fracture involved the three upper vertebræ, the head would be almost invariably twisted to one side after the manner of torticollis, there was often also an abnormal straightness of the back of the neck. Dr. Sayre said experience had taught him that support of the cervical vertebræ was necessary for a much longer time than was generally supposed. Skiagraphs of these cases were often misleading, in very many cases an excellent mode of treatment was to envelop the body and head in plaster-of-Paris, so as to combine a helmet with a jacket.

The Neuritis of Tuberculosis.—Clemente Ferraris reports a case in which all the researches and experiments made went to prove the fact already recognized clinically, that a peripheral neuritis, although reaching the point of absolute paralysis, accompanied by exaggerated reflexes, and not accompanied by alterations in sensation, may be entirely due to the toxic action of the tubercle bacillus acting on the peripheral nerves.—*La Riforma Medica.*

Book Reviews.

Nothnagel's Encyclopædia of Practical Medicine, Typhoid Fever, and Typhus Fever. By Dr. H. Curschmann, Professor of Medicine, Leipzig. Edited, with Additions, by William Osler, M.D., Professor of the Principles and Practice of Medicine, Johns Hopkins University, Baltimore, Md. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Pp. 646. Philadelphia and London: W. B. Saunders & Co., 1901.

The first volume in the series of the American Edition of Nothnagel's Encyclopædia includes the topics of typhoid and typhus fevers, the main bulk of the work, however, dealing with the more important disease.

The completeness of the descriptions is in every way most admirable, practically all the possible complications, aberrations, sequelæ, etc., being presented in a way which shows the author's familiarity with these variegated fevers.

In addition to the peculiar worth of the original, we note the valuable changes wrought by the editor in his revision. Not only has he adapted it to the American reader, but has also incorporated the recent researches of Thayer on the blood conditions, Keen's work on the surgical complications and sequelæ and the different methods of bacteriological and serum diagnosis. The etiological factors in typhoid are discussed in full, and are followed by an exhaustive exposition of the pathological and symptomatic manifestations of the disease. The treatment of the subject of typhus fever will be of less interest to American readers than that of typhoid, but will well repay perusal.

An American Textbook of Pathology. Edited by Ludvig Hektoen, M.D., Professor of Pathology in Rush Medical College, in affiliation with the University of Chicago, and David Riesman, M.D., Professor of Clinical Medicine, Philadelphia Polyclinic; Instructor in Clinical Medicine, University of Pennsylvania. With 443 illustrations, sixty-six of them in colors. 1,205 pages. Philadelphia and London: W. B. Saunders & Co., 1901.

It is a pleasure to welcome a work on pathology in the English language, which presents the subject in as clear a manner as the "American Textbook of Pathology." The nineteen contributors have reason to be pleased with the results of their labors.

The work is divided into two parts—General and Special Pathology. The first part, to which about one-third of the volume is devoted, deals with the general aspects of disease, its causation and the nature of morbid processes. Chapters on tumors, pathogenic microparasites, animal parasites, intoxications, fever and teratology, complete this part. The second part is concerned with the special manifestations of disease in the various organs and systems of tissue in the body, and exceeds the usual scope of such works by including separate chapters on the special pathology of the skin, eye, and ear, which are certain to be of much value to those who have not particularly devoted themselves to the study of those organs.

The work is well and abundantly illustrated throughout, colors being employed where desirable. The descriptions of lesions and processes are clear, but concise; the discussion of theories brief and impartial. In spite of this condensation, the book is eminently readable.

We can confidently commend the work, not only to students of pathology, but also to the medical practitioner who desires a concise statement of the well-established views of pathologists concerning the diseases with which he deals in his daily work. For those who wish to penetrate more deeply into the subject, we think that more numerous references to the literature and suggestions concerning present deficiencies in our knowledge of morbid conditions would have been useful additions to the work. These, however, are matters of personal opinion, and cannot be urged as detracting from the general excellence of the work before us.

The Surgical and Medical History of the Naval War Between Japan and China, During 1894–95. Translated from the Original Japanese Report by S. Suzuki, Deputy Inspector General of Hospitals and Fleets, Tokio, 1901.

The publication of this report in English by the Japanese naval authorities is stated by them in the preface to be due to a sense of "duty to the medical profession." Much has been written about the wounds received in wars on land, indeed the medical and surgical history of the American Civil War is full of interest and information. Of naval warfare we possess no medical history; the lessons of Trafalgar and Lissa, and war between Chile and Peru have been lost to us, and there has been no previous experience of the treatment of wounded on ships since the modern revolution in naval warfare.

This is a large, well-bound volume of 544 pages, translated into excellent English by Dr. Suzuki, and unusually free from typographical errors. The book contains a number of good illustrations, in colors, by Japanese artists, of wounds and injuries received in the Japanese naval forces. It may be said at the outset that the work reflects much credit on the medical authorities of the Japanese navy, and impresses the reader with the marvelous progress made along scientific lines by the Japanese nation since it was opened up to modern civilization by United States warships scarcely a generation ago. The book contains much valuable information which will not be found elsewhere, and should be read not only by naval surgeons, to whose work in warfare the subject-matter is especially applicable, but also by medical officers of the military arm of the service, who are liable to observe wounds of a character similar to those seen in naval warfare, after artillery duels, during sieges, or as a result of bombardment of land fortifications by hostile fleets.

In character, the wounds observed during the Chino-Japanese War were practically limited to such as would be produced by large projectiles, fragments of exploding shells, fragments of metal and wooden splinters. In addition, a considerable number of burns and scalds were incurred. The total number of cases of wounds and injury was relatively small—amounting to but 371—but these cases were so studied by the Japanese authorities as to be of more value than a larger number of cases less carefully elaborated. The book consists of nine sections, each divided under numerous sub-headings. Section I deals of the various battles of the war, with the injuries resulting therefrom. Section II gives a history of the killed and wounded, classified by regions. Section III is of a statistical nature, dividing the killed and wounded into groups, according to varying conditions. Section IV relates to the causes of the wounds received, and the characteristics of the wounds as dependent thereon. Section V treats of the complications of wounds observed. Section VI relates to the management of the wounded on shipboard. Section VII discusses the diseases experienced on board ship during the war, together with such wounds or injuries as were not the result of warfare. Section VIII treats of the sanitary conditions influencing the health of the command during the war. Section IX is devoted to a consideration of the work done in the various naval hospitals during the war.

The general scope of the book is indicated by the above sections, but it is impossible, in the space of a brief review, to touch upon the many individual points of interest which the work presents. One can only say that the book is a noteworthy addition to the scanty literature of the special subjects of which it treats, and that it should be carefully studied by medical officers of our naval and military forces, who are under many professional obligations for this latest work of their confrères of the Japanese navy. The book is a government publication, and is understood not to be on general sale; but copies have been distributed to the larger libraries, where they will be available for reference.

The Principles of Pathological Histology. By Harvey R. Gaylord, M.D., Professor of Surgical Pathology in the University of Buffalo, Attending Surgeon to the Erie County Hospital, Buffalo, N. Y., and Ludwig Aschoff, M.D., Professor and First Assistant in the Pathological Institute of the University of Göttingen, Germany, with an Introductory Note by William H. Welch, M.D., Professor of Pathology in the Medical School of the Johns Hopkins University, Baltimore, Md. Illustrated with eighty-one engravings in the text and forty full-page plates. 336 pages. Philadelphia and New York: Lea Brothers & Co., 1901.

The first fifty pages of this book, Part I, treat of "Microscopical Technique," including the care and use of the microscope and the preparation of objects for microscopical study. The selection of the methods included in this part is excellent, and the directions for using them are usually clear, so that the beginner should find little difficulty in obtaining good results. The advanced student will also find reference to this portion of the work useful to him.

Part II contains descriptions of the pathological histology of the individual organs, preceded in each case by a brief review of the normal structure of the organ under consideration. The organs of the special senses are entirely omitted, but a chapter of forty pages is given to tumors.

The third part, of thirty-three pages, is devoted to "The Principles of Optics and Photomicrography," and contains very useful information for those contemplating giving some time to this most fascinating subject. The excellent photomicrographs illustrating the book fully attest the ability of the authors in this technical field.

It is the obvious intention of the authors to make the book helpful to those engaged in practical work in the laboratory, and we believe that it will prove a welcome addition to the working library. It is a little annoying, perhaps, to find advice in the second part, concerning the technique most serviceable for the demonstration of particular structures partly obscured by abbreviations, such as "F. M.," "N. S.," the meaning of which is left to the intelligence of the reader. Such slips as "septi" for the plural of septum are also the result of somewhat careless attention to details, which can be readily corrected in a subsequent edition. A valuable feature of the book is the frequent reference to the literature. We cannot close our brief review without again mentioning the excellent quality of the illustrations, both colored and uncolored. These are so true to nature that the descriptions are almost superfluous.

Bath Waters—A Rational Account of Their Nature and Use, With Special Reference to Gout, Rheumatism, and Rheumatoid Arthritis. By Preston King, M.D., Cantab, Hon. Physician Royal Mineral Water Hospital, etc. With an historical sketch by T. Baring Gould, M.A. 128 pages. Bristol: J. W. Arrowsmith.

This little volume differs in two respects from the average health resort literature. It is written with candor and contains some positively valuable information on diagnosis, diet, and treatment, all of which appear to bespeak a large clinical observation. The author writes, "Bath is rich in heated and slightly mineralized waters, which operate neither by magic nor charm, but by their chemical and organic powers, and always in harmony with the laws of medicine." The diagnosis between Chronic Rheumatic Arthritis, Rheumatoid Arthritis, Osteo-Arthritis, and Gout is clearly brought out, as are the diet and treatment adapted to each malady. "There is no treatment for gout, but much for gouty patients." Moderation is to be observed not only by the patient in what he eats and drinks, but also by his medical adviser, so that he may avoid too slavish adherence to authority and precedent," wisely writes the author. In Rheumatoid Arthritis large experience is evidenced by his counsel to avoid all prolonged use of depressing drugs and all fanciful restrictions in diet.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug giving, useful in the Prevention of Disease and the Treatment of the Sick. Edited by Solomon Solis Cohen, M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic. Vols. III. and IV., Climatology, Health Resorts, Mineral Springs. By F. Parker Weber, M.A., M.D., F.R.C.P., Physician to the German Hospital, Dalston; author of the "Mineral Waters and Health Resorts of Europe," etc., with the collaboration for America of Guy Hinsdale, M.D., Secretary of the American Climatological Association. In two vols. Illustrated with maps. 336 and 420 pages. Philadelphia: P. Blakiston's Son & Co., 1901.

The third and fourth volumes of this excellent work are fully up to the standard set by those which have already appeared, and of the editor's statement of what the aim of the work would be.

The fact that the Department of Climatology is in charge of Dr. Weber, and that the American branch of the subject is in the hands of Dr. Hinsdale, would vouch for an exhaustive treatment of this important branch of physiological therapeutics. Vol III., Part I., opens with Physics, Physiology, and General Therapeutics of Climate, clearly but briefly describing the elements and determining faction of climate, its relation to the atmosphere, with regard to temperature, light, moisture, absolute and relative humidity, altitude and aerial current, soil and general topography. Good maps furnish graphic illustration of the mean annual isotherms, mean annual direction of ocean currents, equatorial currents being in red, polar currents in blue, and arrows showing the direction of the currents. Suggestions with regard to the availability of different climates in health and disease are made by intelligent deduction from ascertained facts.

Part II. furnishes an exhaustive recital of Health Resorts, divided under the headings of Ocean Climates and Sea Voyages, Mediterranean Climates, Island Resorts on the Atlantic Coasts, European Coast Resorts, the British Isles, and Towns of Europe. There is not a health resort of the slightest importance which is not referred to with more or less detail in these pages. The description of health resorts is continued in the fourth volume. Africa, Asia, the island resorts of the Pacific, South America, Central America, the West Indies, Bermuda, Canada, and the United States receive a thorough canvass. The review of health resorts in the United States is especially commendable, because of its minute attention to every noteworthy town or spring.

Part III., is on Climatotherapeutics, and furnishes a brief but comprehensive review of the therapeutic employment of climate, health resorts, and sanatoria. The elements of treatment at health resorts are discussed at some length—change, rest, and recreation, exercise, mechanotherapeutics, diet, milk and grape cures, mineral waters, baths, hydrotherapy, sea bathing, clothing and medical supervision, each receive separate consideration. Under the captions, "Medical Supervision," the fact is emphasized that the medical man forms an essential part of the health resort, and upon his skill and tact depends much of the usefulness of the locality. This point cannot be too earnestly impressed upon physicians sending patients away from home. Indeed, we regard it more important to know the professional caliber of the doctor than the chemical constituents of the spring.

Chapter II. treats of the selection of health resorts discussing the constitution of the patient, the journey involved, season of the year, expense of treatment, opportunity for open-air treatment, and selection of dwellings, with intelligent reference to the needs of the general practitioner. The succeeding chapters are devoted to the application of the information contained in the preceding ones, to special forms of disease and convalescence.

The practitioner has in this work a *multum in parvo* on every possible contingency, for which he may desire to apply climate as a remedial or hygienic agent. We can commend the work as a most practical one in comprehensive treatment, clear description, and judicious counsel. The index is complete and well made.

The Pocket Gray, or Anatomists' Vade-mecum. By the late Edward Cotterell, F.R.C.S. Fifth edition, revised and edited by C. H. Fagge, M.B., M.S. Lond., F.R.C.S., Senior Demonstrator of Anatomy, Guy's Hospital. Twentieth thousand. New York: William Wood & Company, 1901.

This little book of 270 pages contains an admirable condensation of "Gray's Anatomy"; the bones are omitted, but, with this exception, most of the subjects ordinarily required are presented in a way that will appeal to the overworked student. Among the best features are the tables giving the relations of the various structures, etc., and the summaries of difficult and important parts, *e.g.* the synopsis of the fifth nerve, on page 148. Of the many compends on anatomy now in the market, and all more or less popular, we can unhesitatingly recommend this as the most useful; it is solid meat from beginning to end, with absolutely no padding or theorizing; every statement contained in the volume is both correct and essential. The book represents a great deal of hard and conscientious work on the part of the compiler, and guarantees a corresponding saving of time and drudgery on the part of the student who is wise enough to use it as a companion volume to his larger textbook on this subject, and who may safely trust to it in preparing for his examinations.

Syphilis and Other Venereal Diseases. By H. De Méric, Member of the Royal College of Surgeons of England, Surgeon to the French Hospital, London, etc. New York: William Wood & Co., 1901.

This work, though based largely upon the author's "Notes on Venereal Diseases," stands almost as an entirely new production, due to additions and changes. A chapter on the Prophylaxis of Syphilis is among the strictly fresh material, as is likewise that on the "Contagious Diseases Act." Though only 132 pages comprise the text, there are considered in detail most of the important points connected with chancre, simple sores, balanitis, gumma, eruptions of lues and gonorrhœa, including its complications and treatment. The work is based upon years of bed-side and clinical observation in and out of hospital, and as such can be read with advantage.

A Handbook of Diseases of the Nose and Pharynx. By James B. Ball, M.D. (Lond.), Physician to the Department of Diseases of the Throat, Nose, and Ear, West London Hospital. Fourth edition with sixty-one illustrations. New York: William Wood & Co., 1901.

This handbook is divided into three sections, treating respectively of General Considerations, Diseases of the Nose, Nasopharynx, and Accessory Sinuses, and Diseases of the Pharynx. Four editions within a comparatively short time show that it has found a field of usefulness. As suggested by the title, it is written from a distinctively practical standpoint, and all theoretical discussions and all historical matter are either omitted or given in a succinct form. We are somewhat surprised to find in it but scanty reference to the use of suprarenal extract, which, in America, at least, has come to be considered as second only to cocaine in its general utility in rhinological practice. Moreover, we believe that the operation of crucial incision for relief of deviated nasal septum is capable of a much wider application than is suggested by the reference to it in the present handbook. But these are matters which do not detract from the excellence of the book as a whole, and the work may be cordially recommended as a fair, complete, and reliable exposition of the topics to which it is devoted. The illustrations are notably clear, the style is terse, and the whole appearance of the book is attractive.

The Diagnosis and Treatment of Diseases of the Rectum. A Practical Treatise on Fistula, Piles, Fissure, and Painful Ulcer, Procidentia, Polypus, Stricture, Cancer, etc. By William Allingham, F.R.C.S., Eng., ex-Member of Council of Royal College of Surgeons of England, etc., and Herbert W. Allingham, F.R.C.S., Eng,. Surgeon to the Household of His Majesty the King, Surgeon to the Great Northern Hospital, etc. Seventh edition. New York: William Wood & Co., 1901.

The previous editions of this work have caused it to be looked upon as a standard book of reference in the special field which it covers, and the present edition represents a revision up to the present time. The authors have long had a reputation in the department of rectal surgery, and it is hardly necessary to say more than that their book is comprehensive, concise, and complete. The greatest recent changes in the surgery of the rectum have been in the treatment of malignant disease, both by radical and palliative means; and it has therefore been necessary to make some changes in the part of the volume devoted to this division of the subject, in order to bring it up to present requirements. The subject of colotomy receives a full discussion both from the anatomical and therapeutic points of view, and the text is elucidated by a number of well-executed illustrations. The present edition easily maintains the good reputation of those which have preceded it, and it will undoubtedly be found to be one of the most satisfactory books on the subject. The general make-up of the volume is excellent.

A Laboratory Handbook of Urine Analysis and Physiological Chemistry. By Charles G. L. Wolf, B.A., M.D., Instructor in Physiological Chemistry, Cornell University Medical College. New York, Philadelphia and London: W. B. Saunders & Co., 1901.

As an elementary aid to laboratory work in the examination of urine, with a brief survey of the chemistry of foods, blood, stomach contents, etc., this book may be commended. The attentive student of these subjects will, however, soon outgrow the limits of this little volume, without receiving any indication of where he can find further information. For example, he learns that B-oxy-butyric acid has important relations to diabetic coma, p. 168; but he looks in vain for any test for, or mode of, estimating that substance. Again, under the heading "Indican," p. 137, he learns something about that substance, but he receives no hint that over-oxidation with chlorin must be avoided in order to detect the indican. Furthermore, he gains no conception of the relations between indican and indol, and their connection with intestinal putrefaction. These and many similar omissions may not be serious when the book is used under the supervision of an instructor who supplements the information it contains, but they materially affect its value as a book of ready reference for those bearing the responsibilities of medical practice.

The Surgical Treatment of Disfigurements and Deformities of the Face. By John B. Roberts, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic, etc. Second edition, with a chapter on the reconstruction of Syphilitic Noses. Illustrated with sixty-two figures. Philadelphia: The Philadelphia Medical Publishing Co., 1901.

We had occasion only a few months ago to review this brochure in its first edition when it embodied the Mütter Lectures for 1900. In its present form it differs from the previous edition in having an added chapter upon the treatment of the well-known deformities due to destruction of the bony and cartilaginous septum of the nose. This chapter occupies only a few pages, but it contains many concise directions as to the management of cases of nasal deformity. The author emphasizes the fact that we need not fear operating upon such patients on account of the syphilitic taint, since their tissues seem to heal, under favorable circumstances, as well as any others. Many points of interest are noted, but there are one or two diagrams which we hope to see suppressed in future editions.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending January 25, 1902:

	Cases.	Deaths.
Measles	829	22
Diphtheria and croup	286	48
Scarlet fever	363	25
Smallpox	54	11
Chickenpox	108	0
Tuberculosis	258	142
Typhoid fever	22	11
Cerebro-spinal meningitis	..	2

Medical Treatment in Afghanistan.—Dr. Gray, in his work "At the Court of the Amir," thus describes treatment for various maladies pursued in Afghanistan: "For fevers, dyspepsia, gout, headache, or any feeling of malaise, the barbers bleed their patients; but besides these, which may be called the irregular bleedings, there are regular bleedings every spring and autumn. These are generally done out of doors by the roadside. The barber, squatting down by the side of his patient, makes his incision at the bend of the elbow; fortunately, not into the vein immediately over the great artery of the arm, the one usually bled from in England, but into one adjoining. The patient holds out his arm, and allows the blood to drip on to the ground till he thinks enough has run away. There is not the slightest attempt made to measure the quantity of blood lost. The only precaution taken is to avoid drinking any water for twenty-four hours afterward, lest it should mix with the rest of the blood in the vein and make it thin, or, if they do drink any, they hold the wounded arm above their heads to prevent the water running into it."

Incidence of Smallpox as Regards Vaccination.—Up to the beginning of December, 349 cases of smallpox, in the present outbreak in London, had been "completed"—that is to say, had ended in death or recovery—and from an evidently authorized statement it appears that the borough of St. Pancras heads the list with 94 cases. The number is rather small for statistical purposes, but so far it appears that after the age of fifty the liability to smallpox is slight. Of the 349 cases, 116 ended fatally. This is, of course, a high rate; but it must be taken into consideration that, since death usually takes place at a comparatively early stage of the illness, the fatal cases are in advance of recoveries.

These were distributed as follows:

Vaccinated, 233 cases; deaths, 47; rate of mortality, 20 per cent. Unvaccinated, 97 cases; deaths, 47; rate of mortality, 60 per cent. Doubtful, 19 cases; deaths, 58; rate of mortality, 57 per cent.—*Public Health.*

A Newspaper Description of Leukæmia.—The following is a fair sample of newspaper portrayal of clinical medicine: "Mrs. Horace Fries, of 4931 Penn street, Frankford, who died on Wednesday in the University Hospital from a disease that excited much comment among physicians, went to the University Hospital some weeks ago. There she was told that she had a complication of disorders, and the physicians say that there was a separation of the red blood corpuscles from the white. If she had survived long enough her blood would have become white. Physicians declare that there is no known cause for this and no cure.

Vaccination League.—A number of medical men and others have thought this a fitting time to form a new vaccination league in Great Britain. Among its supporters are Mr. Jonathan Hutchinson, Sir Alfred Garrod, and Professor Charles Stewart.

Number of Deaf Mutes.—There are 275.000 deaf mutes in Europe, and more than 1,000,000 probably in the world. There seem to be more in countries where we find most intermarriage, and the worst social conditions. Among the Hebrews there are more deaf mutes, in proportion, than is the case in the nation where they live, probably due to more frequent intermarriage.—*Medical Magazine.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended January 25, 1902:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, Los Angeles	Jan. 4-11	11	
San Francisco	Dec. 29-Jan. 12	10	
Illinois, Belleville	Jan. 11-18	8	
Chicago	Jan. 4-18	14	1
Freeport	Jan. 4-11	2	
Galesburg	Jan. 11-18	2	
Indiana, Evansville	Jan. 4-18	6	
Iowa, Clinton	Jan. 11-18	3	9
Ottumwa	Nov. 30-Dec. 28	79	
Kansas, Wichita	Jan. 11-18	1	
Kentucky, Lexington	Jan. 4-11	3	
Louisiana, New Orleans	Jan. 4-18	5	3
Maine, Portland	Jan. 11-18	2	9
Massachusetts, Boston	Jan. 4-18	76	
Brockton	Jan. 11-18	1	
Brookline	Jan. 11-18	1	
Cambridge	Jan. 4-11	3	1
Clinton	Jan. 4-11	3	
Holyoke	Jan. 11-18	1	
Lowell	Jan. 11-18	1	
Marlboro	Jan. 4-11	1	
Medford	Jan. 4-11	1	
Quincy	Jan. 4-11	1	
Somerville	Jan. 4-11	2	1
Weymouth	Jan. 4-11	1	
Michigan, Ann Arbor	Dec. 28-Jan. 4	2	
Detroit	Jan. 4-18	4	1
Grand Rapids	Jan. 11-18	2	
Minnesota, Winona	Dec. 28-Jan. 4	1	
Nebraska, Omaha	Jan 4-11	41	
South Omaha	Dec. 1-Jan. 18	216	
New Hampshire, Nashua	Jan. 4-18	2	
New Jersey, Camden	Jan. 4-18	31	6
Jersey City	Dec. 29-Jan. 19	43	
Newark	Jan. 4-18	68	12
Passaic	Jan. 4-11	2	1
Plainfield	Jan. 11-18	4	
New York, Binghamton	Jan. 4-18	1	1
Mount Vernon	Jan. 11-18	1	1
New York	Jan. 4-18	48	8
Ohio, Cincinnati	Jan. 4-17	27	
Cleveland	Jan. 4-18	4	
Dayton	Jan. 11-18	1	
Hamilton	Jan. 11-18	1	
Toledo	Jan. 4-18	4	
Youngstown	Dec. 28-Jan. 18	30	4
Pennsylvania, Allegheny	Jan. 4-11	1	
Altoona	Dec. 28-Jan. 4	4	
Lebanon	Jan. 4-11		1
Norristown	Jan. 4-11	10	1
Philadelphia	Jan. 4-11	213	31
Pittsburg	Jan. 11-19	4	
Rhode Island, Providence	Jan. 12-18	1	
South Carolina, Greenville	Jan. 4-11	1	
Tennessee, Memphis	Jan. 4-18	11	
Utah, Salt Lake City	Jan. 11-18	1	
Vermont, Burlington	Jan. 4-11	38	
Washington, Tacoma	Dec. 29-Jan 12	12	
Wisconsin, Green Bay	Jan. 4-18	25	
Milwaukee	Jan. 4-18	3	
SMALLPOX—FOREIGN.			
Africa, Monrovia	Dec. 7-14	1	
Austria, Prague	Dec. 14-28	12	
Brazil, Rio de Janeiro	Dec. 7-22		77
Canada, Halifax	Jan. 4-11	12	
Quebec	Jan. 4-18	110	1
St. John	Dec. 28-Jan. 18		3
Colombia, Panama	Dec. 23-Jan. 13	48	
France, Lyons	Dec. 21-28		1
Paris	Dec. 21-Jan. 4		7
Great Britain, Glasgow	Dec. 27-Jan. 10	31	
Liverpool	Dec. 21-Jan. 4	5	
London	Dec. 21-Jan. 4	1419	68
Newcastle-on-Tyne	Dec. 21-28	1	
Sheffield	Dec. 21-28	1	
India, Karachi	Dec. 8-15	6	2
Italy, Naples	Dec. 21-28	32	2
Russia, Moscow	Dec. 7-21	34	12
Odessa	Dec. 14-28	11	2
St. Petersburg	Dec. 14-28	11	4
Warsaw	Dec. 14-21		5
Spain, Barcelona	Dec. 24-31		3
Corunna	Dec. 21-Jan. 4		2
Vigo	Dec. 1-31		1
YELLOW FEVER.			
Brazil, Rio de Janeiro	Dec. 8-22		2
Mexico, Vera Cruz	Dec. 28-Jan. 18	8	5
CHOLERA.			
India, Bombay	Dec. 10-17		2
Calcutta	Dec. 7-14		36
Madras	Dec. 7-13		5
Java, Batavia	Nov. 30-Dec. 7	10	4
PLAGUE.			
Brazil, Rio de Janeiro	Dec. 7-22		13
China, Hongkong	Dec. 7-14	1	1
India, Bombay	Dec. 14-17		144
Calcutta	Dec. 7-14		24
Karachi	Dec. 8-15	81	56
Turkey, Smyrna	Dec. 28	1	

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Original Articles.

THE DIAGNOSIS OF PERICARDITIS.

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The definitive diagnosis depends on the physical findings, which are, therefore, first discussed.

I. *Inspection.*—Precordial prominence, *voussure*, first noted by Louis, may occur when the chest is plastic, as in women, in children, and when the intercostal muscles are paretic. The left chest often moves less than does the right. An epigastric tumor-like bulging of the luxated liver was noted by Auenbrugger and Corvisart.

The apex beat is somewhat lower when exudation depresses the diaphragm; it is more horizontal, more to the left, and the dulness of an effusion transcends the apex to the left. The greater the effusion, the weaker the apex becomes, and disappearance of the previously distinct apex is all important. On bending forward, the apex usually reappears.

The interspaces may bulge. Collateral œdema of the chest wall (Rendue) is most rare. Undulation, described by Senac, is not due to the exudate, but to the heart itself. Swett described it in the epigastrium. Graves and Stokes described tumor-like extrusion of the compressed lung above the clavicle. According to Ewart, the upper edge of the first rib can be felt as far as its sternal attachment, being separated from the clavicle ("first rib sign"). The thoracic wall veins are large. During convalescence, the apex may retract during the systole. The decubitus is usually dorsal, rarely on the left side; the head and shoulders are usually elevated, and the attitude is rarely changed. The knee-hand position was noted, Zehetmayer's case. Guttmann holds that the apex never wholly disappears.

II. *Palpation Confirms the Location of the Apex.*—The friction thrill is often felt. In Fuller's cases of palpable rub, there was always some external pericarditis favoring conduction of the true pericardial friction. Disappearance of an apex beat previously observed with a strong radial pulse is very important, since mere absence of the apex is observed in many conditions.

The friction may exceptionally originate in tubercles, cancer, calcification, maculæ tendinæ, etc.

Epigastric tenderness to either side of the ensiform, or between the attachments of the sternocleidomastoid muscle is due to participation of the phrenic nerve (Guéneau de Mussy and Peter). Fluctuation is practically never felt.

III. *Percussion.*—Usually 100 gm. of fluid are required for distinct physical signs, though Fraentzel has detected 50 to 60 in favorable cases. According to Ferber, there are two complementary recesses in the pericardium, the first over the basal vessels, where the fluid may accumulate, revealed by a triangular dulness whose apex is directed downward (Skoda, von Dusch, Oppolzer, Rosenbach), which may compress the large veins or arteries; and the second in the fifth right intercostal space (Rotch-Ebstein), the fluid exudate here replacing the relative liver dulness, and recognized best by palpatory percussion. Extensive or enormous exudates of (chronic) pericarditis produce an outline usually designated as triangular, with the blunted apex upward, or as pyriform with the base directed downward. The dulness may even reach the interclavicular notch above the right nipple, the left axilla, impinging on Traube's semilunar space, extending beyond the left lobe of the liver, and markedly depressing the diaphragm and liver. Very massive exudates may be mistaken for pericarditis plus pleurisy with effusion. While the outline is roughly triangular, the right border is more vertical in contrast with the oblique left border, which is beyond the apex beat, if the latter remains visible (Skoda). The dulness varies with fluctuations in the effusion and resorption.

Dulness may be one-third to one-half more in the erect than in the dorsal posture (Gerhardt), but this is not invariable, since the lung borders must be normal and the exudate freely movable. Sahli has found increase in dulness by the sitting posture in enlarged hearts and in valvular disease, which he explains by depression of the diaphragm or by posture emptying the auricles of blood. He places more stress on the lateral than on the upper border. Setting the patient up is usually unnecessary and often dangerous. Change of the dulness, especially when the patient lies on the right side (Rosenbach), is important, since this is uncommon physiologically, whereas change of dulness in the left decubitus is of minor value.

Dulness may persist from cardiac dilatation or from pulmonary retraction. The effusion may be enormous (10 liters, Kyber; one gallon, Clark; eight pounds, Corvisart), and lead to a diagnosis of pleurisy alone, or pleurisy complicating pericarditis. Shattuck renounces all faith in the characteristic dulness.

IV. *Auscultation Reveals the Chief and Most Reliable Diagnostic Sign, the Pericardial Friction Due to Attrition of the Inflamed Serous Pericardial Surfaces.*—Usually it is a rubbing "to and fro," located over the base, and is deficient in precision of rhythm; it is usually increased by pressure and deep inspiration, is *very superficial, i. e.* close to the ear, is not propagated widely, and is often short-lived; it is variable as to the heart's phases and acoustic quality, and is not dependent on the intensity of the inflammation, but rather upon the accidental quality of the effused lymph and its location. Disappearance of the rub is explained by (1) Regression; (2) Exudation; (3) Adhesions; (4) Weak heart. The heart tones are usually more or less weakened and distant.

Laennec described the friction without fully appreciating it; Collin, in 1824, and Latham, in 1826, described it, but Stokes most fully elaborated it in 1831. In quality, it may be harsh, soft, whistling, creaking, crunching, musical, or even metallic (resonance from the stomach or intestines). In contradistinction to pleurisy, it may be present even with great exudation (Stokes), especially at the base, since here the heart may displace the fluid and touch the parietal pericardium.

In location, while it is most often heard over the base, it may be present over the sternum or the tricuspid region, where it is especially significant. It may also be heard over the apex. Deficient in precision, it is not exactly synchronous with either cardiac phase, anticipating or falling behind the systole or diastole, which character is more clear when the heart rate is slow. It is single, double, mostly late in the systole (Sahli, Geigel), meso-systolic or meso-diastolic; it may be triple, *i. e.* præ-systolic, systolic, and diastolic, or even quadruple. It is sometimes absent in fibrinous (Mayne, Macdowell, Leube) or purulent inflammation. Superficiality of the friction sound is absent when partial adhesions exist anteriorly and the fluid accumulates behind.

Moderate pressure usually increases the friction, especially in plastic chests, yet pressure may also accentuate valvular murmurs. Much pressure may inhibit the cardiac action (Friederich). Change of posture (Corrigan, Stokes) often makes the murmur clearer, *e. g.* on leaning forward.

While the propagation is not wide (*il naît et meurt sur place*, Jaccoud), yet it has been heard at a distance of nine feet. In children, it may be heard over the whole chest, and we have seen the same in adults. Hydrothorax (Graves) has been thought to favor its propagation, and cardiac hypertrophy by bringing the heart closer to the chest wall propagates the friction more widely (Stokes). Usually the murmur ceases abruptly when the stethoscope has been removed a short distance. It does not follow the lines of propagation heard in valvular heart disease.

Sears describes a case in which the friction was clearest at the angle of the left scapula.

Respiration usually increases the murmur (Traube), due to the closer apposition of the pericardial leaves by the movable wedge of expanding lung. (Sometimes it is more marked during expiration [Lewinski, Paul], in adhesions between the heart and lung [Riegel] and also without lung fixation.)

The murmur may last but two to six hours.

It is frequently stated that, as exudation increases, the friction disappears, to reappear during absorption. "The friction increases upward during exudation, and downward during absorption" (Sibson). Nevertheless, friction often persists in large exudations, if indeed its persistence is not the rule (Walshe). Balfour claims that friction once heard is never effaced by even the greatest effusion.

Secondary Physical Signs.—Evidences of cardiac incompetence are due to mechanical pressure hindering the diastole, especially of the auricles, inflammatory or degenerative myocardial alteration or coincident cardiac disease, etc. They are hepatic and renal stasis, ascites, œdema, cyanosis, dyspnœa, cerebral anæmia (syncope), etc. Traube held that the heart's action was stronger because the fluid was less resistant than the pericardial walls.

The pulse at first suffers irritative acceleration, but lasting frequency speaks for myocardial change. It may exceptionally be normal, or even slowed (36). There is no characteristic pulse. Dicrotism is frequent. The pulsus paradoxus is seen (Traube). A very strong or water-hammer pulse may suggest underlying valvular disease. Irregularity has been recorded (Louis, Gendrin). The pulsus differens occurs (Traube).

Lung compression: Bamberger observed a small area of compression, the size of a dollar, at the angle of the left scapula, where bronchial breathing dulness, and increased fremitus are noticed, which clears up in the knee-chest posture, etc. (Pins). Puncture excludes fluid in cases of doubt. Shattuck denies Bamberger's sign, which Allbutt has also seen in hæmopericardium. There is tympany (or dulness) under the felt clavicle and to the left of the heart in fair-sized effusions. (Ewart describes tubular breathing near the right mamma.)

Vomiting, singultus, dysphagia (Morgagni, Gendrin, Stokes), even of the hydrophobic type, recurrent paralysis (Landgraf, Riegel, Bäumler), and slow pulse are pressure symptoms.

Walshe observed tracheal compression. The second pulmonic may be accentuated, and Warthin holds it an early sign. The second tone may be split (Skoda).

Metallic heart tones may be due to an adjacent cavity, pneumothorax, ar the stomach and intestine. A systolic non-valvular murmur over the aorta has been explained by pressure on the vessel (Walshe, Friederich), or inflammatory relaxation of the vessels (Zehetmayer) interfering with their normal vibration. Organic or accidental murmurs may occur. Gerhart observed splenic pulsation.

Symptoms.—All symptoms are frequently absent, and no symptom is diagnostic. Osler's statement that "probably no serious disease is so often overlooked" finds confirmation in the earliest observations of Latham, Graves, Stokes, Shattuck, and Letulle. Leudet found total latency in 55 per cent. of cases.

Fever may exist, but follows no set type (Wunderlich). It is often absent, especially in secondary pericarditis, and may run below normal, even in purulent effusions. High fever is infrequent.

Dyspnœa, thoracic oppression or constriction and cardiac asthma occur. Oppolzer observe. cyanosis without dyspnœa when the pulmonary circuit remained intact. Dyspnœa is due to vagus irritation, venous, cardiac, pulmonary, and arterial compression.

Pain is variable and often is missed in secondary pericarditis. Severe pain was considered indicative of pleurisy (Bouillaud and Bamberger). Epigastric pain may precede pain elsewhere (Guéneau de Mussy). Anginal pain (Andral), radiating to the shoulder, arm, and neck, is rare.

Cerebral symptoms in rheumatism, etc., should suggest pericarditis, *e. g.* delirium, mania, choreiform movements, convulsions, psychoses (Burrows and Flint), but may be due to complicating uræmia, endocarditis, etc. Gastritis may be suggested from the symptoms, while pericarditis is found on examination.

The etiological diagnosis is important, since pericarditis is almost invariably secondary.

I. Infective diseases, of which rheumatism is foremost (Pitcairn, 1788), being most frequent (Bamberger) when many joints are involved and when the process extends rapidly from joint to joint.

Probably many "primary" cases are rheumatic. It occurs with recurrent rheumatism with endocarditis. Usually it develops rather early, but may precede arthritis (Stokes, Graves, Trousseau). Commonly sero-fibrinous, most exceptionally is it purulent.

Other infections, as pneumonia (especially in the streptococcus type, Banti), septicopyæmia, scarlatina, tuberculosis (multiple serous inflammation, pleuritis, peritonitis). etc., etc.

II. By contiguity from adjacent organs, pleurisy, pneumonia, aneurysm, disease of the ribs, sternum, spine, œsophagus, stomach, spleen, liver, peritoneum, myocardium, endocardium, etc., and from cervical cellulitis (diphtheria, etc.), or mediastinitis.

III. In cachexiæ or dyscrasiæ, carcinoma, in 3 to 10 per cent. of nephritis (especially contracted forms), alcoholism, blood diseases, scurvy, etc., often as a terminal infection where it may be overlooked.

Differentiation rests upon (1) The friction, or (2) The dulness, or both. Special subdivision into types, as acute or chronic, fibrinous, sero-fibrinous, sero-purulent, purulent, ichorous, hemorrhagic, etc., is inadvisable as a general proposition. Puncture alone reveals the character of the exudate. Usually fibrin-formation and serous exudation coexist (Latham).

I. The pericardial rub is practically pathognomonic of pericarditis (von Dusch).

It has been observed in cholera from dryness of the tissues (Leichtenstern, Peischl), in soldier's spots (Gerhardt, Pazzolo), hemorrhage (Wagner), hypertrophied heart (Gendrin, Seitz, Lépine), inflammation of the diaphragm (Walshe), or peritoneum (Emminghaus).

From endocardial murmurs, the acoustic quality, superficial character, inconstancy, lack of precision, variability with posture, slight propagation, palpatory difference in the fremitus, basal location, and increase of the pericardial friction by pressure or inspiration are most decisive. Sometimes pericardial friction covers an endocarditic bruit. The distinction is sometimes difficult, between an aortic to-and-fro murmur and pericardial friction. Valsalva's experiment, *i. e.* a long inspiration with closed glottis followed by expiration with tense abdominal muscles, intensifies pericardial friction and decreases endocardial murmurs. Bearing in mind the great frequency with which pericarditis is a complication (or co-ordinate phenomenon) of endocarditis, this special point demands reserve in the prognosis, since the valvular disease remains after the pericarditis subsides.

From pleuropericardial friction (pseudo- or extra-pericardial), originating in the inflamed pleura, where friction depends not only on respiration, but also on the heart's action. The usual differentiation lies (1) In the closer connection of the pericardial rub with the cardiac activity, persisting during expiration, and (2) The location of the pleuro-pericardial friction in the sinus mediastino-costalis, along the lingual lobe, in its intimate relation to respiratory movements, and in its usual cessation at either extreme phase of respiration, inspiration or expiration (Stokes, Addison).

This method of differentiation is not infallible. Inspiration also augments true pericardial friction, which is, however, increased by bending forward. Valsalva's test (*v. s.*) is also useful. Pericardial friction toward the base or sternum is less often confused with pleural friction near the heart. Rosenbach finds differentiation most difficult when the basal vessels pound against a tuberculous cavity or a pneumonia. (As a sequence of pleuritis pericardiaca, Riegel observed an expiratory lessening of the apex beat due to pulling of adhesions.)

From the præcordial emphysema murmur, differentiation is possible in the crackling sounds of interstitial emphysema or air in the anterior mediastinum. The sounds resemble râles, but are closely associated with the heart's action, and are often metallic. The condition of the heart tones, etc., is decisive.

From pericardial splashing (see pneumo-pericardium).

II. The dulness of pericardial exudation.—The typical pyriform or triangular dulness is modified by pleural or pericardial adhesions, pulmonary emphysema, etc. The relative cardiac dulness may be markedly increased with little change in the absolute.

Hydropericardium and effusive pericarditis may be confused, since stasis with hydrops pericardii may intervene in pericarditis, the friction may be absent or disappear, and fever may be lacking (chronic pericarditis). The etiological diagnosis of hydropericardium, *i. e.* local pericardial changes or a general cause for hydrops, with previous anasarca or hydrothorax, which almost always develops first, on the one hand, or, on the other hand, the etiological factors of pericarditis, may easily determine the difference. Hydropericardium is less apt to produce high dulness. Digitalis and purges favor resorption of transudation rather more readily than of exudation, in which latter event friction sounds would probably reappear. Paracentesis is not imperative for differentiation, but would reveal the usual differences in opacity, specific gravity, and albumin percentage between exudates and transudates. The triangular dulness may be very marked in hydrothorax, since there are no adhesions; friction is absent, and the fluid almost always contains some sugar. Potassium iodide passes readily into transudates (see pleurisy, page 201). Hæmopericardium, from trauma and rupture of a coronary artery, ventricular or aneurysmal rupture, etc., is commonly sudden, is attended by syncope, and blood is removed by puncture.

From pneumopericardium (*q. v.*).

From cardiac dilatation, the differentiation may be most difficult, especially with dilatation plus hydrops pericardii, when drastics, digitalis, friction, the history and evolution only may decide. The very distinctive relation between the apex and the outer dulness to the left is rarely fallible (*v. s.*). If the pulse is strong and the apex weak, pericarditis is present (with, of course, the typical dulness, etc.); yet compression or weakness of the heart in pericarditis necessitates a weak, rapid pulse. Schott's resisted movements, like digitalis, may decrease dilatation. In both affections the heart's dulness is increased by leaning forward, which may, however, bring out the apex well within the dulness of the exudate. When the patient lies on his right side the apex in pericardial effusion becomes visible (Rosenbach), which does not obtain in enlarged heart.

From retraction of the left lung away from the heart: The diaphragm is high, the apex and outer cardiac dulness coincide, the spleen is high, the pulmonary artery is exposed, and the proper signs of pulmonary contraction are elicited (Leube).

From mediastinal tumor: The dulness is irregular; there is no variation of dulness on postural change; the signs of increased conduction, etc., are noted, with the absence of the cardinal signs of pericarditis.

From aneurysm; marginal infiltration of the lung; callous pleura; encapsulated pleurisy, superabundant fat (Walshe); anterior mediastinitis (usually with friction, but with more vertically elongated dulness).

Diagnosis of the Character of the Exudate.—The fluid is sero-fibrinous in rheumatism, ichorous in perforation from hollow viscera, hemorrhagic in scurvy, carcinoma, tuberculosis, hemorrhagic exanthemata and alcoholism, purulent in sepsis, empyæma, etc.; yet paracentesis is the only certain test, since exceptions are frequent. Tuberculous pericarditis, even in clearly tuberculous cases, can be diagnosticated positively only by detection of tubercle bacilli in the aspirated exudate.

103 State Street.

Some Cases of Acute Contagious Articular Rheumatism.—G. B. Allaria reports three cases which were characterized by contagiousness, and by the beginning of the disease with angina of the throat. In a fourth case, the angina reappeared with every reappearance or exacerbation of the articular symptoms. Bacteriological investigations of the exudate on the tonsils showed in each case a streptodiplococcus which was almost identical in structure and behavior with that found by Meyer in the same affection. Animals inoculated with this microorganism developed lesions in the joints.—*Rivista Critica di Clinica Medica.*

DENGUE: A STUDY OF ITS MODE OF PROPAGATION AND PATHOLOGY.

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Although the literature of dengue is quite voluminous, and a large number of valuable reports have been made of different epidemics—from that of Java, Cairo, and Alexandria, in 1779, to that of the eastern end of the Mediterranean in 1889—yet nothing definite has been ascertained with regard to either its mode of propagation or its pathology. A number of autopsies have been made, but no definite anatomical lesions have been found. At one time it was considered a purely miasmatic infection, but since the epidemic of 1889 a strong opinion has prevailed among those who have given the matter careful study that it is a purely contagious disease. O. Lichtenstern of Cologne (in Nothnagel's "Specielle Pathologie und Therapie," IV, Band 1) sums up a very careful study of the whole literature by saying that it belongs to "den contagiös-miasmatischen Krankheiten." He believes that it is contagious, but that the contagion requires for its propagation certain miasmatic influences, and without these the contagion is powerless to spread.

The rapidity with which dengue spreads from one house to another after entering a city, and from one member of a family to another, having once entered the household, shows that it must be highly contagious. (See E. von Düring, "Denguefieber in Constantinopel," *Monatshefte für praktische Dermatologie*, 1890, 2, S. 16 ff.; Mahé, article "*Dengue*," *Diction. Encyclop. des Sciences Méd.*, Zulzer, Mordtmann, Skoltowe, and others). On the other hand, the inability of the disease to spread, when introduced into other regions than those in which the miasmatic conditions are favorable, has forced many accurate observers in the East and in America to the conclusion that it is not a contagious but a miasmatic infection. (See Orenstein, "Zur Dengue-Frage," *Deutsche medicinische Wochenschrift*, 1890, 2; Wernich-Eulenburg's Realencyklopädie, 1886, V; Chrysochoos in Smyrna, A. Hirsch, and others.) There is a great multiplicity of evidence to show that it does not spread to any extent when carried away from certain low-lying regions, which are its favorite abode. Epidemics in Cuba, Jamaica, East Indies, Réunion, Martinique, and Madagascar, all seem to show that, in spite of the most active communication, dengue cannot spread to any extent when carried into dry and high places in the interior. These epidemics have shown time and again that people come down from these higher and drier places, contract the disease, and then have it break out on them in their homes to which they have returned, and there lie smitten with it for several days without the other inmates of the household catching it. Up to the present time no logical explanation has been offered us by which we can reconcile these two theories of its propagation, the one miasmatic and the other contagious.

Early in July of the year 1901, the city of Beyrouth in Syria was visited by an epidemic of dengue. It began slowly, but as it increased, it seemed to gain force and virulence, spreading through every part of the city and the outlying villages. During this epidemic, which has been a very severe one, few houses in the city have escaped, and usually but few members of a household have been spared when the disease has once found an entrance. The epidemic has been a typical one, the fever lasting from three to eight days, rarely ten or twelve, and as it passed away, in the majority of cases, it produced an eruption more or less marked. In a considerable proportion of the cases (in my own practice 30 per cent.) there has been after a certain interval—five to fifteen days—a sharp second attack. The second attack I have never seen without an eruption, and in none of the cases has the patient been entirely well between the attacks. The eruption in the first attack has been the rule, and there has been marked desquamation from it in about half the cases. I also saw during the epidemic several well-marked third attacks, the patient in no case having fully recovered himself between attacks. A description of this epidemic would differ in no particular way from the classical ones given by Manson and others.

I saw something of the epidemic which prevailed on the Syrian coast in 1889, and my experience of that and what I had been able to learn from a careful study of the reports of similar epidemics by others had lead me to believe that the link, which would join together the two theories with regard to the propagation of the disease, was to be found in the mosquito. I believed that the mosquito was the condition or necessity, in order to make the disease portable from one individual to another.

The city of Beyrouth offers peculiar advantages for a study of this kind. It is situated on a cape, almost a peninsula, I might say, with a sandbank behind it on one side and irrigated mulberry orchards on the other. The Lebanon Mountains rise almost directly from the limits of the city, reaching in places an elevation of 9,000 feet. The slope facing toward Beyrouth is dotted with villages, and around them the ground is terraced on all sides and cultivated for the most part with mulberry trees for the silkworms. The city is terribly infested with mosquitos. Professor Day, of the department of natural sciences in the college, has found among them only certain forms of the culex. Most all the villages on the mountain side contain a certain number of mosquitos, which are also only the culex. Some of the villages in the drier parts have none.

At the beginning of the epidemic I commenced a series of experiments, in order to determine, if possible, whether the culex which exists in perfect swarms in the city could carry the dengue from person to person.

The first experiment was done with a mother and her nursing child. The day the mother was taken with the initial chill, all the mosquitos in that part of the house were killed by generating chlorine gas in the rooms. As she changed from one room to another, the rooms were, from day to day, ridden of the pests by means of chlorine, and netting upon the windows kept others from entering. The child, which was eight months old, was allowed to nurse from the mother during the whole course of the fever, and was constantly in her arms. Care was taken to keep away the mosquitos for ten days, after the temperature had fallen to normal. The mother had an eruption on the fifth day, which did not desquamate. The child escaped without fever or any other symptom of dengue.

In experiment No. 2, four children occupied the same room as a sleeping room. This and the adjoining room, which was used as a nursery, were freed from mosquitos the day the youngest child, four years old, was taken sick. During the whole course of the disease, and for eight days after the temperature dropped to normal, the two rooms were kept carefully free from the mosquitos. The eldest child was eleven years of age. The children all slept under the same cover on the floor, and played together during the day time, and yet none of the other three children contracted the disease. In experiment No. 3, the father of three children brought the disease to the house. He was anxious to keep his wife and children from the illness, and submitted to the daily annoyance of a disinfection of either one side or the other of his house. The fever in his case lasted five days, and ended with an eruption which desquamated, but no other member of the family was taken ill. Several other experiments of the same kind were made, and in each case in which the directions were carefully carried out, the result was the same, viz., that the dengue did not seem to be contagious when the mosquitos were carefully kept out of the house.

Feeling that these results were negative in one sense, I carried on several experiments in direct inoculation. As dengue is a disease not dangerous to life, and not accompanied by serious complications, followed by grave sequelæ, I believe these experiments to have been justifiable. It has been a very easy matter for a sum of five dollars, each, to get any number of strong young men willing to run the risk of being sick a week with the dengue.

In the city I made four different attempts to convey the disease by means of the culex. In each case the mosquitos were taken from inside the sick man's netting, and put inside the netting where the candidate for the disease slept, and there left until the latter was taken ill. In no case was the man allowed to leave the house or to receive visitors, and in each case no one had been sick with the disease in the house where the candidate slept. Patient No. 1 was taken ill with the initial chill five days after the mosquitos were put in. In case No. 2 the fever began six days afterward, and in case No. 3 the fever began on the fourth day after. In the fourth case, the man slept eight nights under the netting with the mosquitos, but did not fall ill. I again put in a larger number, which I left under his netting for a week without avail. He said that in the epidemic of 1889 he had had a very severe attack lasting six days, accompanied by high fever and an eruption.

These experiments seem to prove the possibility of the culex carrying dengue directly from one person to another; yet in a city where the disease was so prevalent, it might with justice be argued that the disease had been contracted in some other way. In order to avoid this objection, the mosquitos taken from a dengue patient were put in a pasteboard box, and I carried them to the mountains after taking a bath and changing my clothes. The mountain village to which they were carried has an altitude of 2,500 feet. No case of dengue had occurred there up to that time, and I believe there has been none since. Two young men, both in good health, residing in different parts of the village, were found to submit to the experiment. Both of them said they had never had the dengue before. The mosquitos were put under their nettings the afternoon of the 15th of September. On the 19th one was taken with a chill in the morning, and toward evening of the 21st the other. Both of them had typical attacks of dengue. Neither of them had been to Beyrouth or to any other place where cases of dengue existed. Most of the villages of the Lebanon have had some cases of dengue during this epidemic, but most of them contain a sufficient number of mosquitos to carry it about. It seems to me clear that the first class of experiments proves that, failing mosquitos, the dengue is not a contagious disease; and the second class evidences in direct inoculation that certain forms of culex may carry the disease from one person to another.

A very disagreeable experience which I had in 1889 goes to prove the truth of the first of these statements. I spent one night in the city of Beyrouth early in the epidemic, and then returned to our camp, 4,500 feet high, in the Lauras Mountains. Here were no mosquitos. Six days after leaving Beyrouth, I fell ill in our cabin, where there were twelve of us, with a very severe attack of dengue. I did not know what was wrong with me, as it was the first case I had seen. The fever lasted six days, and the eruption which came out toward the end was followed by desquamation. The other eleven in the cabin came and went freely, taking no precautions to prevent contagion, and yet none of them was taken ill.

Being convinced that the mosquito was the means of carrying the disease, I was forced to the conclusion that the cause must therefore be sought in the blood; and, hoping there to find it, I have carefully and systematically examined the blood in a very large number of cases. I must say that I chose for examination only those in which the fever was high, the constitutional symptoms marked, and the course of the disease typical. The lighter cases in which the temperature was at no time higher than 101° F., I did not take the time to examine. After having examined a certain number of cases, I was struck by the presence of an amœboid form in certain of the red blood corpuscles, and having once definitely found it, I was able to discover it after careful examination in all of the cases without exception which I examined. In all, over one hundred cases were examined, and in no case in which I had the time to examine the blood carefully before the specimen was spoiled did I fail to find it.

It resembles in many ways the plasmodium malariæ, but its cycle of production or formation in the human blood is so much longer than that of the malarial parasite that the changes in its life phase come more slowly and are more difficult to follow. Fresh preparations, no matter how carefully made, do not keep long enough to enable the observer to follow it through any great extent of its life. Long before the parasite has changed its form to any other more advanced, the specimen is so degenerated as to be worthless. The fever lasts in these cases from four to ten days, and in order to see the parasite in different stages, an attempt had to be made to find cases of the fever in series, as it were, from the initial chill to the end of the disease. In order to accomplish this in every case where I examined the blood, I kept as close a record as possible of the time from the initial chill or onset of the disease when the blood was drawn. The record of this time I endeavored to make as exact to the hour as possible. In this way I was able to make a fairly well connected history of the growth of the parasite. The specimens were drawn and made in the usual way—slides, cover-glasses, and finger-tips being kept as clean as possible. The specimens in each case were immediately rimmed around the cover-glass with vaseline, and the specimens thus protected from changes as long as possible. The blood was drawn in most cases from the finger-tip. In a few cases where the eruption was very pronounced the blood was drawn from the center of some of the brightest spots. I might here say that these specimens did not present features in any way different from those found in a drop drawn from the finger-tip of the same patient. An attempt was made to gain additional information by staining, the cover-glasses being prepared according to Ehrlich's method, and stained at times with Löffler's methylene blue, at times with borax methylene blue, and with Ehrlich's stain; but the results were not so satisfactory as those obtained with specimens of perfectly fresh blood. However, most people who have worked in stained specimens of malaria parasites know that even the most carefully done work in this line may turn out but poor results.

The illustrations here presented were drawn from different specimens as seen with a Zeiss 2 mm. oil immersion—apochromatic system—and compensation eyepieces 6 and 8; of course, none of these figures represent any one field under the microscope, but are samples drawn from many fields examined and put together to show in a small compass as many phases of the parasite as possible. In Fig. 1 may be seen the parasite in its early stages, that is, in the first thirty-six hours. Sometimes it is seen in the center of the red corpuscle, and sometimes at the margin. From time to time it changes its shape, showing amœboid movement and shifting its place from one part of the corpuscle to another. It need not be mistaken for a vacuole, for it is too dull in color, lacking that clear brightness seen in a vacuole.

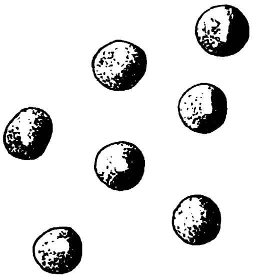

Fig. 1.—Forms seen first 36 hours.

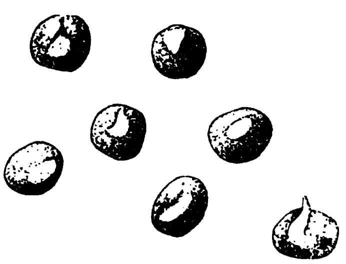

Fig. 2.—Forms seen from 2d to 4th day.

In Fig. 2 the parasite is shown in a later phase of its cycle, and this is the form in which it is usually seen. Careful search may have to be made to find it, but when that is made one is certain to find several good specimens in an ordinary typical case of dengue. It is evidently a protozoon, but differs from that of malaria in its life history, and in that it forms no pigment from the beginning to the end of its growth. It is true that Marchiafava and Celli have discovered and carefully described an *un*pigmented quotidian parasite, but this differs also in other ways from the hæmatozoon of the dengue. I know of no parasite which resembles it so much as the Pirosoma bigeminum (Boophilus bovis). It is like the pirosoma mostly ovoid in form, and it very frequently shows that same sharply pointed end so often found in the parasite of Texas fever. The pirosoma is unpigmented and so is the *Hæmatozoon denguii*. I have, however, never seen it in pairs, or received any suggestion that it multiplies by binary division, as in the case of the pirosoma. This sharply pointed end may be seen at times to turn around inside the red blood corpuscle, and at times when it has attained a certain size to push out like a pseudopodium past the margin of the corpuscle. The best examples of it and the largest I have seen have been in blood that has remained on the slide for a few hours, and which has been kept from undergoing decomposition.

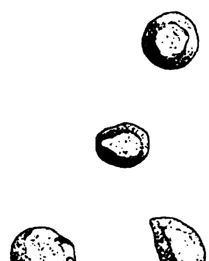

Fig. 3.—Corpuscles about to rupture.

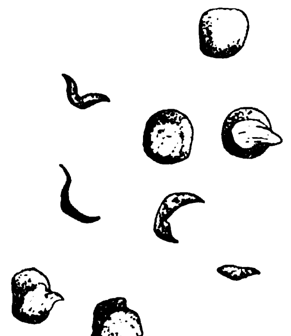

Fig. 4.—Forms seen about 4th day of fever, with remnants of red corpuscles already ruptured; also unruptured corpuscles.

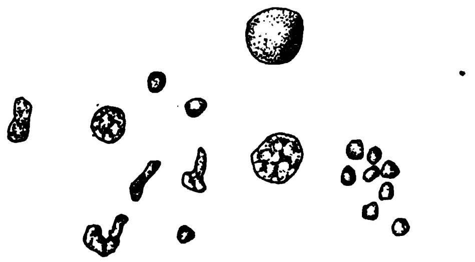

Fig. 5.—Parasite escaped from red corpuscles and undergoing changes of form and degeneration.

In Figs. 3 and 4, the parasite is seen still further advanced, and about the fifth or sixth day many portions of broken corpuscles are seen scattered throughout the field. In specimens prepared from the fourth or fifth day, which have stood for a couple of hours, frequently the hæmatozoon is found pushing its way out from the remnants of a corpuscle, or it is seen with the mere outline of a corpuscle around it. Very soon after its escape it is seen to undergo degeneration. I have never seen a white blood corpuscle swallow one when the parasite was making amœboid movement, but have frequently seen degenerated or degenerating forms of the parasite engulfed by leucocytes as seen in Fig. 6. In Fig. 5 may be seen certain degenerated and degenerating forms of the parasite. The white blood corpuscles seem to clean these up very rapidly from the blood plasma.

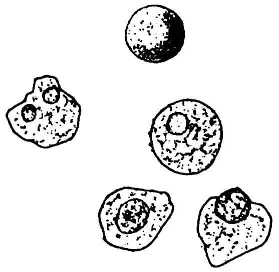

Fig. 6.—Parasites taken up by phagocytes.

In Fig. 7 may be found a form of parasite, I believe to be a flagellated one, rolled up, as it were, inside a membrane. Some of the flagella are seen in the illustration, which is drawn as closely as possible from specimens under the microscope, to be in the act of pushing outside the cell wall. In Fig. 8 flagella may be seen among the red blood corpuscles. They have a distinct undulatory movement by means of which they progress, making their way among the corpuscles, pushing them aside or steering around them. Some of them have a distinctly clubbed end. These illustrations have been taken from blood examined during severe second attacks, and these free flagella were found only after the blood

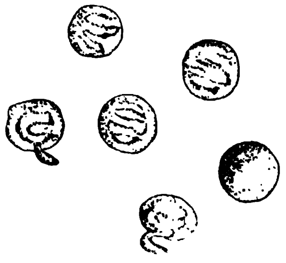

Fig. 7.—Corpuscular bodies containing flagella.

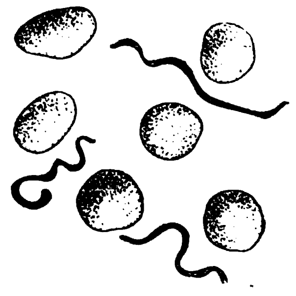

Fig. 8.—Flagella free in the plasma.

had stood for some time. I was not able to see in any of the specimens a cell with three or more flagella attached, and these flagella moving out free their full length from the cell. As soon as a flagellum pushed out from the cell wall, it seemed free by itself in the blood plasma and separate from the original cell. Whether the flagellum has the power or function of fructifying the other round cell or not, as in the case of malaria, I cannot say. I must say that, although I have searched diligently for these flagella in first attacks, I have never succeeded in running across them. More diligent search and other or better methods might, however, reveal their presence. The best specimens I saw were in blood obtained from a severe third attack, and the cover-glasses were moistened by the breath before touching them to the blood drop, as advised by Manson, in searching for flagellated forms of the malaria parasite.

It may not be absolutely proven that this hæmatozoon is the cause of the dengue, but its constant presence in the red blood corpuscle during the fever, its resemblance to the parasite of the Texas cattle-fever, its likeness in manner of growth and mode of propagation (by the mosquito) to the malaria parasite, all point in the same direction and lead us to believe by analogy, if by no other way, that in this parasite we have the cause of the dengue.

In conclusion, it is interesting that the culex should be found capable of carrying disease in man. Certain forms carry the proteosoma of birds, but I know of no disease they carry in man unless the form of mosquito which has been found to carry yellow fever be a real culex, and not a genus (stegomyia) by itself.

TREATMENT OF VESSELS FROM YELLOW-FEVER PORTS.*

A REPLY TO DRS. REED AND CARROLL.

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I HAVE recently read over again the captivating article of Drs. Reed and Carroll in the MEDICAL RECORD of October 26, 1901,[1] entitled "The Prevention of Yellow Fever," and while admitting that mosquitos may transmit yellow fever, yet I cannot let go unchallenged several of the conclusions they reach under the heading of "Measures Directed Against the Importation of Yellow Fever Into the United States." They are as follows:

I.—"Under the admirable system of inspection and reports, as carried out by the Marine Hospital Service, the appearance of yellow fever at any foreign port is promptly reported for the information of the health authorities of our several Atlantic ports. We may, therefore, divide foreign ports within the so-called epidemic zone into (*a*) infected, and (*b*) non-infected ports."

"We believe that no quarantine restrictions should be placed upon either passengers or cargo from non-infected ports."

Now, many of those ports have no medical inspectors of any kind. Besides, all the men with any practical experience of these matters know how difficult it is for the medical inspectors of the United States Marine Hospital Service and of the Louisiana State Board of Health to ascertain reliably the true conditions of all the Mexican, Central and South American ports. The physicians and the people there are not afraid of yellow fever, and do not report it. It is only when cases are too glaring that the Louisiana and United States officers learn of them. Besides, almost all of these ports hold free and unrestricted intercourse with other ports, infected or non-infected. They ignore profoundly modern scientific sanitation; they practise no disinfection, and take no precautions whatever against anything or anybody, mosquitos or any other bodies.

Almost all the medical inspectors of the Louisiana State Board of Health, stationed there every year for many years past, report this. Therefore, how can we consider so-called non-infected ports as safe ports?

The Louisiana State Board of Health, by placing marine medical inspectors on board of vessels carrying passengers from fruit ports,[2] has almost done away with quarantine detention. The principal duty of the marine medical inspectors is to take the temperatures of every one on board in the evening, and to keep a clinical record with urine analyses of all the cases of fever, ever so slight, which may occur in transit.

Thus the vessel is truly a moving detention camp on which all on board are serving their probation time.

Vessels without any suspicious records are given credit for the number of days in transit.

The passengers which have been less than five days in transit are detained only a day or a day and a half so as to make five days.

The passengers on these vessels which have been five days in transit are not detained at all upon arrival at the Mississippi River Quarantine Station.

Passengers after disinfection are permitted to come on board as soon as the fruit vessel arrives at the fruit port, and their time of detention begins from that moment, so that many passengers who have only been four days in transit, but five days on board, are allowed to pass without detention at the Mississippi River Quarantine Station.

The fruit vessels themselves are not detained unless presenting suspicious or positive signs of sickness.

II.—"If the disease has developed *en route* among crew or passengers, the sick should be promptly removed; the forecastle or staterooms, as the case may be, thoroughly disinfected with sulphur or formaldehyde gas, and the vessel allowed to proceed to her wharf."

The following cases show how dangerous that practice would be, since they show that after one case has developed another may follow one day or more after. Besides, in the histories given below, disinfection had been practised before any case at all developed:

1880. Bark *Excelsior*. Sailed from London February 17, 1880. Arrived at Rio April 13. Left Rio May 10. Arrived at Mississippi River Quarantine Station June 25 (Wilkinson), having been on the voyage forty-five days. No case of sickness occurred at Rio or on the voyage. She was disinfected on June 26 and following (Wilkinson). She was detained twelve days altogether, up to about July 4. Arrived at New Orleans on July 5. On July 7, at 8.30 P.M., John Kinney was taken sick. On July 10, in the morning, he was removed to Touro Infirmary. He developed a genuine case of yellow fever. He died. The bark was returned to the quarantine station on July 10. Three more cases developed after the return at the quarantine station. Two died.[3]

1900. Non-infected Norwegian steamship *Bodo*, from Bocas del Toro, five days out, cargo fruit, living quarters and effects disinfected and vessel allowed to proceed to Middle Bay-Light, six miles below Mobile to discharge cargo into lighters. Vessel returned to station in forty-eight hours with one case of yellow fever, remanded to Ship Island Quarantine, where two additional cases developed later; no deaths.[4]

1900. Steamship *Electrician*, Belize, via Colon, Vera Cruz, and Tampico, three days out from Belize. Arrived at Mississippi River Quarantine Station October 7, and disinfected same day. On the 8th, three cases of fever developed. On the 11th three cases, and on the 12th one case—seven in all. Cases were all well marked, but all recovered. A convalescent second-class passenger taken on board at Colon was the probable cause of infection.[5]

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* Read at the meeting of the Louisiana State Board of Health of January 4, 1902, and officially approved by resolution of the board.

These vessels, if treated according to Drs. Reed and Carroll's theory, would have carried infection into a Southern port.

III.—"If more than twenty days have elapsed during the voyage, without the occurrence of yellow fever, we see no good reason why either passengers or vessel should be detained."

The following cases of vessels more than twenty days out developing yellow fever, and that after disinfection, will surely convince the reader that assertions have no value in these days of modern science, which requires proofs for all assertions.

1890. British steamship *Curlew*, from Rio, with rock ballast. Sixty-eight days out from Rio. No sickness was reported at port, en route, or on arrival. Cleaned July 22 to July 23. Disinfection completed July 25 in the afternoon. One and a half days after completion of disinfection, one case of yellow fever developed July 27, in the early morning, before day. The disease was probably contracted between July 22 and July 25. Incubation between five days and one and a half days.[7]

1890. British ship *Chippewa*, from Rio, with rock ballast. Sixty-four days from Rio. No sickness was reported in port, en route, or on arrival. Cleaned July 26 and 27. Disinfection completed July 26. One day after, one man, the quartermaster, developed yellow fever at night. He probably contracted the disease between July 26 and 28. Incubation three and a half to one day.[8]

IV.—"With our present knowledge of its propagation, personal baggage should no longer be subjected to disinfection, and, with our increased ability to prevent its spread by measures easy of application, instances should be few and exceptional when a vessel coming from a yellow-fever port should be delayed longer than will be necessary to remove her non-immune passengers who have not yet completed their period of five days since leaving the port of departure."

We do not say that fomites will always carry infection, but we do believe that they can do so. We are most willing to be convinced, but we can only be convinced by facts well established.

The following cases stand before the distinguished writers for an explanation. I will confine myself here to cases reported by American writers, and will leave out the array of cases reported at the Geneva Congress in 1882, or in the works of Berenger Feraud, the French authority on Tropical Diseases, in which the intermediation of mosquitos seems impossible or superfluous:

1. Case at Franklin, La., in 1853:

Centerville, a small village on the Bayou Teche (having instituted no quarantine regulations), was swept by a terribly fatal epidemic.

The large village of Franklin (but five miles distant), having maintained a most thorough and effective quarantine, from the first breaking out of the disease in New Orleans, had remained entirely exempt.

On the evening of the 9th of October the physicians of Centerville notified the Mayor of Franklin that they considered the epidemic at an end, "as no fresh case had occurred during the last ten days." Intercourse between the two places was, consequently, permitted on the following day (the 10th).

Quarantine against Centerville was re-imposed by Franklin on the morning of October 11, on account of six new cases of fever reported on the night of the 10th.

On October 10, while quarantine was suspended, a merchant of Franklin received from Centerville certain goods, which, after being boxed up there, were opened at his store in Franklin in the forenoon of October 11, the merchant himself, with his three daughters "standing near as it was opened," and no one else present.

On October 16, between 1 and 6 A.M., the merchant and two of his daughters were seized with yellow fever, which resulted fatally for the merchant and one daughter. The third daughter had the disease later, with black vomit, but recovered.

So far as has ever been ascertained, this was the only direct communication between the two places during the cessation of quarantine.

No other cases occurred in Franklin that year.[10]

2. Case at Franklin, La., in 1854:

Again, Franklin, neglecting the enforcement of quarantine, in 1854, was desolated with yellow fever, having permitted a steamboat direct from New Orleans to land and remain at a central wharf, some of her crew being sick with yellow fever at the time.

During the height of the epidemic a certain lot of household goods (blankets, quilts, and woollen and cotton stuffs generally) were packed in air-tight boxes for the purpose of being transported to Texas. For some cause they were not removed that season, remaining thus boxed up until the following November (1855).

The boxes remained during the winter in a room where a fire was kept. About the middle of November, 1855, Mrs. C. arrived in Franklin, intending to remove the above-mentioned goods, together with other property to her home in Texas. She concluded to repack the articles into larger boxes, and was engaged, during the greater part of two days, in opening the original packages and repacking them. On the night of the fifth day, from the time of commencing unpacking, she was taken with fever which terminated fatally, black vomit and suppression of urine supervening.

No other case occurred in or about Franklin that season (1855), save that of a man brought from Marksville (where an epidemic existed). The man was in a dying condition when landed—was buried the following day, and no communication could be traced between the two cases. The above case was peculiarly interesting to the attending physicians, happening as it did long after several frosts and even a solid freeze.[11]

3. Case at Pattersonville, La., in 1857:

Again, during 1857 (in September), a young man made his way from New Orleans, where yellow fever was prevailing, to Pattersonville, a small village near the mouth of the Bayou Teche. A very strict quarantine was being enforced throughout the parish (St. Mary), and this young man was consequently compelled to travel in a somewhat clandestine manner. He arrived at a store in Pattersonville some time after dark (the clerk was an intimate friend), and requested permission to remain all night, as he was too much fatigued to continue to his home, some four miles farther. Permission was readily accorded. On retiring, he deposited at the foot of the bed a bundle, tightly corded. This bundle consisted of a heavy overcoat and a thick blanket. It had not been unrolled since he had wrapped it up in New Orleans (in a house, too, not only in an infected district, but wherein some cases of yellow fever existed at the time). During the night, the clerk (Mr. R.), feeling cold, intimated his intention of getting up "to procure more cover," when his bedfellow remarked, "I have just the thing for us," and reaching forward, untied the bundle and drew the blanket and overcoat over them both, under which they slept until morning. About one week (?) subsequently Mr. R., the clerk, was taken with yellow fever, dying on the fifth day with black vomit, and suppression of urine. There was no other case that season in the parish.[12]

4. Case of Mrs. F., St. Mary Parish, 1866:

In October, 1866, Mrs. F., a young wife of but a few months, was taken ill with a fever. She had been subject to somewhat frequent attacks of fever, which, though smart, had always been ephemeral. Her physician considered this as of the same character, but she insisted, from the first, that it was a different fever from any she had ever before suffered from. She died on the fourth night, with all the characteristic symptoms of yellow fever.

Here was a person living on a plantation, far remote from any town or village, and from which she had not been for weeks (two months). There had not been a case of yellow fever in the entire country, outside of New Orleans, and yet she unquestionably died with yellow fever. The husband (Mr. F.) afterward informed me that about a week (five days) before his wife was attacked, Mr. P. (a very intimate friend) had arrived from New Orleans.

The boarding house in which Mr. P. had logded while in the city was situated nearly in the center of the infected district, in the French part of the town. Three fatal cases occurred in the house itself during his stay. His trunk remained open in his room until the morning of his departure, when he locked it. It was not again opened until Mrs. F. unlocked it, for the purpose of taking out some articles of dress which Mr. P. had purchased for her in New Orleans.[13]

5. Case of child near Franklin, La., in 1867:

Again, during the summer of 1867, a most stringent quarantine was enforced by the authorities of Franklin (as well as by the other small towns situated on the Bayou Teche) against all persons, boxes, bales, and packages of every description arriving from New Orleans.

Mr. C., a planter, residing on an isolated plantation some twelve miles from Franklin, drove into that town one day during the latter part of October, 1867, and brought, among other purchases, a bale of woollen blankets. On his return home in the evening he took with him a little nephew (seven or eight years of age) that he might spend a few days in the sugar house, it being the "grinding season."

He slept with his nephew, and during the first night (the weather suddenly becoming cold) he arose from bed, undid the fastenings of the bale of blankets, and threw a pair over the boy, wrapping him well up in them. The fifth day afterward, the youngster was taken so ill that Mr. C. took him home in his carriage. The disease proved to be yellow fever, and terminated fatally.

This was a most puzzling case to the physicians for more than a year; not the slightest exposure to yellow-fever infection could be traced. It was finally discovered that the bale of blankets purchased by Mr. C. had not only come direct from New Orleans to Franklin about a week previous to Mr. C.'s buying them, but had lain all summer in a store in the city, located right in the middle of the infection.

These blankets, together with other goods, had been allowed entrance to Franklin on the statement that they had come direct from New York in a steamship which loaded at Algiers, the goods being transferred immediately from the steamer to the Opelousas cars.[14]

6. Case of Harry Beal, Cypremort, La., 1879:

The first case of sickness of a suspicious nature was Harry Beal, white, adult, native of the parish. He kept a store. He was taken sick on the 17th of October with fever, nausea, headache, and pain in limbs. He was seen by a physician for the first time on October 19, was restless, but free from fever; eyes injected, considerable nausea. Nausea increased and vomiting occurred. On the 22d he had several black passages from his bowels, and while straining in the effort to vomit, spat up some blood. Black vomit then occurred and the suppression of urine. He died October 25, in convulsions.

Investigation as to the cause of his attack has elicited the fact that he had received, on the 13th inst., a box of goods from New Orleans containing two dozen blankets of a very low grade. These were immediately unpacked, and their offensive smell was remarked by several persons who visited his store. After his death, these blankets were replaced in the box in which they arrived, saturated with coal oil and burned.

The next case occurred at a house just across the public road opposite Beal's store. Miss J. D. was taken sick about the same time Beal was attacked, but was not seen by a physician until October 20. She died October 21, exhausted by profuse hemorrhage from the womb.[15]

7. Case of Mr. C., Bayou Bœuf, La., 1879:

The first case of sickness was in the person of Mr. C., adult, white, who visited Morgan City about the 5th of September, and returned home on the 10th. He brought with him from Morgan City some second-hand bedding and clothing, and a few days subsequently was attacked with the disease. His family, wife and children, were soon down, but all recovered. Persons who visited his house were next attacked, and the disease spread rapidly in the little settlement.[16]

8. Indianola, Texas, incident:

The schooner *Margarita* sailed from Vera Cruz on the 11th of May, and came to anchor in the port of Indianola on the 21st of the same month. A Mr. Delord, a passenger on board, had a lot of second-hand blankets which were disposed of at auction, to which was attributed the rapid spread of yellow fever. The first cases were a drayman named Hunter, and a lad named Cook, who hauled the blankets to the place of sale. A Mr. Andrews certified that he, together with a Mr. Duke, examined the blankets at the auction room on the 25th of May. Three days subsequently he left for his home on Hynes Bay, and the same evening was attacked with fever. His companion, Mr. Drake, was attacked the day afterward, and in a few days died.[17]

9. Case of Mr. Lane of Milton, Fla., 1853:

Dr. Hulse of Pensacola, Florida, reported the following instance:

In 1855, a Mr. Lane was attacked with yellow fever at Dr. Fisher's, in Milton (which is a few miles from Pensacola). His effects were packed in a trunk, which was locked, placed in a storehouse, and covered with old cloth and sacks. In the summer of 1855, two years later, this trunk was sent from Milton to Brooklin in Alabama, forty or forty-five miles north, and it was opened in a house in presence of several persons. Soon after, six of those living in this house sickened, and several died with black vomit.[18]

10. Case of Mrs. C., near Taylor, Miss., 1898:

Dr. J. A. K. Birchett, State Health Officer at Taylor and Orwood, Miss., during the 1898 epidemic, reports the two following cases of infection by fomites as having fallen under his observation:

I visited the Gray House, midway between Taylor and Orwood, and found Mr. McC. confined to his bed with an attack of yellow fever. About September 15, he packed the clothing worn at the Gray House in a valise, and proceeded to his home, about ten or twelve miles distant in an isolated spot. On October 13, his wife removed the articles from the valise, and hung them out for an airing. On October 16, at 3 P.M., she sickened with an attack of yellow fever.[19]

11. Case of Miss A. B., near Taylor, Miss., 1898:

Miss A. B. attended the funerals of Dr. G. and H. W. on August 10 and 11, at which time she was clad in a woollen dress, which she took off and placed away in a closet on her return home. She was exposed to a case of yellow fever. About September 20, she was renovating the house, and removed the clothing (the woollen dress among other things) from the closet to air them. She was taken with yellow fever at 7 P.M., September 25. The isolation of these premises had been perfect, it being dangerous to attempt an approach to the house, as my driver can testify; he was shot while attempting to cross a portion of the place.[20]

12. Case at Jacksonville, Tenn., 1878:

In the history of the yellow-fever epidemic in 1878, by J. M. Keating, are mentioned a good many instances of fomites infection, several of which will bear relation:

At a meeting of the Davidson County Medical Association, Dr. Drake of Nashville reported the following cases.

At Jacksonville, Tenn., in 1878, a gentleman returned from Memphis, and, upon reaching home, hung his clothes in a wardrobe. After several days his wife took the clothing out. We would suppose that in a close, hot room the poison would multiply itself in this time until the air would be heavy with it, and so it seemed in this case, for the lady took the yellow fever and died, followed in due time by the rest of the family. The husband developed the disease only when confined to the house, ministering unto the sick.[21]

13. Case of Mrs. Vincent, at Houston, Texas, 1864:

Dr. T. J. Heard of Galveston, Texas, is quoted as follows:

About December 1, 1864, Mrs. Vincent, sister of Ex-Lieutenant-Governor Anderson, fled from Houston on account of yellow fever. A negro left behind took the disease, and as there was great lack of blankets, an old carpet was used instead. Six weeks afterward, Mrs. Vincent returned, and going in the garret took the carpet out to air it. Four days after this she had a most violent attack.[22]

14. Case at Covington, Tenn., 1878:

Keating reports on the source of infection at Covington, Tenn., as follows:

The only person who had the fever at Covington, Tenn., in 1878, was the postmaster, who received and opened a heavy mail that had been detained in the Memphis post-office for some time. In three days he died of yellow fever.[23]

15. Case at Bay St. Louis, Miss., 1875:

Statement of Dr. C. Delery of Bay St. Louis:

Says the malady originated in a house owned by a man named Martin. This house was inhabited by the Gallagher family. . . . This family arrived in Bay St. Louis from the State of Missouri last February. Since that time they had never left the bay, nor had they received any merchandise from the city or elsewhere. On the 23d of August a colored man named Williams arrived at the Bay from Pascagoula, which place he had left to escape the epidemic. He moved on the same day of his arrival into a room situated about thirty yards from the Gallagher family. The child, Myron Gallagher, aged six, went every day to visit Williams, with whom he passed part of the day. This child was the first to fall sick on the 31st of August, that is to say, eight days after his first visit to Williams.[24]

16. Cases near Summit, Miss., 1878:

The great yellow-fever epidemic of 1878 in New Orleans began in July. During that month Charlie and Louis W., sons of Dr. W. of New Orleans (then in Europe), had a fever, classed as malarial by the attending physician, who advised their mother to take them to the country to recuperate. That physician subsequently admitted that these two cases were yellow fever. On July 28, Mrs. W.

arrived with her children at the home of her father, Mr. Griffin, four miles east of Summit, Miss., on the I. C. R.R., 108 miles north of New Orleans, bringing only hand baggage. Her trunk arrived the next day, July 29, and up to August 9, was only opened a few times by Mrs. W. to obtain such articles as she chanced to require, being immediately closed again. On August 9, having been invited, with her children, to visit her brother-in-law, some miles distant, Mrs. W. unpacked her trunk, spreading the contents on the bed, etc., so as to select what she required for the visit. Departing immediately, she left the remainder of the clothing to be repacked by the Griffin family. The next morning, Saturday, August 10, Aleck Griffin, aged thirteen years, repacked the clothing, stooping over the trunk and handling each article. His mother, with her little daughter Mary, and her sons Whit and Frank, were present and assisted. On August 13, the fourth day after the unpacking of the trunk, Aleck was seized with yellow fever, had black vomit August 20, and died August 21. On August 14, Frank was taken with yellow fever. He recovered. On August 15, Mary was taken at daylight, and died on August 24. On August 15, Whit was taken about noon. He recovered. Mrs. Griffin was ill on August 14, but held out until the next day. She also recovered. Thus, every one of the five persons present at the repacking of the trunk were seized with yellow fever within five days afterward. The most important witnesses of these tragic events are living, and can be called on to testify.[25]

17. Case in Floating Hospital on Lower New York Bay, 1862:

During my services as Medical Superintendent of the Floating Hospital in the Lower Bay of New York, in September, 1862, I was sent for by one of my colleagues of the Brooklyn Hospital for consultation in a suspected case. I found there an unequivocal case of yellow fever. The patient died the third day thereafter. She was the widow of a seaman who had died in New Orleans two or three months before, whose clothing she had received and washed four days before she was taken sick.[26]

18. Case of Dr. Wm. Johnson, Surgeon United States Navy, 1860:

On the termination of a cruise on the west coast of Africa, some years before, when yellow fever occurred on board the ship to which he was attached, he packed his books in a barrel, and in that condition left them for about three months after they had been received and his arrival home. He then proceeded to unpack them, and three or four days thereafter he was taken with yellow fever, and came near dying.

19. Yellow fever in Madrid, Spain, 1879:

Dr. Guichet, surgeon in the French army, charged by the government with a special scientific mission in Spain, officially reported, in 1879, the following facts:

Madrid is 2,214 feet above the sea. In 1878, a number of soldiers, returning from Cuba, had been discharged because the insurrection had terminated. All of those at Madrid were apparently acclimated; certainly none came with yellow fever, nor had it while there. But a number of young people who lived side by side with these soldiers, and their clothing, trunks, and baggage, were attacked. The epidemic was restricted to a very few squares adjacent to the crowded domicile of these soldiers, beginning September 15. It was ended by October 15. There were twenty-five cases perfectly well known, but, according to the most authoritative medical statements, there were more than fifty sick, with about thirty-five deaths.[28]

20. Case of recrudescence at Edwards, Miss., 1898:

Edwards, Miss., is an illustration of a recrudescence, a few cases occurring in September, 1898, following the epidemic of the year before.[29]

21. Also at Memphis, Tenn., in 1879, after a freezing winter in 1878–79.[30]

22. Also Franklin, La., in 1898.[31]

Also New Orleans, La., in 1898 and 1899, after a freezing winter in 1898–99.[32]

23. Case of a frozen vessel, North:

I will cite another case illustrating the vitality of the poison of the disease. A small vessel in the tropics had had yellow fever on board. She was sent North in the fall of the year, and sunk in a Northern river. When the winter came on, the vessel was frozen in, or submerged in icy-cold water all winter. In the spring she was pumped out and raised, after a time put in commission, and sent again to a warm climate. Upon getting into the warm belt, and before making a port, the disease reappeared.[33]

24. Case of steamer *New World*, 1852:

I ascertained that about the middle of the year 1851, the steamer *New World*, after having lost more than half her crew by yellow fever in Rio, on her way to California, touched at Callao. The steamer *Pinto* also, during the same season, lost several of her crew there, proceeding to the Pacific, and arriving at Callao in April, 1852. Soon after her arrival, a mild form of a peculiar fever broke out in Callao and Lima, which the natives called "pelusa," similar to the precursory fever which prevailed in Rio in 1849; it was called "polka." In both instances the disease speedily developed yellow fever. And considering the voyages, so inconsistent with the continued presence of mosquitos on board ship, it is hardly conceivable that they had anything to do with either its introduction or transmission.[34]

25. Case of the United States Frigate *Susquehanna*, 1857:

This ship, after more than two years' service in the Mediterranean, October, 1857, was ordered from Spezzia to San Juan de Nicaragua, where she arrived early in December, having touched by the way of Genoa, Madeira, and Key West. She remained at San Juan until the first of the following April, having had during the whole period of time she lay there a constantly increasing sick list of a "precursory" fever. At first intermittent, then remittent, but all recovered, until March 20, when a case became malignant, with symptoms of yellow fever, and died; other cases followed. The ship put to sea April 1, and on April 5 arrived at Port Royal, Jamaica, with one hundred and six officers and men down with yellow fever. Most of these were sent to the hospital, and on the third day afterward she sailed for New York, where she arrived April 15, with fifty-one cases on the sick list.

The remarkable feature in this instance is that at San Juan, where the yellow fever first appeared on board the *Susquehanna*, there was no yellow fever, and the disease had never been known to occur there. As before stated, she had been more than two years on service in the Mediterranean, but with no extraordinary sickness on board. She had had yellow fever on board during service in the Gulf Squadron the summer before she was ordered to the Mediterranean, nearly three years before, and was supposed to have been thoroughly cleansed before she was ordered to the Mediterranean station.

But, as the sequel shows, she still retained the germs of the disease (or mosquitos?) until she returned to the conditions of the yellow-fever habitat at the port of San Juan.

It is conceivable that the advocates of the exclusive instrumentality of the mosquito in her case may contend that she might have shipped the culex when she touched at Key West. But there was no yellow fever there at the time, and no case intervened between that time and the first unequivocal case on board the *Susquehanna*, March 20, after several weeks' prevalence of a precursory fever—a not very unusual feature of yellow fever observed on other occasion, and prominently so at the first outbreaks of the disease in Rio and Callao.[35]

26. Case of United States steamer *Plymouth*, 1878:

The persistence of yellow-fever infection under conditions commonly fatal to mosquitos is particularly well shown in the history of the United States steamer *Plymouth*. She first became infected at St. Thomas in the summer of 1878. In November, following she was sent to Portsmouth, N. H., and about a month afterward to Boston, where she remained four months. Meanwhile everything was removed from the ship; the crew were transferred, and she was fully exposed to intense cold for a month—for ten days of that time in dry dock, with a temperature at times below zero. The water in the tanks was frozen, as it was in basins put in the storerooms of the ship, and for several days after the fires were rekindled on board, the cold continued so intense that the water froze in the bilges at night. One hundred pounds of sulphur was burned below decks, the fumigation extending over two days; the berth deck, holds, and storerooms were thoroughly whitewashed with a mixture of lime and chloride of lime.

March 15, 1879, she left Boston for a cruise in the West Indies. On the night of the 19th, in a severe gale of wind, the hatches had to be battened down, and the berth deck became very damp and stuffy. On the morning of the 22d (she had not touched at any port), Richard Saunders, machinist, was sick, but did not report until afternoon, when he had violent headache and fever. During the night of the 22d, Peter Eagan, boatswain's mate, was taken suddenly and violently sick with the same symptoms. On the 23d, at sea, latitude N. 27° 48′, longitude W. 57° 59′, the surgeon (Woolverton) reported both cases yellow fever, and recommended that the ship proceed no further on that cruise. The first case recovered; the second died on the third day of illness. The ship's course was changed to northward, and she arrived at Portsmouth, N. H., April 7. No new case appeared after she turned. "I am convinced," said the surgeon, in his report, "that the fever infection is confined to the hull of the ship, and especially to the unsound wood about the berth deck; and that while the *Plymouth* is a safe and healthy ship in a temperate climate, she cannot, for the present, be sent into a tropical climate without the certainty of an outbreak of yellow fever occurring on board; and that no precautionary measures whatever could avail to avert such a result."

Soon after her return to Portsmouth, April 7, she was surveyed by a board of medical officers, who reported that: "After careful consideration of all the facts, we have arrived at the conclusion that the infecting virus which gave rise to the last outbreak of fever must have been preserved in the rotten wood of the berth deck or in the bedding or clothing of the crew."[36]

27. Case of United States ship *Vermont*, 1878:

July 12–18, 1878, yellow fever broke out on board the United States ship *Vermont*, at the Brooklyn Navy Yard, of which there were eight cases, with three deaths. According to the investigation and report of a board of medical officers of the navy, "the disease seems to have originated from the ballast of the bark *Juanita Clar*, which left Havana May 1. This ballast, quarry clippings and sand, was deposited on the dock on either side of the *Vermont*, and about one hundred yards distant from her.

On this report, the ballast was promptly disinfected and covered over with fresh earth, after which there was not another case.[37]

V.—"The chief duty of quarantine officers hereafter will consist in the detection of mild or very mild cases of yellow fever. In a series of twelve cases of experimental yellow fever produced by the bite of *stegomyia fasciata*, we have, elsewhere, pointed out that four, or 33 per cent., were mild or very mild in character, and have indicated the difficulty of making a positive diagnosis of such cases."

We quite agree with Drs. Reed and Carroll, but how is the quarantine officer to diagnose light cases which run their course *en route* in three or four days, without even putting the patient to bed, and which, nevertheless, we consider have infected the vessel?

The Louisiana State Board of Health has solved that problem by compelling regular vessels with passengers from fruit ports to carry a marine medical inspector whose principal duty as explained above is to take the temperature of all on board in the evening, and to keep a clinical record with urine analyses of the cases with the least fever occurring during the voyage.[38]

VI.—"In discussing the period of incubation of experimental yellow fever, we have shown that in 16.6 per cent. of our cases the period of incubation exceeded the usual quarantine period of five days. If we add Carter's cases to those observed by ourselves, we find that of twenty-four cases the period of incubation exceeded five days in three, or 12.5 per cent."

The number of cases cited is too small to justify such conclusions. If the risk was 12 per cent., I am satisfied that the Louisiana State Board of Health and the other State boards would at once adopt a six days' quarantine. But the following figures, on a much more gigantic scale, prove that five days is long enough. That some cases may exceed five days, we readily admit, but think the cases are rare and the risk very small. We must accept small risk or destroy commerce; but even in accepting them, we believe in surrounding them with all possible safeguards.

The following is the basis of the five days' quarantine of the Louisiana State Board of Health.[39]

In 1897 and 1898, tons of merchandise were shipped from infected localities under the Atlanta regulations to non-infected localities without carrying the disease.[40]

From 1881 to 1895, 2,307 vessels were quarantined at the Mississippi River Quarantine Station. Of these 2,307 vessels, surely 98 per cent. came from tropical ports liable to yellow fever; 65 per cent. came from ports actually infected with yellow fever, 33 per cent. came from ports liable to yellow fever, and 2 per cent. from ports infected with cholera. Of this number quarantined and disinfected, 2,307, yellow fever appeared subsequent to disinfection on three only. No case of fever developed after the third day.[41]

There were passed 1,007 people through Camp Hutton, near New Orleans, in 1897. There was turned back and sent to the Isolation Hospital of the camp one man with yellow fever who was applying for admission. There developed in camp three cases of yellow fever, but one of these was doubtful. The cases developed within forty-eight hours after entry.[42] No case developed in any one leaving the camp (Dr. H. R. Carter).

At the Oakland Park Detention Camp in New Orleans, in 1897, there were in all 237 admissions, all from houses in which yellow fever existed. Five inmates developed yellow fever at the following intervals after admission. One case on the second day, two on the third, one case on the fourth, and one case on the fifth. None infected any of the attendants, nor any of the inmates of the camp.[43]

There were passed through Camp Fontainebleau, in 1898, from McHenry, eighty-four people, and from other points along the coast, 323. There was no case of yellow fever in the camp in 1898.[44]

The experience of the Mississippi River Quarantine Station and of the Detention Camps is that cases of yellow fever develop within five days after disinfection.

In 1898 there were sent 500 negroes to Camp Haralson from Oxford, Miss. These negroes came from all sections of the town, many of them from infected houses. No disinfection. Eight cases of yellow fever developed in camp. None after five days in camp. To another camp I sent fifty whites. No disinfection. In this camp three cases developed. None after five days away from Oxford.[45]

It may be said that some of the cases were infected many days before being removed, but this is an assertion without proofs which can be refuted in a like manner by an assertion without proofs.

For protection and for quarantine purposes, it suffices to show that no case developed after five days from the last exposure.

VII. In conclusion, Drs. Reed and Carroll make the following appeal:

"A most important part will have been accomplished if we can persuade the sanitary authorities of our sister Republic Mexico, and of the Central and South American States, to join us in the adoption of more enlightened methods for the suppression of this widely prevalent epidemic."

This is the keystone to the whole fortress of protection. Let these ports destroy all possible causes of yellow fever, and let them disinfect thoroughly before departure all vessels going to ports liable to yellow fever, or going to Northern ports which may transmit it to Southern territory, and we will be safe enough to alter our quarantine regulations.

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Case of Symptomatic Epilepsy, Circumcision, and Complete Recovery.—Knox Bacon reports the case of a child of nine years, who gave a history of good health until March, 1901, when he began to have slight seizures, affecting principally the muscles of the left side of the body, and as the disease continued the entire muscular system was involved. In August, when first examined, he was having from eight to fourteen spasms in twenty-four hours. From the indications, circumcision was deemed advisable, and was performed September 1st. For twelve days following the seizures were as frequent as ever, but after that gradually lessened in number and severity. The child improved in weight and in general health and disposition.—*St. Paul Medical Journal.*

NEPHRECTOMY—A CLINICAL STUDY OF FOUR CASES.*

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Among a number of cases of surgical disease of the kidney treated by me, I have selected for presentation this evening, principally from a clinical standpoint, a typical and interesting case of each of the four chief varieties, namely: (1) Calculus and pyonephritis; (2) Tuberculosis; (3) New growth; (4) Suppuration.

Before reciting the history of these cases, I wish to say a word in reference to the clinical examination of the kidney.

The methods of examination of the kidney for disease requiring surgical treatment are inspection, palpation, and percussion, by means of which we ascertain the size, mobility, contour, and consistency of the kidney, and differentiate between a tumor of the kidney and that of other organs of the abdominal cavity.

Of the more absolute means of examination, the most important are catheterization of the ureters, for the purpose of collecting, separately, the urine of both kidneys, and of testing the patency of the ureter and renal pelvis, and cystoscopy, which demonstrates the condition of the mucosa of the bladder and the ureteral orifices. This is performed by means of the cystoscope of Nitze, or its modifications, in the male, or that of Nitze or Kelly in the female. Catheterization of the ureters is not always readily accomplished, and at times is inadvisable, because of the possibility of carrying infection from the bladder up into the ureters. In that case, the urine from the right and left ureters can be collected separately and at the same time, by means of Harris' segregator. My personal experience with this instrument, especially in the female, has been very satisfactory.

The *x*-rays have been used with success in a number of cases of renal calculus, but as a rule this method is not absolutely reliable.

The freezing test, or cryoscopy, is a test of the function of the kidney, and not of its structure; that is to say, that an organic or structural lesion of the kidney will not be detected by this test; but if part of the kidney be destroyed, as a result of some surgical disease, cryoscopy will determine if the remaining portion be functionating normally or not. It consists in comparing the freezing point of the blood or urine, in a given case, with the freezing point of the normal blood or urine, and is based on (1) Rault's Law, which is, as given in Remsen's chemistry, "One molecule of any compound, when dissolved in one hundred molecules of a liquid, lowers the freezing point of that liquid by an amount which is nearly constant"; and on (2) Korany's theory of molecular exchange in the kidney tubules. The freezing point of the normal blood is 0.36° C. below that of distilled water; if the freezing point of the blood is lowered to 0.50° C. or below that, there is an impairment in the functionating power of the kidney. The freezing point of the urine is less reliable as a test, but when below 0.9° C. renal insufficiency is indicated.

When the methylene-blue test is used, the permeability of the pelvis and the ureter is ascertained by the time it takes for the appearance of the blue color in the urine, after the introduction of the methylene blue into the system, and the functionating capacity of the kidneys is estimated by the time required in the elimination of a given quantity of the methylene blue. By what is known as the florrizin test, the functionating activity of the kidneys is determined by the rapidity of the appearance of glycosuria, after the administration of florrizin.

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*Read at a meeting of the Eastern Medical Society, held November 9, 1901.

Of the utmost importance is a quantitative and qualitative chemical, as well as a microscopical and bacteriological, examination of the urine collected separately from each kidney; this will not only assist in arriving at a diagnosis of the nature and the seat of the disease, but by means of cryoscopy, and from a comparative estimate of the urea excreted, it will also be possible to determine the functionating capacity of each kidney.

The distinctive changes in the urine, accompanying the diseases mentioned, may be summarized as follows:

In calculus the urine is invariably acid, there are microscopical or macroscopical traces of blood and an excess of crystals of the salts composing the calculus. When there is an accompanying pyonephrosis, the urine is the same in character as that of suppuration.

In tuberculosis there may be no change in the urine in the early stages; in the advanced stages, varying quantities of blood and pus are found. When the process is an ascending one, pus is found long before there are any renal symptoms. Hyaline and granular casts, epithelial cells from the pelvis or tubules, may occasionally be found. The urine is acid early in the disease, but later it may become alkaline; the quantity of urine secreted is increased, especially in the early stages. The amount of urea is much diminished. Tubercle bacilli are not always found; it may require frequently repeated examinations to demonstrate them.

There are very few changes in the urine indicative of new growth of the kidney. Blood, principally microscopically, is found in the later stages; when the pelvis is involved, elements of the growth may appear in the urine. The amount of urine secreted may be increased or diminished. Urea, chlorides, and acid phosphates are, as a rule, diminished.

In suppuration, when the process is in the kidney proper, the urine is acid and purulent, and frequently contains blood; when the pelvis is involved, the urine is acid at first, but later it becomes neutral or alkaline, especially so if the mucosa of the bladder becomes affected. In the early stages the amount of urine secreted is increased; later, when abscesses form, and there is a destruction of successive areas of the kidney, the quantity is diminished. The albumin depends on the amount of blood and pus. Hyaline and granular, and infrequently pus casts are found. In the early stages of suppuration of the pelvis, pelvic epithelial cells are discovered. The amount of urea excreted is diminished.

The principal symptoms common to the varieties of surgical diseases of the kidney under consideration are: (1) Pain; (2) Hæmaturia and pyuria; (3) Tumor; (4) Frequent and painful urination; (5) Polyuria or anuria, and (6) Febrile condition. With tuberculosis and malignant growth, there are also constitutional symptoms, peculiar to these diseases. The differential points in reference to these symptoms are as follows:

Pain.—In calculus, in addition to the renal colic due to the passage of a stone into the ureters, there is pain due to the presence of the stone, which radiates into the pelvis, is paroxysmal in character, and is increased on exercise. In tuberculosis, pain is present as a rule, but is very slight. In new growth it is generally severe and radiates in all directions, and is not influenced by position. In suppuration of the kidney, pain is always present in a variable degree.

Hæmaturia.—In calculus it is not profuse, but microscopically is always present; it is usually coincident with attacks of pain. In tuberculosis, new growth, and suppuration it is occasionally present. Pyuria with acid reaction is found in pyelonephritis due to calculus, in tuberculosis, and in suppuration. Frequent and painful urination is always present in tuberculosis (in fact, at times it is the first symptom), and occasionally in calculus and suppuration. Polyuria is especially noted in tuberculosis. Anuria is due to an obstructing calculus.

Temperature.—In calculous pyelonephritis there is a slight elevation of temperature; in tuberculosis a characteristic evening rise, and in suppuration a continuous or intermittent high temperature.

CASE I.—Calculous Pyelonephritis.—S. E., eighteen years old, Hungarian, single, domestic. Family history, negative.

Menstrual History.—She began to menstruate when thirteen years old, four-weekly in type, moderate in amount, and painless. One year ago, she ceased menstruating for an entire year, but is again menstruating regularly.

Previous History.—She has always been in a delicate state of health.

Present History.—Five years ago she began to experience some discomfort in her left lumbar region. At times the discomfort would become quite aggravated and would be accompanied by vomiting, which lasted for a day or so. These attacks would recur at intervals of weeks or months; between the attacks, however, she was quite well. Two weeks prior to her admission, a rapidly growing tumor made its appearance in the left lumbar region, which was very painful and compelled her to take to bed.

On admission to Beth Israel Hospital, June 21, 1901, the patient looked very ill and complained of severe pressure pains in the left side; the cheeks were flushed and there was slight œdema of the eyelids; tongue was coated, but moist; heart, lungs, spleen, and liver were normal. Temperature 100°, pulse 84, respirations 24.

Inspection revealed a marked bulging of the left abdomen; on palpation a somewhat tender and fluctuating tumor was felt, occupying the greater part of the left side of the abdomen, and extending from the free border of the left ribs down to a point about two inches below the umbilicus, and reaching to the right of the median line. The tumor was somewhat irregular in form, and the center was the most fluctuating part. The overlying skin was normal.

The urine was turbid, acid, and free from sugar. Microscopically, a few blood cells and many leucocytes were found. Quantity secreted was very much diminished, but amount of urea excreted was normal.

June 24, three days after admission, patient began all of a sudden to pass large quantities of turbid, foul, purulent urine (48 ounces in four hours). This was followed by a great relief from the pain and tension in the lumbar region, and the tumor on the left side became simultaneously much reduced in size. Microscopically, the urine showed innumerable pus cells and round epithelial cells from the kidney.

Having been out of town, I saw the patient for the first time on that day, and diagnosed the case as one of pyelonephrosis. Next day, June 25, under ether anæsthesia, a transverse incision was made in the left lumbar region, and the kidney exposed. The kidney proper was found to be small, soft, and flattened out like the head of a mushroom, the pelvis, however, was enormously distended. An incision into it evacuated a considerable amount of purulent fluid. On exploring the pelvis of the kidney, no stone was found, but its walls, and that of the ureter, were very much thickened and intimately adherent to the neighboring viscera. its cavity extended on the inner side to the umbilicus, above to the free border of the ribs, and below to the iliac fossa.

Taking into consideration the extensive inflammatory process and the disorganized condition of the kidney, I decided that a nephrectomy would give the best ultimate result. As it was impossible to remove the kidney and its pelvis *en masse*, the kidney was first removed after having tied the renal vessels, then the walls of the pelvis of the kidney were separated from the adherent viscera, ligated in sections, and cut away. All bleeding was checked by compresses. The cavity, which was very large and extended down into the pelvis, was packed with gauze and dressed from time to time.

On the afternoon of that same day, the house surgeon, Dr. Rabinovitz, was summoned because the patient complained of some obstruction in the urethra, and extracted a mulberry calculus which he found protruding from the urinary meatus.

June 30. The amount of urine, secreted since the operation, was on an average of 30 ounces daily. The last examination showed it to be clear, acid in reaction, of 1,024 specific gravity, with a slight trace of albumin; microscopically, a few pus cells, and a few bladder and pelvic cells were found.

August 14. She was discharged well. Temperature, 98.6°; pulse, 90; respirations, 24, with a sinus of about five inches in depth.

Note.—November 15. The sinus has since healed completely.

Microscopical examination of a section of the kidney showed an interstitial nephritis.

In this case the presence for so long a time of the calculus in the pelvis of the kidney, and its interference with the outflow of the urine, by its action as a ball valve, has resulted in the enormous distention, inflammation, and hypertrophy of the pelvis, and in the degeneration of the kidney.

It conclusively proves the necessity of an early operation for calculus when the diagnosis is established.

Case II.—Tuberculosis of Kidney. L. N., thirty-three years old, housewife. Mother died of carcinoma of breast; father is alive and well. She began to menstruate when fourteen years old, four-weekly in type, moderate in amount, and painless. Married at the age of eighteen, and gave birth to three children; the first child one year after marriage, the last one ten years ago.

During her last confinement she was very sick, and about eight weeks later was operated on, her appendix and some tumor having been removed. Since the operation, excepting for sciatic pains, from which she has been suffering from time to time, she felt quite well up to one year ago.

About eighteen months ago, she began to suffer from frequent and painful urination, the pain being especially marked toward the end of urination. These symptoms have continued with varying intensity until the present time. Almost constant treatment for these symptoms afforded no relief. For the last year she suffered from headache, backache, and pains in the right lumbar region, radiating toward the pelvis. For some weeks before her admission, all the above symptoms became very much aggravated so that she had to take to bed.

On admission to Beth Israel Hospital, January 13, 1901, patient was fairly nourished, tongue was somewhat coated, but moist. On auscultation there was an occasional skipping of a heart beat, but no murmurs. Lungs, spleen, and liver were normal. The right kidney was felt to be movable and slightly tender on pressure. Temperature, 98°; pulse, 80; respirations, 22.

Urine was straw-colored and turbid, acid in reaction, and contained a slight trace of albumin; microscopically, an abundance of pus cells and a number of hyaline casts were found.

January 16. The urine was very turbid and acid, and there was a moderate trace of albumin; microscopically, innumerable pus cells, many hyaline casts, a few pelvic cells and kidney cells. No tubercle bacilli.

January 26. Under chloroform anæsthesia, the usual lumbar incision was made, and the kidney thoroughly palpated and explored. As nothing abnormal was found, nephropexy was performed.

January 31. Urine was straw-colored, turbid, about 20 per cent. of albumin by bulk, acid; microscopically, many pus cells, a few pelvic and kidney cells, and some hyaline casts; urea normal in amount.

February 7. The urine was less turbid and the number of pus cells much less than in any of the previous examinations.

February 22. The urine again became turbid, albumin about 15 per cent. by bulk, urea normal in amount; pus cells in abundance, kidney cells, and a few tubercle bacilli were found for the first time.

March 1. A cystoscopic examination, by means of Kelly's cystoscope, was made under spinal anæsthesia, and this revealed the mucous membrane to be greatly thickened, corrugated, and congested, and some of the folds were bathed with pus.

March 15. The albumin in the urine began to increase; quantity of urine secreted and amount of urea was normal.

March 29. Since February 21 repeated examinations were made for tubercle bacilli, but none were found.

March 30. For the last four days, patient developed a dry, hacking cough, with evening temperature ranging from 103° to 104°, pulse 130, respirations 36; accompanied by night sweats and headaches. Mucous and sibilant râles and sonorous breathing were heard over both apices, and below the left scapula there was distinct bronchial breathing.

From the time of her admission, she had a daily rise of temperature, occasionally it would reach 105°; pulse was always rapid, and at times very feeble and irregular, and the general condition of the patient was gradually growing worse. The kidney was slightly increasing in size. The urine continued to be cloudy, and contained pus and kidney elements.

After having refused the suggestion previously, the patient finally consented to have a nephrectomy done. This was performed on May 28.

Macroscopical examination of the excised kidney showed the presence of many cysts of various sizes, the largest being that of a hazel nut, situated mainly near the cortex, and some of which were filled with cheesy purulent material. Microscopical examination showed these deposits to be tubercular.

The patient passed 20 ounces of urine the first twenty-four hours after the operation, and an average of 34 ounces daily, subsequently. The bladder was irrigated daily.

On July 24, 1901, she was discharged in a fair state of health, with a small sinus in lumbar region.

Temperature, 98°; pulse, 90; respirations, 24.

Note.—November 1. Patient has improved in health and strength, and has gained about twenty pounds. The wound has healed completely. Examination of urine made this week showed no tubercle bacilli, nor any abnormal elements.

Tubercle bacilli may reach the kidney through the circulation or the lymphatics, or by way of the ureters.

I am inclined to believe that the process in this case was an ascending one, judging from the fact that the patient has had a protracted vaginitis, urethritis, and cystitis long before there were any renal symptoms.

It is interesting to note that after frequent and careful examination of the urine during many months, both before and after operation, tubercle bacilli were found but once.

Case III.—Adenoma of Kidney or Struma Suprarenalis.—Mrs. G., fifty-five years old, born in Germany, married thirty-eight years, has had five children. Family history, negative.

Patient was well until about three years ago, when menopause set in. Then she began to have attacks of hæmaturia. These attacks would occur every two or three weeks, at times she would pass about 3 or 4 ounces of blood. This condition lasted for about six months. She began losing in weight and strength.

About two years ago patient was very ill, and was then told (by a physician) that she had a stone in the kidney. The attack lasted three weeks. She was under treatment by various physicians, until she came under my observation.

I saw the patient on May 17, 1901, and found her very much emaciated, extremely anæmic and cachectic, with a weak thready pulse, and in a very poor and enfeebled general condition.

Physical examination: Heart and lungs normal; temperature normal; pulse, 80, and small.

Vaginal examination, negative.

Abdominal muscles were soft and flabby; a sausage-shaped mass could be distinctly felt in the left lumbar region, extending upward to the free border of the ribs and downward to the inguinal region. The lower border was free, round, and distinctly palpable. The tumor was immovable and tender to the touch; it was evidently connected with the left kidney, but at the lower extremity it appeared to be adherent to the descending colon.

Rectal examination revealed nothing.

I diagnosed the case as one of sarcoma of the kidney and advised exploratory nephrotomy. Dr. James P. Tuttle saw the patient at my request and concurred in the diagnosis.

Examination of the urine of each kidney, collected by Harris' segregator, showed the urine from the right kidney to be normal, and that from the left to be turbid, acid, and to contain a faint trace of albumin, and 2.5 per cent. urea; there were epithelium from the bladder and from the pelvis of the kidney, and granular, fatty, and hyaline casts.

The amount of secretion was about three times as large from the right as from the left. Cystoscopic examination by Kelly's instruments showed bladder mucosa to be normal.

I operated on the patient at her home on May 23, 1901, under chloroform anæsthesia, assisted by Drs. Tuttle, Luckett, and Goodman.

A transverse lumbar incision was made, the kidney was exposed and found to be very much enlarged, the capsule was considerably thickened, congested, and adherent. The lower pole of the kidney was occupied by a large tumor, which extended downward toward the pelvis. The growth was soft, very vascular, and friable, and bled profusely.

Isolation of the kidney and tumor was followed by severe hemorrhage, which could only be checked by compresses held by the assistants.

As the incision, though enlarged, did not permit of the removal of kidney and tumor at the same time, a ligature was placed around the renal vessels, a temporary ligature placed around the lower border of the kidney, and the kidney removed, leaving the tumor *in situ*. This permitted a clearer view of the growth, which was found to be intimately adherent to the descending colon, pushing the latter forward and toward the median line. The tumor was rapidly separated from the colon by blunt dissection and removed, bleeding vessels were ligated, and the profuse parenchymatous bleeding from the wall of the large cavity was checked by tight packing with gauze. The wound was partly closed by means of deep silkworm-gut sutures.

There was little reaction from the operation. For the first twenty-four hours after the operation pulse ranged from 78 to 96; temperature, 99° to 100°; respirations, 26 to 36; urine passed, twenty-five ounces.

May 25. Second day after operation, temperature, 99° to 100°; pulse, 72 to 88; respirations, 26 to 28.

May 26. Temperature, 99° to 99.6°; pulse, 72 to 88; respirations, 26 to 28; urine, twenty-seven ounces.

May 27 to 31. Temperature, pulse, and respirations, normal; urine averaged thirty ounces. Chemical and microscopical examination of urine, negative.

June 1 to 6. Condition same; urine, thirty to fifty ounces daily.

Cavity packed every other day, which gradually filled up, and healed over completely in about six weeks.

October 1. The patient has gained some thirty pounds since the operation. She looks better and is stronger than she has been in years.

Microscopical examination by Dr. F. M. Jeffries proved the growth to be "adenoma of kidney or struma suprarenalis."

Struma suprarenalis is a term given by Grawitz to that form of adenoma which is developed from a supernumerary adrenal inclosed within the capsule of the kidney. The true nature of this variety of tumor is still under discussion; it is considered by some as adenoma, by others as carcinoma, and still by others as sarcoma. While it is true that some authentic cases of struma suprarenalis have proved to be benign, and many have run a malignant course, both in reference to recurrence and metastasis, all observers are agreed that it is impossible to distinguish clinically or microscopically between the benign and malignant forms. The treatment, therefore, in every instance, should be early removal.

Case IV.—Acute Suppuration of Kidney.—E. L., primipara, nineteen years old, married one year, last menstruation nine months ago.

Dr. Louis Friedman was called after she had been in labor thirty hours, with midwife in attendance; he found pulse and temperature normal, and applied forceps under chloroform anæsthesia.

Due to a deformed pelvis (contracted in all diameters), the extraction was difficult; no laceration of perineum, but slight laceration of cervix. Placenta was adherent and was removed. Slight post-partum hemorrhage.

Four hours after delivery, temperature rose to 102° F., pulse 110. The next morning temperature, 100°; pulse, 90. Intrauterine douche, 1-8000 bichloride. Bowels moved with calomel.

Puerperium continued without any rise of temperature or pulse for six days, but it was necessary to catheterize for retention.

On the afternoon of the sixth day, patient complained of pain in right lumbar region. Lumbar muscles were rigid and somewhat tender on pressure. On the evening of that day, temperature was 102°; pulse, 116. Uterus was contracted and not tender on pressure; lochia not fœtid. Five hours later a chill, lasting one hour. Temperature, 104°; pulse, 120. Seventh day, temperature in morning, 105°; pulse, 130; pain, rigidity, and tenderness of right lumbar region were more marked; no palpable tumor present. Temperature in evening, 106°;

pulse, 140. Patient was curetted, some small particles of placental tissues and adherent clots were removed. Morning temperature, eighth day, 104°, pulse, 120. Pain on right side increased. Still retention; urine found to be very ammoniacal, full of pus, blood, and albumin. Temperature in evening, 106°; pulse, 150. Stimulants and enemata of salt solution administered. Pain in right side increased, for the first time dulness on percussion in right lumbar region.

I saw her, in consultation with Drs. Friedman and Lefkovitz, on the morning of October 23, the ninth day after delivery. Her temperature was 104°; pulse, 150, and irregular; respirations, 40. She looked sallow, and the muscles were flabby and skin œdematous. The tongue was moist, and mind perfectly clear. There was absence of delirium, and restlessness and anxious expression. There was only slight prostration. The abdomen was soft and flaccid, and free from any tenderness. There was a distinct sensitive tumor in the right lumbar region. It was immovable, and the lower border was rounded.

Vaginal examination revealed a slight laceration of the cervix. Uterus slightly enlarged, but not sensitive, and containing blood clots. The adnexa and para- and peri-metrium were normal. I made a diagnosis of surgical kidney, in which the attending physicians concurred.

I had the patient transferred to my service at the N. Y. Polyclinic Hospital for immediate operation. Pulse on admission was 148 and very weak; temperature, 104.6°. Under chloroform anæsthesia, the uterus was first curetted, irrigated, and packed, by my associate, Dr. Luckett.

The patient was then placed on the left side, and while she was being transfused with salt solution, a transverse lumbar incision was made. The kidney was exposed; it, as well as the tissue around it, was found to be œdematous. An incision was made into the pelvis, through the cortex of the kidney, and a quantity of bloody fluid evacuated. A gauze drain was introduced into the pelvis.

The temperature dropped after operation to 101°; pulse, though still rapid, was of much better quality; she passed 30 ounces of urine the first twenty-four hours, which was acid in reaction, and contained a large amount of albumin and pus cells.

During the following seven days her temperature ranged between 100° and 103°, and her pulse between 81 and 120. She passed on an average of 30 ounces of urine daily, examination of which on the seventh day proved negative.

The wound in the kidney was dressed every other day, the bladder irrigated with potassium permanganate solution, and high enemata of salt solution given at regular intervals.

On the eighth day after operation, I used the Harris segregator, and drew off the urine from the left kidney, which, on examination, proved normal; no urine could be obtained from the right kidney, nor was there any discharge of urine from the wound.

Her condition for the next week continually improved, temperature and pulse were slightly above normal. As a microscopical examination of a section removed from the kidney showed purulent foci of pus, and streptococci and staphylococci, I decided to remove the kidney, which I did on November 6. The kidney was very much enlarged and œdematous and ecchymotic. There were several small abscesses in the cortex, near the lower border. The wound was closed by means of deep sutures, except for a small drain.

Note.—The patient made an uneventful recovery.

Infection may be communicated to the kidney, either through the circulation or by the lymphatic system, or by an extension upward of an infection from the vagina, urethra, etc. This is evidently a case due to the last named.

The interesting points in this case are: (1) The rapid extension upward to the kidney of the infection from the vagina. (2) The differential diagnosis between acute suppuration of the kidney and puerperal septicæmia. (3) The immediate and remarkable improvement following the incision into the pelvis of the kidney. (4) The comparatively little constitutional disturbance after abscesses had developed in the kidney.

1289 MADISON AVENUE.

Unrecognized Syphilis in General Practice.—L. Dunca Bulkley calls attention to the fact that syphilis is often unrecognized in general practice for the following reasons: (1) Syphilis is certainly not a venereal disease in all cases, and the absence of any history of sexual exposure should never throw one off the guard, when there is reasonable evidence of the existence of the disease. In addition to the large number of instances of innocent marital and hereditary syphilis, there are a certain number of cases of extra-genital chancre, which must always be reckoned on when confronted with possible syphilis. (2) Syphilis is often a very erratic disease and it is sometimes difficult to get a satisfactorily corroborative history. Not only may previous symptoms have been prevented or held in check by treatment, but even if left to themselves some of the early manifestations may be very slight and escape notice, yet be followed by serious lesions. This is particularly the case in women. (3) Many cases of unrecognized syphilis have very severe later symptoms, involving great destruction of tissue and severe lesions of internal organs. This is due to the absence of previous controlling treatment. It has been a common remark that syphilis acquired by means of an extra-genital chancre was apt to be of a very severe character. It is furthermore these cases which are often overlooked. (4) Syphilis is such an imitator of other diseases that its presence may often be suspected when they present unusual or peculiar features. In such cases, careful study and analysis will often serve to determine the true nature of the trouble, but it may be difficult to obtain a perfectly satisfactory corroborative history. In many instances of late syphilis from innocent infection the sufferers do not at all suspect the nature of their disease. (5) As many of the late, often unrecognized, lesions of syphilis are the result of imperfectly treated early syphilis, it is desirable that the general profession and the laity be thoroughly convinced of the necessity of careful and prolonged treatment to cure the disease. Too often syphilis is treated in a superficial and hasty manner, which is neglected as soon as the symptoms disappear. According to all modern experience and opinion, this is wrong, and physicians should see to it that patients receive proper treatment for at least two years, in the manner now accepted and fully described in writings on the subject.—*International Medical Magazine.*

The Agglutinating Power of the Serum in Bubonic Plague.—G. Polverini found that the agglutinating reaction of the serum is very marked in severe cases. In light ones it can be demonstrated only by the most delicate tests requiring long practice to be successfully performed. Even in severe cases it is not to be found in the first ten days of the disease. Plague being of easy diagnosis in marked cases, it is evident that this agglutinating property of the serum is of little assistance to the physician. It is of use in the diagnosis of diseases with a long course, such as typhoid or Malta fever, which may be confounded with other diseases, and in which this specific germ is not readily found, but of little value when, as in bubonic plague, the course is rapid, the symptoms well marked, and the specific germ easily found.—*Rivista Critica di Clinica Medica.*

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IMPROVING THE HUMAN BREED.

To improve the human race, mentally and physically, has been the aim of philosophers at intermittent periods from time immemorial. During the past few years the matter has been again brought forward with much persistence, and various schemes —mostly impossible—have been suggested to attain this object.

The ancient Greeks would seem to have most nearly solved the problem, but as their system was based upon the principle of the survival of the fittest, a reversion to so cold-blooded a method would hardly be in keeping with the humanitarian spirit of the present age.

Laws regulating marriage are in favor with many and are in force to a limited extent in a few States of this country. The close confining of criminals, and even their asexualization, are projects which have received consideration at the hands of some earnest anthropologists.

No plan as yet advanced but presents difficulties in the way of realization apparently insuperable.

Sir Francis Galton recently delivered the second Huxley lecture of the year at the British Anthropological Institute, and took as his subject the possible improvement of the human breed under the existing conditions of law and sentiment.

Dr. Galton in part said: "The possibility of improving the race of a nation depends on the power of increasing the productivity of the best stock. This is far more important than that of repressing the productivity of the worst. They both raise the average, the latter by reducing the undesirables, the former by increasing those who will become the lights of the nation. It is, therefore, all important to prove that favor to selected individuals who might so increase their productivity as to warrant the expenditure in money and care that would be necessitated. An enthusiasm to improve the race would probably express itself by granting diplomas to a select class of young men and women, by encouraging their intermarriages, by hastening the time of marriage of women of that high class, and by provision for rearing children healthily. The means that might be employed to compass these ends are dowries, especially for those to whom moderate sums are important, assured help in emergencies during the early years of married life, healthy homes, the pressure of public opinion, honors, and, above all, the introduction of motives of religious or quasi-religious character.

Dr. Galton dwells with insistence upon religious enthusiasm as a spur to improve the race, and rightly says, so noble is its aim that it might well give rise to the sense of a religious obligation.

Nevertheless, it is to be feared that the religion or cult of physical improvement will not quite prove a stimulus sufficiently strong to induce persons to marry those best suited to them.

The fact is undoubted that many most fitting marriages are hindered from prudential reasons; but this is only one of the numerous disadvantages which civilization imposes on the race.

Dr. Galton is of the opinion that it would be possible to alter the conditions of life, so that the most prudent course would be for such persons to marry at an early age.

If this change in the existing order of affairs could be brought about, it would be a long step in the right direction; but it is a question whether stirpiculture applied to the human race could be successfully carried out as things are at present.

Physical and mental improvement is greatly needed, and the race would benefit greatly if practical methods tending to this end were devised.

Almost all the suggestions advanced have been visionary and impracticable.

The inculcation by example, precept, and especially by education of the gospel of health and cleanliness, the repression as far as is possible of criminality, vice, and drunkenness, are the means at hand whereby the evils of modern life can undoubtedly be considerably lessened.

Perhaps in measures of this nature lies the mental, physical, and moral redemption of the race rather than in well-meant but utopian schemes, which offend the intelligence of the people at large and are repugnant to their ideas of freedom.

CANCER PARASITES AND CELLULAR INCLUSIONS.

ONE of the salient questions in the controversy on the etiology of cancer is the confusion of degenerated cellular elements and cellular inclusions with parasites, and *vice versa*. A recent article from the pen of Sanfelice (*Riforma Medica*, October 12, 1901), who, with Leopold and Plimmer, was instrumental in placing certain blastomycetes on the list of possible parasitic causes of cancer, deals at length with the interpretation of such atypical cellular forms. In defense of the blastomycete which he has described as the cause of cancer, the learned Italian is led to say that all the recent investigators who have denied the validity of the claims of the Plimmer-Sanfelice parasite have mistaken cellular inclusions for blastomycetes, and that therefore the experiments which they have recorded to disprove the specific nature of the blastomycete aforesaid cannot be considered seriously.

Nichols of Boston ("First Annual Report of the Cancer Committee," Boston, 1900) found the Plimmer-Sanfelice blastomycete in thirteen cases of cancer of the breast out of a total number of sixteen cases. He did not find these organisms in sarcomata, and he was unable to prepare cultures of the parasites, but on injection of blastomycetes, furnished by Plimmer and Sanfelice themselves, into animals, he found that the parasites which appear in the tissues of the inoculated animals differed in appearance from those described by the discoverers of the parasite. He therefore denied that blastomycetes could cause cancer, and attributed the positive results obtained by Sanfelice to mere coincidence. To this Sanfelice replies that both Plimmer (*Practitioner*, April, 1899) and Leopold (*Archiv für Gynäkologie*, Vol. 61, 1900) obtained positive results on inoculation, *i.e.* found that epithelial tumors were produced in the animals inoculated with blastomycetes. Sanfelice concludes that Nichols must have mistaken cellular degenerations in the tumors examined for parasites—an error which is clearly shown, to his mind, by the illustration furnished by Nichols.

Borrel (*Annales de l'Institut Pasteur*, 1901) concluded that all the parasites described as causes of cancer by Nils Sjobring, Sondakewitch, Foa, Ruffer, Walker, Plimmer, Podwyssotzky, and Sawtchenko are structures derived from the atypical development of one of the elements of cancerous cells—the sarcoplasm. Borrel's ingenious theory, however, is, according to Sanfelice, without any foundation; for, as a matter of fact, all the intracellular structures which Borrel designates in his illustrations as parasitic have nothing in common with the intracellular parasite of cancer. Borrel did not take into consideration the fact that most authors on the subject, in their search for coccidia-like forms, have figured in many places atypical sarcoplasm or cellular inclusions that had nothing parasitic about them, together with true parasites, and in his article considers the pseudo-parasites only.

The recent work of Harvey R. Gaylord of Buffalo (*American Journal of the Medical Sciences*, May, 1900) is next reviewed by Sanfelice.. Gaylord, as is well known, inoculated some liquid obtained from the peritoneal cavity of a patient with adenocarcinoma into a dog and two guinea-pigs. One of these animals showed lesions in the form of epithelial new growths in the lungs. Gaylord examined a number of tumors, and found that they always showed the presence of the parasites described by Plimmer, but asserted that these parasites were not blastomycetes, but protozoa. From Gaylord's article, as well as from his photographs, Sanfelice concludes that the distinguished American pathologist did not see Plimmer's parasites in the tumors examined, but mistook for parasites certain cellular degenerations. The identity of Plimmer-Sanfelice parasites with blastomycetes is now an established fact, and according to Sanfelice, Gaylord's hypothesis that these structures are protozoa is merely based upon their resemblance to the parasites of vaccine injected into the cornea of rabbits. The latter organisms were, however, only provisionally placed in the class of protozoa by Garnieri, and their exact zoologic status has not as yet been determined.

According to Sanfelice, certain cellular degenerations are very easily mistaken for cancer parasites, and special methods of fixation and staining are required to differentiate these cellular deformities from blastomycetes.

The careful and authoritative work of Sanfelice should command the attention of all who are interested in the cancer question, and yet it is difficult to believe at first thought that such authorities as Nichols, Borrel, and Gaylord actually mistook cellular inclusions for parasites, and published results based upon the assumption that they were dealing with the Plimmer-Sanfelice blastomycete. The charge is a grave one, and demands refutation.

MILK AND THE TUBERCLE BACILLUS.

The milk question in all cities is a most important one, and it has been brought somewhat unpleasantly to the notice of the inhabitants of New York by the recent report of the milk commission. The facts which have come to light by means of the investigations of the commission have naturally aroused feelings of distrust as to the healthfulness of milk as a diet for young children.

The situation in this respect has not been improved by the declarations made by some physicians that pasteurized milk has a tendency to produce scurvy.

The assertion is now made that not only is pasteurization an uncertain safeguard against infection, but that sterilizing milk by boiling is frequently an ineffective process.

The Bristol *Medical and Chirurgical Journal* says: "It is now commonly understood that milk can be deprived of danger from all kinds of germs by raising it to the temperature known to be fatal to these germs. Less than the boiling temperature suffices for this purpose, and hence the custom is growing of submitting the milk to pasteurization. This, however, has proved itself to be beset with fallacies, inasmuch as many cases of scarlet fever have recently been traced to milk which was called pasteurized."

The London *Hospital*, January 18, calls attention to the temperature necessary to render the harmful germs in milk inocuous, and says: "The exact temperature to which milk must be raised in order to destroy tubercle bacilli which may be present has always been a disputed point. Bang stated that 85° C. was sufficient. Foster, 70° C. for 10 minutes; de Man, 80° C. for four minutes; while Gaultier maintained that the tubercle bacillus could in this medium resist a temperature of 85° C. for six minutes. The milk from cows with advanced tuberculosis of the udder is more alkaline than that of healthy cows, or those only lightly infected. Tubercle bacilli, like other microorganisms, have greater powers of resistance when growing in an alkaline medium, and consequently in a heavily infected alkaline sample a temperature of 80° C. maintained for ten minutes may be insufficient to kill the tubercles present.

In a commercial pasteurizer, Farrington and Russell found milk heavily laden with tubercle bacilli, and kept for five minutes at a temperature of 140° F., was still infective, but inocuous, if the time was prolonged to ten minutes. For safety a full twenty minutes should be allowed, the vessel being closed to prevent the formation of a skin upon the surface of the milk.

The dicta of the above observers serve to emphasize the need of procuring milk in the first instance as free from contamination as possible.

Boiling and pasteurizing milk certainly do not add to its nutritive qualities, necessary as these processes may at times be, and the chief efforts of the philanthropists and sanitarians might be directed with advantage to insuring a supply of pure milk.

It might seem that, if the recommendations of the milk commission be faithfully carried out, such a result would eventuate.

A CAUSE FOR AMERICAN CATARRH.

It is a well-known fact that modern changes of temperature induce catarrhal affections, and it is also evident that the best prevention of a "cold" is a ready adaptation to the varying conditions of an uncertain climate. The latter implies a certain resisting quality of the respiratory mucous membranes which must be necessarily developed along rational lines. The hardening processes thus become questions of vitality, habit, and environment.

The old Indian explained his immunity against low temperature by explaining that he was "all face." It was with him the habit of exposure to inclemencies and its reactive protecting tendency. The other extreme is seen in the coddling process which our modern methods of civilization encourage. "When houses were made of willow, the men were made of oak." Our superheated houses reverse these old-time conditions.

The dry-hot air of the modern dwelling is undoubtedly the most prolific of all the predisposing causes of catarrhal troubles. The mucous membranes are thus placed in the worst possible condition for resisting the impression of the outside atmosphere. Their natural protective secretions are not only decreased, but the blood supply of the air passages becomes relatively superabundant, congested, and sluggish, and the beginning of the end is evident enough.

Persons who are luckily unaccustomed to these high temperatures often experience a sense of oppression from the same cause. It is the protest of healthy resistance against artificial enfeeblement. Foreigners say with truth that Americans literally bake themselves in their houses, and there is in this connection also much reason for their opinion as to the cause of the American catarrh.

TIME REQUIRED TO TREAT SUCCESSFULLY CONSUMPTIVE CASES IN SANATORIUMS.

In the sanatorium treatment of consumption, many points must be taken into consideration.

Usually, when a State or municipality erects buildings in which to treat and care for needy persons suffering from disease, an undue portion of the sum appropriated to the purpose is devoted to the construction of magnificent edifices.

For example, the State Hospitals of New York are palatial in conception and ornate to a degree. This is very well in its way, but it suggests the question as to whether it would not be wiser to expend less money on the buildings themselves, and more on the patients.

With regard to sanatoriums for pulmonary tuberculosis, isolated buildings of small size and of modest construction will meet the exigencies of the situation far better than splendid specimens of the architect's ability and of the builder's capacity.

Another point which is deserving of consideration is the duration of stay in a sanatorium necessary to effect decided improvement in health.

The *Lancet*, December 7, ult., discusses this matter and says: "Naturally, the earlier the stage of the disease at the time of admission, the shorter will be the period of residence necessary. Among the working classes, unfortunately, the seeming necessity for pursuing employment as long as possible militates against their receiving institutional treatment before the disease has made considerable inroads. Another fact which calls for as extended a period of treatment as the circumstances of the sanatoriums permit, is that a number of the patients will return to home surroundings which are not ideal in their condition.

"The shortest period of treatment—that is, in a case in which the physical signs give evidence that the disease is in an early stage—will by most sanatorium physicians be fixed at three months."

The difficulty is to be able to tell when persons are so slightly affected as to benefit by a three months' treatment. A working man who is suffering from consumption in the earliest stage is not likely to pay much attention to his condition—even if he is aware of it—but is apt to imagine that he will soon be better and continue to work.

Thus there is no doubt that the large majority of workers with pulmonary tuberculosis will not seek treatment until they are in the intermediate stage, and are more or less compelled to stop work.

Therefore it may be said that a six months' treatment at a sanatorium will be in most cases essential really to benefit the sufferer.

The early recognition of tuberculosis is the main point to be aimed at, but the difficulties in the way of such a diagnosis are many.

If a feasible plan can be devised to overcome these obstacles, the sanatorium treatment of the working and indigent classes will undoubtedly bring about unspeakable benefits to the whole community.

BELLEVUE REFORMS.

The fulminations of the medical and lay press against the conduct of Bellevue and its allied hospitals, at any rate to some extent, has had the desired effect. A few months ago the revised charter provided that the city hospitals should pass from the control of the Charities Department to a board of trustees consisting of seven members.

The new board has been appointed by Mayor Low, and on Saturday entered upon its duties. The trustees take under their management Bellevue, Harlem, Gouverneur and Fordham hospitals, but the Morgue remains under the supervision of the Charities Department.

When a patient dies in any one of the above hospitals, the body is removed to the Morgue, and consequently is in the charge of the Charities Department.

Many changes will be introduced in the methods of management now prevailing in the city institutions, and the insane pavilion of Bellevue, it is said, will receive marked attention at the hands of the recently appointed officials.

Dr. Flavius Packer, the first assistant resident physician of the Matteawan State Hospital for Criminal Insane, will take charge of the Bellevue Insane Pavilion. Dr. Packer will have as assistant Dr. Gregory, of the Long Island State Hospital. Under Dr. Packer's management, Dr. Brennan said, the insane pavilion at Bellevue would practically be a temporary insane asylum.

The announcement was likewise made that the board of trustees had designated committees of two, who would visit the hospitals once a week at least, and that a plan had been arranged whereby one of the members of the board would always be in attendance at Bellevue.

It is also reported that the trustees have decided to retain Dr. George T. Stewart as superintendent of Bellevue, as well as his assistant, Michael J. Rickard.

The trustees intend to provide better paid help for Bellevue and thoroughly to reform the alcoholic ward.

The saying that "new brooms sweep clean" has a rare opportunity of being put into practice to the good of every one concerned in the city hospitals of New York.

When Bellevue is rebuilt and its system of working remodeled upon modern, intelligent, and scientific lines, the chief municipal hospital of New York will be a credit rather than as heretofore a somewhat doubtful blessing to the largest and richest city of this continent.

Cats and Disease.

That animals and birds may spread disease among human beings has long been conjectured, although no absolutely positive proof in support of the view has as yet been forthcoming.

The nearest approach to conclusive evidence on this point has been the intimate connection between the occurrence of bubonic plague among men and rats. It is thought that the fact of plague-infected rats, being always present in those localities in which the malady has attacked the human race, must be something more than a coincidence. How else to explain the widespread dissemination of plague in countries far distant from the seat of the original outbreak!

In the case of tuberculosis, again, diseased cattle are a probable cause of spreading infection. Parrots have been suspected of communicating to the human species a certain disease, while the insect world is known to be responsible for conveying to man various maladies.

Some time ago, the theory was mooted that the domestic cat might be an infective agent; but little notice was taken of this aspersion on the fair fame of the universal home pet. However, the matter has again cropped up, and in the *Sun*, February 2 it is stated that an epidemic of diphtheria which prevailed recently in Knowlton, Canada, has been traced to cats.

Suspicion of the cats as a means of spreading the disease having been aroused, the matter was looked into, and it was found that nearly all these animals were suffering from sore throats. Short shrift was then made of the cats, the whole colony in that particular district being made away with, root and branch.

With the extermination of the cats, it is declared that the epidemic of diphtheria quickly subsided.

The account proceeds to state that the spread of the disease was found to be much more far-reaching than at first supposed, and that foxes which have a special predilection for the flesh of cats, were discovered dead in large numbers in the vicinity of Knowlton, doubtless having regaled themselves on the sick cats, which, after the manner of their kind, had crawled to the woods to die in solitude.

Perhaps the foregoing version of the epidemic at Knowlton may owe some of its sensational features to the imaginative powers of the journalist, but at the same time it is pervaded by a singular plausibility.

There would seem to be no inherent reason why an infectious malady, such as diphtheria, if contracted by cats, should not be by them communicated to human beings.

Nevertheless, it might be well first to find out whether cats are subject to diphtheria, and if so, whether the disease is identical with human diphtheria.

As to Gynecological Operations Before Medical Classes.

The action of the warden of Cook County Hospital in Chicago in refusing to permit operation on a woman in the clinical amphitheater on the ground of protecting her and similar patients from indecent exposure before medical classes is quite worthy of a lay-political official unable to attribute to others higher conceptions of modesty than his own. If views like his prevailed, many legitimate opportunities for clinical instruction would be removed, and thereby the means for alleviating disease and preventing death restricted. Medical men are, as a rule, not less considerate than others of the rights and privileges of their fellows.

Another French Scientist Honored.

A few weeks ago Berthelot received distinguished recognition at the hands of his countrymen of his life-long service to science. Now another somewhat less eminent worker in the same field has been honored by his associates and admirers.

In the Medical Amphitheatre of the Collège de France on Sunday morning, January 29, there assembled leading Frenchmen representing every branch of literature, medicine, art, and politics, to do homage to Etienne Jules Marey, professor of the natural history of organized bodies and director of the physiological experiment station at the Parc des Princes.

The special reason for this celebration was the completion of Professor Marey's fifty years of university work.

Although Marey's original researches in animal physiology do not compare with those of his illustrious contemporaries Pasteur and Berthelot, nevertheless they have given an impetus to many arts and sciences, and have helped the progress of modern medicine.

The first discoveries linked with his name were the method of observing and recording the movement and rhythm of vital actions—walk, gallop, flight, blood pulsations—as well as the photography of animal movements.

The Paris correspondent of the *Evening Post*, February 1, says that Professor Marey was brought up in an atmosphere of science, as he began as substitute of Flourens, who himself held the same relation to Cuvier.

M. Gaston Paris, director of the Collège de France, in an eloquent speech summed up Marey's achievements in the following well-chosen words: "Your idea of unifying the registration measures of physiological phenomena will render, I do not fear to say, when it is realized, a service of first order, not only to science, but to humanity, for it will aid us effectively to know ourselves better in the working of our physical and psychic life, and so make us abler to direct our destinies and consciously to favor our evolution for the best."

In this country the magnificient contributions of Frenchmen to science, and especially to medical science in the half-century just passed, have hardly been estimated at their full value.

The discoveries and work of the Germans—which have been much more widely heralded—have obscured to some extent the equally valuable benefits to mankind resulting from French scientific research.

It is probable that in the time to come, when men are able to dispassionately review the outstanding events of the medical and scientific world, of the latter half of the twentieth century, a verdict will be given that Pasteur accomplished more for the good of his kind than any other scientist within the same period.

We therefore take the opportunity of tendering to Marey, his worthy follower, our appreciative congratulations.

Tuberculosis in London.—Consumption is worst in the Strand District of London, where the deaths from this disease are 336 in every 100,000 yearly. The rate for Great Britain is 140 per 100,000.

News of the Week.

Smallpox in spreading in many places throughout the country, and in New York City the disease shows no signs of having been got under control by the health authorities. There were more than twice as many deaths from this cause in January as there were in December, and three times as many as there were in November. The Health Commissioner has urged all hotel keepers to see to it that their employees are vaccinated at once, offering to relieve them of all unnecessary trouble and expense if they will issue the order for the employees to submit to vaccination. If they do not consent to this being done, the commissioner warns them that the hotel will be quarantined if any of the people connected with it get smallpox. The post-office clerks and carriers have been vaccinated, and so have most of the children in the schools both public and parochial.

A Swindler of Physicians.—A man has been arrested in Chicago on the charge of having swindled several hundred physicians in Illinois, Iowa, Michigan, Minnesota and Wisconsin out of small sums of money. He is charged with having fraudulently obtained cash subscriptions to a Chicago medical publication, offering the subscription at a reduced price, and then keeping all that was collected.

Typhoid Fever Prevalent in Philadelphia.—The people of Philadelphia are again paying tribute in life for their failure to provide themselves with pure water. Large sums of money are being expended upon a system of filtration, but the progress is slow, and the end appears yet far off. For the week ended February 1, there were reported to the Bureau of Health 201 cases of typhoid fever and 21 deaths, as against 117 cases and 9 deaths for the preceding week. The disease prevails widely throughout the city, and the increased prevalence is attributed to impurity and inadequacy of the water supply. Some sections of the city being said to receive their supply by direct pumpage, the storage capacity of the reservoirs being insufficient for the needs of the people of these sections. There has been a marked increase in the number of cases of typhoid fever since the first of the year, as is shown by the following figures:

	CASES.	DEATHS.
For the week ending January 4......	70	6
" " " 11......	41	8
" " " 18......	81	5
" " " 25......	117	9
" " February 1......	201	21

The number of cases of smallpox (73) and the number of deaths from this disease (13) for the week were smaller than for the preceding week, namely 90 and 19.

There were 83 cases of diphtheria and 16 deaths as compared with 65 cases and 10 deaths, and 65 cases of scarlet fever and 9 deaths, as compared with 72 cases and 3 deaths for the preceding week.

A Pan-American Sanitary Code.—The Pan-American Conference, which has just closed its sessions in Mexico City, on January 28, passed the International Sanitary Convention, though the report had to be remodelled owing to the withdrawal from the committee of the Argentine delegate, who objected to the idea of an international sanitary bureau with headquarters in Washington. The Argentine delegates have persistently voted against any project looking to the creation of a bureau at Washington having authority in international matters.

A Tuberculosis Hospital on Blackwell's Island.—The Commissioner of Charities of this city has ordered the removal of all phthisical patients from Bellevue Hospital to one of the buildings formerly occupied by the Manhattan State Hospital on Blackwell's Island. Consumptive patients in the general wards of the City Hospital will also be removed to this pavilion within a few days. This is a provisional arrangement to relieve the general hospital from the presence of the consumptive patients, and to provide for the latter special care and treatment. The building they will occupy will accommodate about 120 patients. There are two other available buildings with a total accommodation of about 350, but these will require some alterations before they can be ready for occupancy.

The Mortality in New York State in 1901.—The total number of deaths in this State last year was 130,757, making the death rate 18 per thousand population. The mortality was 7,500 in excess of the average of the past five years, but the rate was the same as that of 1900. The infant mortality was unusually low, being 3,500 less than in 1900, and 2,500 less than the average of the past five years. The deaths at seventy years and over were only one-third as many as those under five years in the maritime district; in the rest of the State they exceeded them by 4,300, and constituted 27 per cent. of the total.

The Carnegie Institution.—The Board of Trustees of the Carnegie Institution met in Washington on January 28, received Mr. Carnegie's deed of gift, and elected officers. Dr. Daniel C. Gilman of Baltimore was chosen *President;* Abram S. Hewitt of New York, *Chairman of the Board of Trustees;* Dr. John S. Billings of New York, *Vice-Chairman,* and Dr. Charles D. Walcott, *Secretary.* The deed of gift provides that the income of the $10,000,000 is to be expended in "founding in Washington an institution to co-operate with those now or hereafter established, and, in the broadest and most liberal manner, encourage investigation, research, and discovery, show the application of knowledge to the improvement of mankind, provide such buildings, laboratories, books, and apparatus as may be needed, and afford instruction of an advanced character to students properly qualified to profit thereby." One of the main objects of the institution is to discover "the exceptional man in every department of study, whenever and wherever found, inside or outside of schools," and enable him to make his favorite line of work his life work. Still other objects are to increase the facilities for higher education, to throw open to students the advantages afforded by the Government institutions at Washington, and to insure the prompt publication and distribution of the results of scientific investigations.

Surra Among the Army Mules in the Philippines.—A despatch from Manila states that the fatal and much-dreaded surra of Indian Burmah has invaded the Philippines and is destroying horses and mules with amazing rapidity. The disease was at first mistaken for glanders, but failed to yield to treatment, and puzzled for months the best veterinarians. A bacteriological investigation has now revealed the presence of the specific parasite of surra. The disease affects horses, mules, camels, dogs, and monkeys, and is almost always fatal. In Manila alone the Quartermaster's Department lost 300 horses within four months.

The New Control of Bellevue and Allied Hospitals.—On Saturday, February 1, Commissioner of Charities Folks formally turned over the management of Bellevue and subsidiary city hospitals to the Board of Seven Trustees appointed by Mayor Low on January 20. This was in accordance with the provisions of the revised Charter. The board, as selected by Mr. Low, is as follows: Dr. John W. Brannan, *President;* James K. Paulding, *Secretary,* and Messrs. Myles Tierney, Samuel Sachs, Marcus Stine, Theodore E. Tack, and Howard Townsend. Commissioner Folks will be an advisory member of the board. The first official act of the board was the appointment of Dr.

Flavius Packer to have charge of the insane pavilion at Bellevue. Dr. Packer has for some time been first assistant resident physician at the Manhattan Asylum for the Criminal Insane. The selection was made on the recommendation of Dr. Peterson, President of the State Lunacy Commission. Dr. Packer has appointed Dr. Gregory of the Kings County Asylum as his assistant. Dr. Thomas L. Burckhalter, who heretofore has been connected with the insane pavilion. has been transferred to the Board of Health. The new board has established the rule that each hospital will be visited once a week by one of the seven trustees, and also that a meeting of the full board will be held every Thursday at Bellevue.

A Physician's House Burned.—The house of a physician in Appleton, Wis., was destroyed last week by fire, which was suspected to have been of incendiary origin, there having, of late, been numerous threats against the man. He is said to be a disbeliever in the contagiousness of smallpox, and, in order to prove the correctness of his theory, smeared himself with the secretions from smallpox lesions, and then started on a visit to several towns about his home. Smallpox prevails extensively now in that region, and many of the friends of the sufferers have attributed the epidemic to this doctor's freak experiment.

Medical Society of the District of Columbia.—At a recent meeting of this society the following officers were elected for the present year: *President*, Dr. Samuel S. Adams; *Vice-Presidents*, Drs. J. W. Chappell and A. R. Shands; *Treasurer*, Dr. C. W. Franzoni; *Corresponding Secretary*, Dr. Thomas C. Smith; *Recording Secretary*, Dr. Francis P. Morgan; *Librarian*, Dr. Edwin L. Morgan.

The Health of Chicago.—According to the *Weekly Bulletin of the Chicago Health Department*, physicians in that city are unusually busy and the death rate still declines. It is not meant, however, to flatter the profession unduly by implying that the latter is the result solely of the former. There is a vast amount of sickness in the city, but the prevalent maladies—except scarlet fever—are of a mild type. The 480 deaths from all causes recorded during the week ending January 25, give an annual rate of only 13.73 per thousand of population—a reduction of about 7 per cent. from the rate of the previous week, and of 3.8 per cent. from that of the corresponding week last year. There has been a notable increase in the demands upon the department's laboratories for bacterial examinations since the appeal was made for a more general resort to these means of determining the character of obscure symptoms, especially that of influenza. Fully 60 per cent. of all examinations reveal the presence of the bacillus of this disease, either pure or associated with other germs—chiefly those of pneumonia. But the number of examinations called for is still wholly disproportionate to the prevalence of the disease.

Senate Passes Lunacy Bill.—The State Senate, on Wednesday last, passed the bill abolishing local boards of management for insane hospitals. The Governor will accord a public hearing before taking final action.

A Gift to the Harvard Medical School.—President Eliot of Harvard University recently announced to the medical faculty that Mr. John D. Rockefeller proposed to give $1,000,000 in aid of the medical school, provided other friends of the university would raise a sum of money in the neighborhood of $500,000, to be used by the medical school for land, buildings, or endowments. It was stated that this condition would doubtless be speedily complied with. Since the announcement last June that Mr. J. Pierpont Morgan would erect three of the buildings the plans of the architects have called for two additional laboratory buildings, and a considerable fund is also needed to provide for the increased running expenses of the school.

Association of French-Speaking Physicians of North America.—A committee of French Canadian physicians has been formed for the purpose of organizing a new medical society for the men of French speech in Canada and the United States. It is proposed to hold the first meeting of the society in Quebec in the present year, at which time will also be celebrated the semi-centennial of the establishment of Laval University, the alma mater of most of the present generation of French-Canadian medical men.

Seizure of Stone Baking Powder.—The Health Department of this city recently seized as dangerous to health nearly two tons of baking powder, half a ton of which was on sale at a department store. The stuff was being advertised for sale at four cents a pound. The Health Department got some and analyzed it, and found that it contained between 25 and 30 per cent. of a stone mined in Tennessee, which was ground up very fine. The stone, it was said, was mostly silicate of magnesia.

A Physician's Unfortunate Experience.—Dr. H. A. Hare of Philadelphia, while riding a few days ago in an automobile he was testing, was, by mistake, apprehended for another chauffeur, on account of fast riding. Despite his protestations, Dr. Hare was taken in a patrol wagon to the police station, where he was confined for an hour without being permitted to communicate with his counsel or his family, until released by the intervention of friends who had learned of his misadventure.

Philadelphia Neurological Society.—At a stated meeting, held January 28, Dr. Wm. G. Spiller exhibited "A Case of Paralysis of the Face and the Upper and Lower Extremities on the Right Side, and of the Tongue and Muscles of Mastication on the Left Side." The patient was a colored woman with a history of miscarriages, but none of syphilis, in whom the hemiplegia developed after an apoplectic seizure that had been preceded by drowsiness. It was thought that the alternate character of the symptoms was indicative of multiple lesions. Dr. Spiller exhibited also "A Case of Right Hemiplegia, with Paresis of the Muscles of Mastication upon the Affected Side." In addition to increased knee-jerk and Babinski sign on the paralyzed side, there was a marked contraction of the tendon of the anterior tibial muscle, when, with leg flexed, an attempt was made to flex the thigh on the trunk; also dorsal extension of the great toe, when, in the recumbent posture an attempt was made to elevate the extended lower extremity; and also flexion at the knee-joint, when an attempt was made to arise from the recumbent to the sitting posture without aid.

Dr. Max H. Bochroch exhibited "A Case of Superior Tabes," occurring in a cigarmaker who was compelled to relinquish his work on account of numbness and delayed sensation in the fingers, and which were present also in the lower extremities. In addition there were lancinating pains, girdle sense, and distinct incoördination in the upper extremities, although the station was good. The knee-jerk could not be elicited at all on one side, while on the other it was capricious and often elicitable only on reinforcement. The pupils were small, and failed to respond either to light or in accommodation. Speech and mental activity were slow, the tongue was tremulous, and the possibility of paretic dementia was suggested. Syphilitic infection was denied.

Dr. Chas. S. Potts exhibited "A Case of Progressive Muscular Atrophy (Aran-Duchenne Type), in which the Atrophy Began in the Extensors of the Hands and the Fingers." The patient had been a painter, then a sailor, and, finally, a locomotive engineer. He was compelled to relinquish his occupation on account of the impaired motility in the hands.

Drs. A. P. Francine and D. J. McCarthy exhibited "A Case of Facial Tic, in which Each Contraction is Followed by Complete Paralysis in the Facial and Hypoglossal Distribution on the Same Side." The patient was a colored woman, in whom, following a slight injury of the scalp, a convulsion occurred, whose exact nature, whether hysterical or epileptic, could not be determined. It was thought that the symptoms might be due to a small lesion involving the cerebral cortex.

Dr. F. Savary Pearce exhibited "A Case of Poliomyelitis with Increased Knee-Jerk" in a child presenting no evidence of cerebral disease.

Dr. A. D. Buckley, by invitation, presented a communication entitled "Carcinoma of the Spine with Autopsy."

The following officers were elected for the ensuing year: *President*, Dr. J. K. Mitchell; *Vice-Presidents*, Drs. F. X. Dercum and Jos. Sailer; *Secretary*, Dr. A. A. Eshner; *Treasurer*, Dr. Guy Hinsdale; *Councillors*, Drs. D. J. McCarthy, W. G. Spiller, and W. C. Pickett.

Dr. Thomas H. Manley of this city was recently the defendant in an action for malpractice brought against him by a woman who alleged the unnecessary removal of a joint of the thumb. The case was tried in Part IX. of the New York Supreme Court, and the jury, after only five minutes of deliberation, brought in a unanimous verdict in favor of Dr. Manley. An unpleasant feature of the affair was the fact, brought out at the trial, that the suit was begun on the advice of another physician.

The Establishment of a Missouri State Sanatorium for Consumptives was recently urged by resolution of the Medical Society of the City Hospital Alumni of St. Louis. The preamble states that, while several State governments have recognized the necessity for the better protection of the public against tuberculosis by the establishment of sanatoria, Missouri has as yet done nothing in this direction. The society has therefore taken the initiative in arousing public opinion in favor of the establishment of a State institution of that kind, and has appointed a special committee to agitate the question at society meetings, and in the local and medical press. The special committee consists of Drs. George Homan, *Chairman*; Ludwig Bremer, Louis H. Behrens, Francis Reder, and R. B. H. Gradwohl, *Secretary*.

Obituary Notes—Dr. CHARLES H. BURNETT of Philadelphia died at his home in Bryn Mawr on January 30, at the age of sixty-one years. He was a graduate of the Medical Department of the University of Pennsylvania in the class of 1866. After graduation, he passed a season of study in Europe, devoting special attention to diseases of the eye and ear. His practice was in aural diseases, in which specialty he was justly regarded as a high authority. He edited a cyclopædic treatise on diseases of the ear, nose, and throat, and was the author of a recently published special treatise on diseases of the ear. He was a member of the American Otological Association, of the Philadelphia College of Physicians, and of other special and general societies.

Dr. WM. A. DUDLEY of Petersburg, Va., died of pneumonia on February 1, at the age of seventy-six years. He was a graduate of the Medical Department of the University of Pennsylvania in the class of 1850, and had practised medicine in Petersburg for almost half a century.

Dr. BOWMAN H. SHIVERS of Haddonfield, N. J., died at his home in that place on February 1, at the age of sixty-seven years. He was a graduate of the Medical Department of the University of Pennsylvania in the class of 1858, and later from the Hahnemann Medical College of Philadelphia.

Dr. HENRY RUTGERS BALDWIN, President of the Board of Health of New Brunswick, N. J., died at his home there on February 3, of pneumonia. He was born in New York City on September 18, 1829, and was graduated from Rutgers College in 1845. He then entered upon the study of medicine with Dr. George J. Janeway of New Brunswick, receiving his medical degree from the College of Physicians and Surgeons, New York, in 1853. He began practice in New Brunswick in December, 1855. At the time of his death he was a member of the Board of Managers for the New Jersey Hospital for the Insane, the New Jersey Medical Society, the Middlesex County Medical Society, the New Jersey Microscopical Society, and the medical staff of the Wells Memorial Hospital at New Brunswick. He was in every respect the type of the old-fashioned family practitioner and kept abreast of his work to the last.

Obituary.

JOHN T. METCALFE, M.D.,

THOMASVILLE, GA.

Dr. Metcalfe, who died of old age on January 30, at his home in Thomasville, Ga., was for many years one of New York's most noted physicians. The son of a physician, he was born in Natchez, Miss., on July 10, 1818, and was educated at West Point, where he was graduated in 1838. He was, for a time, Lieutenant in the Artillery Service, but was soon transferred to the Ordnance Department. He resigned from the army in 1840, and began the study of medicine at the Jefferson Medical College, Philadelphia, from which he was graduated in 1844. After graduation he studied in the schools of Dublin, Edinburgh, Vienna, and Paris, and then returned to practise his profession in this city. He was the first of a line of Southerners who have contributed so largely to the medical forum of New York. For many years he was in partnership with Dr. T. G. Thomas; afterward with Dr. William M. Polk, and still later with Dr. J. S. Ward. He was prominent as a teacher and expounder of medicine in college and medical society. He lectured for many years at the College of Physicians and Surgeons, and to the end held the post of emeritus professor of clinical medicine there. He was consulting physician to Roosevelt, Bellevue, St. Luke's and the Woman's hospitals, the Orthopedic Dispensary, and the Hospital for the Relief of the Ruptured and Crippled. He was an active member of many medical societies, among which may be mentioned the New York Medical and Surgical Society, the County Medical Society, the New York Society for the Relief of Widows and Orphans of Medical Men, the New York Pathological Society, the Academy of Medicine, and the Medical Journal Association of the City of New York. He was one of the earliest members of the academy and gave to it his large and valuable library upon his retirement from practice about fifteen years ago. The portrait of him at the academy was presented by Dr. Thomas, his former associate. Since Dr. Metcalfe's retirement a new generation of physicians has grown up to whom he was hardly known, even by name; but to the older men the memory of his charming presence, his witty and brilliant conversational gifts, and his deep learning can never fade.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

PARLIAMENT—SMALLPOX—NURSES FOR THE NAVY—HOSTILITY OF NEWSPAPERS TO THE PROFESSION—EXPERIMENTAL RHEUMATIC ARTHRITIS—RADICAL TREATMENT OF INTESTINAL TUBERCULOSIS.

London, January 17, 1902.

Yesterday the King opened his second Parliament with all the pomp and ceremony of such occasions. Among the measures announced in His Majesty's speech to be brought forward, those of most medical interest are to deal with the London water supply, the sale of intoxicants, and the lunacy laws.

There have been rather fewer cases of smallpox during the last three days, but if we take the numbers for the week, there is no diminution.

The report of the Asylums Board, which I stated was about to appear, deals with the completed cases only, *i. e.* those ending in death or discharge. Of course, at present, the percentages are provisional, but they give just such evidence as might have been expected. The total mortality rate was 14.21 per cent. of vaccinated, 65.08 of doubtful, and 50.52 of unvaccinated cases. Among patients admitted during the year, twenty-one were employed, mostly by local authorities, in disinfecting work, and one of them died; not one of them had been revaccinated since infancy. Sanitary inspectors and others specially exposed had also been admitted. At the smallpox hospitals and in the ambulance service of the board revaccination is a condition of employment. Of 2,198 persons so employed from 1884 to 1900, in which 17,900 cases were admitted, only seventeen contracted the disease, of whom thirteen were not revaccinated until after they had joined the service, and four were workmen who escaped observation. Not one case has occurred during the past year in the new staff of the hospital ships; not one has contracted smallpox in the last eight years, and not one of the staff of these hospitals has ever died from the disease.

The numerical inadequacy of orderlies or male nurses (medical staff corps) in the army has been painfully demonstrated during the war, leading to the engagement of a number of St. John Ambulance men. Profiting by the experience of the war office in regard to the R.A.M.C., the admiralty have been considering the state of their own nursing staff—"the sick-bay men." Inspector-General of Hospitals, Dr. H. C. Woods, has been inquiring into the matter for some time, and the result is that a scheme will probably be shortly promulgated for organizing a reserve of nurses which could be called upon to supplement the sick-bay men during a naval war. Dr. Woods has been prominently associated with the St. John Ambulance Association, but I hope he will not rely altogether on the men to be obtained from it. If the pay and conditions of service are reasonable, he would be able to obtain men completely trained as nurses, such, for instance, as those who have gone through the training under the R.A.M.C.

The average newspaper reporter seems to take special delight in girding at the profession. It does not seem to occur to him that absolute ignorance of matters medical is any disqualification for attempting to elucidate them. The editors of the cheaper papers seem happy to pass any gibe at the doctors, and often display extreme hostility to medical science. Their attitude has been well illustrated in the case of the difficulty at the Macclesfield Infirmary, caused by the appointment of a female house-surgeon concerning which I lately wrote to you. Scores of newspapers opened a campaign against the profession, pretending that the whole difficulty was due to the opposition of the staff to women doctors, supported by a selfish trades-union policy. No protest, no denial, availed. The cry of woman's rights was raised, and at first the lady doctor herself encouraged this, though she must have known better. She must have perceived that the Infirmary had not proper accommodations for both a male and a female house-surgeon, and should have known, too, that there are numerous surgical cases that are more properly intrusted to their own sex. She seems to have realized this, and resigned when the leading lady doctors declined to support her. It is said she will now open practice in the town, to which no one will object; and the *Express* raises a pæan on her triumph, and declares she must have a partner to help her in the work which is waiting for her. Very well, that only affects those concerned. The governors have now conceded to the honorary staff a voice in the selection of the residents, such as is provided in all well-managed hospitals, though one governor withdraws his support in consequence, which looks like preferring his prejudices to his philanthropy.

Another illustration of the ignorance of the press on professional questions is furnished by the *Express*—a very respectable daily—which lately made a violent attack on the Medical Council on account of its attitude on canvassing in connection with medical aid societies—an attack evidently instigated by these societies who have assured us through various organs that they will very soon obtain an act of Parliament to protect them from the council! The paper gibes at the council for ignorance of the English language in applying to offenders the words, "infamous in a professional respect." Surely, the writer of such an article should have known that the phrase of which he makes so much, is dictated by the act of Parliament. As to the judicial decisions of the council being upset, he should also have known that the courts have already decided that there is no appeal from its judgments. The charge of trades-unionism leveled at the council is not only absurd, but in a paper which usually sides with the unions in trade disputes is a little hypocritical. Still, more inexcusable is the pretence that the poor will be deprived of medical assistance, and that the workingman may be driven to accept charitable aid from hospitals, etc. The poor have never failed to find free attendance, and the workingman has never failed to avail himself of hospital relief. The pretence that his independence will be sapped, if he cannot pay a penny a week for medical aid, is too transparent. But, then, this pandering to the workingman by press men is as disinterested as that of the politicians. The one fishes for his dime, the other for his vote.

Drs. F. J. Poynton and Alexander Paine communicated to the Pathological Society, on the 7th, the results of an investigation with a diplococcus from the knee-joint of a man of sixty-seven, who suffered from chronic arthritis, and who died from accidental poisoning. Several joints were involved, the fluid was clear and scanty, the cartilages eroded, the bones eburnated, the synovial membrane thickened. The diplococcus was isolated and grown on blood agar. Injected intravenously into two rabbits, arthritis followed in both without valvulitis or suppuration in the viscera. One, killed on the fifteenth day, showed no changes of cartilages or bones. The other, killed in the tenth week, had arthritis of the right knee, and the specimen (exhibited) showed the changes associated with osteo-arthritis. It seems curious that this mono-arthritis was the result of intravenous, not direct, injection into the joint. This non-suppurative osteo-arthritis had not previously been observed by Drs. Poynton and Paine in animals inoculated with the diplococcus of rheumatic fever. Cultures and sections showing the diplococcus in unincubated and incubated fragments of synovial membrane were demonstrated, as were other specimens.

Dr. A. E. Garrod remarked that more than one disease was included in the term rheumatoid arthritis. The diplococcus had produced an arthritis, but other micro-organisms might do the same. Dr. J. H. Drysdale thought we must not conclude too much from a single experiment. Mr. Shattock asked for more definite history of the patient, as he might have had rheumatic fever, and the organism be a mitigated diplococcus rheumaticus. The cartilage was hardly characteristic, but there was a degree of lipping of the joint. Mr. Spencer asked if gonorrhœal rheumatism could be excluded.

The reply was that fuller history could not be obtained on account of the death from carbolic poisoning, but there was no evidence post mortem of any other disease. Gonorrhœal coccus could be excluded by the difference in form and growth.

The occurrence of malignant tumors in the pelvis originating from suprarenal "rests" was the subject of a paper by Dr. A. Eastwood, who showed a specimen which he had examined, and seemed unique. It was a large tumor attached to the fundus uteri, but separated by a capsule. Its character was determined by a process of exclusion, and observing that these were typical of a suprarenal tumor. Two other specimens of suprarenal "rest" tumors, growing in connection with the kidney, were shown for comparison. Dr. Eastwood remarked on the bearing of these growths to questions as to the internal secretion of the gland, the diagnosis of new growths, and the theories that have been propounded concerning them, particularly criticising Ribbert's displacement theory.

Mr. Targett admitted that the structure of the tumor was typical of one arising from an adrenal "rest." Such growths were to be found in the broad ligament, but were not common. He had only met with them in the still-born fœtus, never in the adult.

Mr. Shattock put little, if any, value on theories of malignant growth. None were more than working hypotheses, and Ribbert's less than most. Referring to Dr. Lack's experiment, he considered the growth which followed only a coincidence, for neither Dr. Lack nor himself had been able to produce a similar result. Lubarsch and others had equally failed by injecting minute fragments of tissue into the veins. Dr. Eastwood, in reply to Mr. Targett, said that German authors asserted that suprarenal rests might often be found in the broad ligament of infants, if minutely examined.

Radical treatment of chronic intestinal tuberculosis is advocated by Mr. Mayo Robson, who read a paper on the subject at the Clinical Society's meeting last week. He related seven cases in which he had operated with one death. In two there were adhesions, but in the others the bowel was free. In one case, colotomy, in another, short-circuiting, secured physiological rest to the diseased part, and answered so well that, when excision involved serious difficulties, or the patient seemed unfit to bear it, he would adopt similar procedures, and then trust to general treatment and hygienic surroundings. Where peritonitis coexisted with the intestinal disease, and exploratory operation had not arrested the tuberculous process, removal of the principal focus had succeeded; so had short-circuiting. Simple abdominal section often seemed to cure tuberculous peritonitis, but the disease was apt to recur after a longer or shorter interval, and Mr. Robson suggested that this was due to the original focus being left to become the starting-point for a fresh diffusion of tubercle in the peritoneal cavity. If so, the original disease should be removed whenever possible, without adding seriously to the risk of the operation.

Mr. Symonds thought operation was mostly undertaken for the relief of obstruction rather than to cure ulceration, but he mentioned a case in which two feet of intestine had been excised, and another in which short-circuiting had been done. He approved of removing the disease whenever possible.

Mr. Watson Cheyne said short-circuiting was sound practice, but it was doubtful whether it was advisable to search for the original focus; if strictly localized, it might be desirable to do so, but not in diffuse peritonitis, on account of the depressed state of the patient.

Mr. Newton Pitt thought tuberculous appendicitis rare, and that most operations were done in view of obstruction.

Mr. Barker agreed that appendix cases were rare. He referred to a case in which cæcum and colon (ascending, transverse, and descending) had been successfully excised for tuberculous ulceration, the patient completely recovering.

Dr. Percy Kidd thought that there was often concomitant disease of the lungs, and the diagnosis of ulceration in the early stage was difficult. Multiple ulcers he had met with in the cæcum more frequently than in the ileum.

Mr. Keetley and Dr. Dalton mentioned cases, and then Mr. Robson, in the course of his reply, said that 5 per cent. of 300 cases of appendicitis on which he had operated proved to be tuberculous.

OUR PARIS LETTER.

(From Our Special Correspondent.)

METHYLENE BLUE IN TONSILLITIS—BACILLI IN THE BLOOD IN TYPHOID FEVER (COURMONT)—THE USE OF ELECTRICITY IN THE TREATMENT OF SPRAINS—ADULTERATION OF MILK IN PARIS.

Paris, January 17, 1892

At a recent meeting of the Medical Society of the Hospitals, Professor Chauffand spoke of a novel form of treatment of Vincent's angina, which is a disease characterized by a fœtid ulceration of the tonsil in the form of a chancre, high fever, and painful swelling of the lymphatic glands. Three applications of perfectly pure methylene blue cured this patient completely. This treatment would seem to be a good method of recognizing this disease and distinguishing it from syphilis.

Recent investigations have shown that Eberth's bacillus is found in the blood in most cases of typhoid fever. Dr. Courmont, who has been examining the blood in typhoid fever, has found it generally before the fifth day. It remains in the blood until the end of the third week. There is no relation between its presence in the blood and the agglutinating power of the serum.

In some cases the sero-reaction may be retarded, though bacilli may be already found in the blood. At least 2 to 4 c.c. of venous blood should be mixed with 5 c.c. of bouillon to produce a culture.

The treatment of sprains has seemed to consist of late in the use of massage, but several authors have been advocating recently in France the use of the electric current. Even massage is not applied in many cases in any but a perfunctory manner. A certain number of English authors have recommended the use of electricity, but without giving special instructions.

Charrier and Planet indicate the treatment that was recommended by Apostoli, and which consisted in faradization with an apparatus having a bobbin with a fine wire, and allowing of very rapid intermissions. The electrodes used are two large tampons covered with chamois skin and made out of coal. The positive pole is generally placed over the internal malleola, while the negative one is moved over the affected surface. The "séance" should last about five to ten minutes. The most remarkable result of this treatment is the well-nigh total disappearance of pain after the electrical application. The patient is able to get up and walk.

The last census taken in France in 1901 has shown that during the last five years there has only been an increase of 444,613 inhabitants. Still this is better than in 1896, when the increase was only 175,027. If, however, the statistics published in other countries are considered, it is seen that France is falling rapidly behind the other nations. Germany increased well-nigh 7,000,000, Austria-Hungary almost 4,000,000, and Great Britain 4,721,000 during the space of ten years, while France only had an increase of 619,000. Another result of the census is to show the steady influx of the country people into the city.

The *Matin*, a Paris daily with a large circulation, has been carrying on a campaign against milk dealers. According to this paper only a small amount of milk is quite pure when it is bought from the retailer, it having been more or less falsified as it passed through the hands of the producer and middleman. There are in reality four intermediaries, which are the producer, the agent who collects the milk and sends it to Paris, the milkman who brings the milk to the shop, and the owner of the shop where it is sold. Milk that cost only nine to eleven centimes or two sous, is sold at eight to twenty in Paris. The *Matin* pretends that some of the middlemen make as much as 10,000 to 20,000 francs a year, and it calls upon its readers to found a league of public health, which will prosecute all dealers who change the quality of the milk. There is a rumor that a large establishment for the sale of milk is soon to be opened in Paris, and this recent campaign of the *Matin* would be really after all only a sort of puff for this.

MEDICAL PRACTICE LAW IN HAWAII.

To the Editor of the Medical Record:

Sir: I see in the Medical Record, No. 1,624, the requisites for license in most of the States. I should like to add our own to the list. As the result of our law the only irregulars here are an old Portuguese, who has been here many years, and a few Chinese who also antedate the law, and certain *Kahunas*, or native practitioners, similar to the Indian Medicine-man. Our population is indeed most heterogeneous, some 60,000 Japanese, 29,000 Chinese, and 22,000 Portuguese. There are several reputable Chinese M.D.'s and a large number of Japanese, all of whom compare fairly with our own men.

The law is stringent, requiring every practitioner to undergo examination before a Board of Three. The examination is a thorough one, and no one is licensed who cannot pass a reputable examination for a degree. The fee, paid to the Board of Health, is $10, and a voucher as to morals is also required.

The law has been in operation four years, and is very satisfactory.

Geo. P. Andrews,
Chairman of the Board of Examiners.

Honolulu, January 4 1902.

THE CHIEF HORROR OF SMALLPOX.

To the Editor of the Medical Record:

Sir: Only yesterday one of the leading daily papers of New York City, the *Herald*, very properly directed attention to the "chief horror of smallpox." It consists not in the disease itself, but in the way the unfortunates who are attacked with it are taken care of, by reason of the laws now governing the Health Department of this city. As soon as a case is recognized as one of smallpox, the patient is transported to North Brothers' Island. If the case is a suspicious one, the patient is taken to the Reception Hospital for Contagious Diseases, until the diagnosis is definitely determined. These rules have been established, and are carried out for the public good, even though it is clear that great mental distress is caused not only to the patient, but also, and in greater measure, to the nearest relatives. Let me ask, is the law as it now exists either right or necessary? I do not believe it is. In the first place, the only persons who contract real smallpox are those who have *not* been successfully vaccinated. Those who have been successfully vaccinated may take varioloid, but they do not take smallpox. They take in reality a very mild and never fatal form of disease. The reason why such persons are isolated is merely because they can give smallpox to those persons who have not been successfully vaccinated. Are the former persons, then, to be made victims of the law because silly, ignorant, incorrigible people will not partake of the sole protection to them from a virulent disease? To my mind, that is not right or just. Again, varioloid is no more contagious than scarlet fever or measles, and is not, in reality, as grave a disease as either. Why, then, not treat it with just the same precautions and under the same conditions that we treat the latter? I see no reason why not. The law of New York City does not at present make it *compulsory* to be vaccinated or revaccinated at stated intervals. In my judgment, the law should be made compulsory, and the sooner the better for all. In Germany, where such a law is compulsory, there is practically no smallpox. The great and urgent importance of this subject prompts me to write this letter.

BEVERLEY ROBINSON, M.D.

42 WEST THIRTY-SEVENTH STREET.

Progress of Medical Science.

The Boston Medical and Surgical Journal, Jan. 30, 1902.

Vaccination and Smallpox.— S. H. Durgin holds that we do not vaccinate enough. To secure full vaccination, a child should not only be vaccinated when very young, but the physician should feel called upon to exhaust all susceptibility to smallpox by repeating the operation until it will no longer take effect. At the age of ten or twelve years this process should be repeated to the same extent. Later in life, on exposure, vaccination should be repeated. The data in Boston furnish evidence that, as a rule, the unvaccinated die, and the vaccinated get well. The author has been unable to satisfy himself whether the occurrence of smallpox among those who have been vaccinated depends upon our carelessness in vaccination, or upon any possible deterioration in the bovine lymph which has been in almost exclusive use for the past thirty years. The question should be carefully studied. There should also be a more uniform and careful method of vaccination. Aseptic conditions are necessary; scarification one-eighth to one-quarter inch in diameter is ample, the drawing of blood is useless, and care in rubbing and drying in the lymph is important. The shield is a nuisance. If, at the end of a week, there is not a typical vesicle, the operation should be repeated.

Suggestions in Medicine.—George C. Smith urges that greater attention be paid to the psychical side of their patients than is at present the case. Children are peculiarly susceptible to suggestion, and there is no doubt that early training would save many a person from hysteria, neurasthenia, or insanity later in life—diseases which are quite as often acquired as inherited. Patients are usually in a receptive mood, but if at all pessimistic or melancholic, are more open to evil than to good suggestions, hence the necessity of using great caution in the method of examination not to arouse apprehension, as well as care in our suggestion of remedial therapeutics. The pernicious influence of evil suggestion is clearly illustrated in cases of traumatic neurosis—the victims of railroad accidents, who are still further victimized by sympathizing friends and impecunious lawyers, till they become imbued with fixed ideas that are false. The use of wise suggestion necessitates in the physician a more thorough study of human nature and of psychology, makes the examinations more exhaustive, sharpens observation, broadens vision, enhances the powers of concentration, and intensifies interest. The result is better diagnosis, prognosis, and treatment.

Journal of the American Medical Association, Feb. 1, 1902.

Nineteen Years' Experience with Creosote in Tuberculosis.—J. A. Burroughs presents the following conclusions: (1) Selection of a creosote made by the double distillation of tar from beechwood is essential; (2) Large doses continued indefinitely do not irritate the stomach, but improve digestion; (3) Large doses are appropriated by the system, as shown by clinical observations; (4) The drug in large doses is indicated in all stages of the disease; (5) For permanent results the drug in large doses should be continued for months after the absence of all physical signs or constitutional disturbance; (6) Creosote in large, continued doses is not only the most rational treatment, but gives the best clinical results of any one agent familiar to clinicians.

Treatment of Acromegaly with Pituitary Bodies.— After a discussion of the literature of lesions of the pituitary gland, and their relation to the normal physiology of the body, Sidney Kuh reports three cases of acromegaly, one in a Jewish tailor, twenty-nine years old; another in a Swedish woman, thirty years old, and the third in a Jewish merchant, fifty-eight years old. Concerning the general effect of treatment with the remedy mentioned, Kuh states that the result in his three cases was that the first patient derived little, if any, benefit from it, while in the other two cases, for one and a half and one year, respectively, the condition of the patients seemed decidedly improved. Headache, dizziness, general weakness, hyperhidrosis, and vomiting disappeared, while the trophic changes in the nails of the second patient became very much less marked. In her, new symptoms appeared, however, almost as troublesome, perhaps, as those from which she had been relieved. Still, when one remembers how little other methods of treatment can do in this disease, even the slight improvement obtained seems gratifying. The most important question is whether the feeding with pituitary bodies exerted any beneficial influence whatever. This question, for two cases, at least, is to be answered in the affirmative.

Dyspeptic Asthma.—Max Einhorn reports a group of thirty-one cases of asthma in which the chest organs were apparently in a normal condition. The cases are divided into acute and chronic. The first group is characterized by the occurrence of attacks of asthma at more or less prolonged intervals, either without an apparently preceding cause or after distinct excesses in eating, drinking, smoking, or after undue excitement. The attack is usually of a very severe type, often assuming alarming symptoms—extreme dyspnœa, cyanosis, almost collapse. The second group, that of chronic dyspeptic asthma, embraces the larger number of cases, and may again be divided into two separate categories: (*a*) Cases in which the attacks of asthma appear quite soon after meals, either without any particular provocation or after some slight exertion; (*b*) Cases in which the attacks usually occur two or three hours after meals, either spontaneously or again after some exertion—walking, etc. In a certain number of the latter category the attacks can be checked by partaking of a small amount of food. Cases belonging to category (*a*), of group 2, resemble very much true angina pectoris, which is so often encountered in arteriosclerosis of the coronary arteries. Their differentiation from the latter is often difficult. For even in true angina pectoris, at the beginning, there will be attacks without any discoverable lesions of the heart or blood vessels. Such cases may for a long time appear as dyspeptic asthma, until all of a sudden there are distinct signs indicating the heart involvement, as, for instance, a sudden appearance of albumin in the urine or irregularity of the pulse, etc. The treatment must be directed, first, toward relieving any existing disorders of the digestive tract; second, toward correcting any abnormal position of the abdominal organs, principally the liver. A regular mode of life, avoidance of too much tobacco and alcoholic drinks, also of too much mental worry and strain, is always of importance. By paying attention to these points, the majority of cases of dyspeptic asthma will not only be temporarily relieved, but often radically cured.

New York Medical Journal, February 1, 1902.

A Case of Hydrencephalocele.—D. E. Wheeler reports the case of a child presenting no abnormality except a large tumor protruding from the posterior fontanelle. It was twelve inches in circumference and covered with skin, which was hairy near its attachment to the head. The tumor was translucent and markedly fluctuating. Fluctuation was not communicated to the anterior fontanelle. The child gradually sank, while the tumor, in the mean time, increased in size and became more tense. There were no symptoms of digestive disturbance, nor any convulsions, even when the tumor was compressed. On the twenty-fifth day after admission, the child collapsed suddenly, and died with dyspnœa and cyanosis. Post-mortem examination showed the anterior fontanelle open, cranial bones soft, with numerous small islands of membranous bone-formation, mingled with areas where there was no calcification. This condition was best seen in the parietal bones, on inner surfaces of which were small concavities corresponding to the uncalcified areas. The sinuses and brain tissue appeared normal. From the posterior fontanelle there was a large fluctuating cystic growth, but fluctuation was not communicated to the anterior fontanelle. This cyst was seventeen inches in circumference, translucent, and contained clear serum. Pressure forced the cyst contents into the posterior cornu of the left lateral ventricle.

Typhoid Perforation; Its Frequency, Prognosis, and Treatment.—H. M. Taylor is inclined to regard as true the prevalent statement that one-third of the deaths in typhoid fever is due to perforation, though this fatal complication may have often been unrecognized. Cases in which a diagnosis of perforation has been made, and in which recovery occurred, were probably cases of local peritonitis and incomplete perforation. In the light of our present knowledge, surgical intervention offers the only hope of recovery. In this the profession is pretty well agreed, but the difficult point is to decide when perforation has actually occurred, for the clinical picture of this condition as portrayed in the older textbooks is by no means universally true. In many cases, the patients are perfectly clear mentally; they can warn us intelligently of the sudden onset of pain, and can help us to decide when it is localized or diffused. In many, the thermic changes are gradual and no sudden rises or falls occur, and the same is true of the pulse. In many, abdominal pain is absent, and there may be no distention or rigidity. In this class of patients, and they are by no means a minority, such a group of symptoms as vomiting, pain, shock, increased and increasing pulse rate, abdominal rigidity, distention, and abolished peristalsis and gaseous movement, together with, perhaps, a reduced temperature incident to shock, should enable us to make about as positive a diagnosis as is possible in a majority of acute intra-abdominal troubles. On the other hand, in another group of cases, in which there is mental apathy, not infrequent vomiting from impaired stomach digestion, distention from nerve exhaustion and intestinal indigestion, rapid pulse, high temperature, frequent paroxysms or persistent pain from peritoneal involvement without perforation—in such cases the diagnosis must call for an acute reading of symptoms manifested. The author would attach especial importance to pain, muscular rigidity, and inhibited peristalsis, as diagnostic points.

Medical News, February 1, 1902.

Sanitary Aspects of Nicaragua vs. Those of Panama.—J. Edward Stubbert believes that the following conclusions are supported by reliable statistics: The natural conditions of the Central American or Nicaragua route are far more conducive to health than those along the Isthmus of Panama route. The endemic diseases of the Panama route are far more fatal than those along the Nicaragua route. During the time of actual construction, while there would necessarily be an increase of sickness, the mortality would be markedly less in Nicaragua than in the Isthmus of Panama. After the completion of the canal, the regions bounding the Nicaragua route would be capable of development by the Anglo-Saxon, while he could not safely live along the Panama line. The writer adds that far more money was spent *per capita* by the medical department of the Panama Company than by that of the Nicaragua Company, and yet the morbidity statistics were greatly in favor of the latter.

A Word on Specialization in Medicine and Surgery.—Wm. M. Polk declares that the problems which the physician has to face are of such a nature that his work in the interest of the patient can be specialized to only a limited degree. The only real specialty in medicine is neurology, and this is so on account of the great influence of the nervous system, and of the need on the part of the physician of wonderful patience in the management of people in whom will-power can often not be counted on as an element in their cure. As to the surgeon, he must be an anatomist, a physiologist, and a pathologist. He must know in what cases to interfere, and he must recognize those cases in which the patient can master the situation himself. He must be thoroughly familiar with the reparative forces of the body. The entire field of surgery is enormous, as can be realized when it is seen in how many conditions surgery has supplanted medicine. Consequently, in surgery it is more essential than in medicine to make some division of the field. That specialty will survive, whose results are better as regards the patient than are shown in the general field. Limitations of specialization, then, will be fixed by results. The tendency of all specialization is to narrowness and to exaggeration of minutiæ. The curse of the profession at present is the non-competent specialist.

American Medicine, February 1, 1902.

The Passing of Drug-Giving.—John Madden states that drug-giving as a function of the physician is fast decreasing in importance. Some years ago, every disease had its treatment indicated in sets of formulas. Later, there arose the hope for specifics. A few were found, among them mercury and cinchona bark. The discovery that most diseases are caused by germ invasion practically left the profession without any rational remedy for any disease except those for which specifics had been discovered. Rational treatment would mean a medication which, while being harmless to the organism, would, nevertheless, destroy the germs of invasion or render the poisons generated by them inocuous—a germicide or an antidote. We are even yet sadly lacking in rational remedies for the cure of disease. There is something to be hoped for in the production of antitoxins, for by their natural development nearly all acute febrile diseases are made self-limited. In this method great success has been attained in diphtheria. These results, as well as those attending vaccination with the kinepox as a protection against smallpox, and of the treatment of persons bitten by rabid animals with increasingly potent rabic virus, have stimulated hope for the treatment of other diseases by kindred methods. There is always hope that chemistry may unlock some of these secrets, but at present the realization of such a hope seems far distant, for there are many perplexing problems to be solved. However, it is certain that the early polypharmacy will not be revived.

The Abandonment of Digital Examination by the Vagina in Labor.—W. A. Briggs describes the methods of digital examination per rectum and palpation of the perineum. After cleansing and disinfection of the vulva and adjacent parts, the patient should be placed on her back, with the knees well flexed, close to the edge of the bed; the examiner must sit beside the bed on a low chair, facing the patient. The disinfected and gloved right hand is to be passed under the patient's right knee, the index finger being passed into the rectum, its tip being carried, if possible, to the sacral promontory, and the tip of the thumb to the pubic synchondrosis; by their divergence one may estimate the conjugate diameter. Then the left hand is placed on the abdomen just above the pubis, and by gentle palpation, it will be possible to map out the presenting part and determine its size, position, descent, mobility, and stage of evolution. If the head presents, the accoucheur should dip the fingers of the left hand down about the chin or the occiput, and the position may be determined even if the fontanelles and sagittal suture cannot be felt. The os and the cervix are to be searched for with the tip of the finger. The sagittal suture and fontanelles should be identified. Should the head recede before the examining finger, it may be fixed by the left hand from above. Palpation of the vulva and perineum will determine the mobility and the progress of the presenting part, and obviate the necessity of internal examination. The writer believes that abdominal palpation and auscultation, antepartum pelvimetry, digital examination per rectum, simple and bimanual, and palpation of the perineum intelligently and systematically practised, will, in all but operative cases, obviate the necessity of invading the vagina in any way.

Philadelphia Medical Journal, February 1, 1902.

Treatment of Epithelial Skin-Cancers and Sycosis Non-Parasitica with the X-Ray.—J. F. Rinehart speaks of the advantages of the treatment of these cases by the *x*-ray. It gives no pain, there is but little scar tissue left after the sore has healed, and there is the possibility of a more thorough eradication of the disease, as the effect of the rays is to destroy all the cancer cells within the area exposed. He reports a number of cases which illustrate the success of this treatment. It is best not to be in too great a hurry to obtain the reaction lest too much inflammation be caused. There is a great difference in skins as to their ability to withstand the *x*-ray. It is best to begin with a five-minute exposure at six or eight inches and try that for a day or two, and if no reaction is obtained, increase the time of exposure till the desired effect is produced.

Precancerous Keratosis, Probably Due to X-Rays.—James C. Johnston believes that every squamous-celled epithelioma has a stage in which the only change is a thickening of all the layers of the surface epithelium. There is not only a hyperkeratosis, but an acanthosis, or overgrowth of the prickle-cell layer, as well. He reports two cases, the first one being in the early stages of the disease of which the second one shows the full development. The latter patient had worked with the *x*-ray machine for four or five years. The backs of both hands were affected as far as the wrist joint. The skin was rough, dry, and slightly scaly, with a little itching. There was no pain and no thickening. The palms were rough, dry, and thick. The nails showed dystrophic changes. The chief feature was about twenty hard cornified growths on the backs of both hands. The larger keratoses all showed a small circumscribed area in the center, where the horny material had crumbled away, leaving a rough blackened pit. Microscopical examination showed the malignant character of these growths. Rest and treatment were advised. There has been no progression of the lesions, and the epithelioma which was excised has not returned.

The Lancet, January 25, 1902.

The Widal Reaction in Tuberculous Meningitis.—Edward Mackey reports the case of a woman of twenty-eight years in whom the diagnosis of typhoid fever had been made, mainly on the strength of a positive reaction to the Widal test. The patient died and autopsy revealed no typhoid lesions, but distinct tubercles in the brain.

A Case of Vagina Duplex.—The condition noted in the case reported by E. W. Sharp came to light during an operation for hemorrhoids. The vagina was divided by a fleshy partition running from before backward, and from the cervix, where it was of membranous thickness, to the vaginal orifice, where it was almost half an inch thick. The mucosa on both sides was corrugated. There was a small communication near the cervix, between the two portions of the vagina. The cervix was small, distinct fornices were absent, and the os was situated on the left side. The uterus was small, but otherwise normal. There was no menstrual difficulty. The patient, aged forty-one years, was married, but had never been pregnant.

Combined Fetal and Maternal Dropsy.—H. V. Munster reports the case of a woman aged thirty-one years who suffered from dropsy of the lower limbs and abdomen, the latter being so much swollen as to suggest hydramnios. Her confinement was expected to occur on November 29, but labor came on October 10, two days after she was seen by the author. The os being dilated, the membranes were ruptured, but only half a pint of liquor amnii escaped. Examination revealed high up a boggy mass giving exactly the same sensations as an œdematous area. Forceps was applied, and the head delivered. It looked at first like an acephalic monster, no features being discernible; but subsequent examination showed that the shape was due entirely to anasarca. The delivery of the body was retarded, and it became necessary to place the patient under chloroform, when, with much difficulty, the body of an enormously dropsical dead fœtus was extracted. The uterus was still quite as large as a full-term organ, due to the fact that the placenta was œdematous and as large as four or five ordinary placentæ put together. There was no unusual hemorrhage. The mother made an uneventful recovery. The fœtus was anasarcous throughout. Section revealed fluid in both abdomen and thorax.

The British Medical Journal, January 25, 1902.

A Note on the Diagnosis of Yellow Fever.—St. George Gray from his study of the subject concludes that in yellow fever there is a slight increase in the number of large uninuclear leucocytes, but that this increase is by no means so great as it is in malaria. The lowest percentage of large uninuclear leucocytes that he has observed in malaria is nineteen, while it has gone as high at times as thirty-six. Although in the cases of yellow fever which he examined, he counted many doubtful leucocytes among the large uninuclears, he could not bring the percentage above eleven.

Leprosy and Congenital Symmetrical Keratoderma.—George Pernet refers to a case reported by Gilbert White as a leper, which the writer declares comes rather under the category of symmetrical congenital thickenings of the palms and soles. This affection is described as affecting only the palms and soles. It was a scaly eruption, and broke out usually twice each year, spring and fall, and by peeling away left the skin so thin and tender that neither the hands nor feet could perform their functions. Neither of the parents was a leper. An intermittent case of this kind is also on record. A similar condition—hereditary palmar and plantar keratoderma—is frequent on the Island of Meleda (Dalmatia), and such cases were also formerly mistaken for leprosy. It is noteworthy that this case was not hereditary. Leprosy is unheard of as involving the soles and palms alone.

The Treatment of Dysentery by Rectal Injections.—Cecil F. Lillie has found this method most useful. The injections have never proved displeasing to the patients. The pain which was sometimes suffered at first was soon overcome by allowing only a small quantity of the solution at a time to pass into the bowel slowly. The value of injections in chronic cases is well known. They are also valuable in mild acute cases. The bowel is flushed out and the toxic substances are removed, and with their removal the griping and tenesmus, which they induce, subside. Antiseptics may be in this way directly applied to the focus of the disease. In addition to the injections the patient must be kept in bed and take fluid nourishment in small quantities at frequent intervals. Milk diluted is best. Chicken broth is often useful. Stimulants are generally required.

Blackwater Fever.—R. U. Moffat states that the whole theory of the influence of quinine in causing hæmoglobinuria rests on the fact that in the majority of cases there is a history of quinine having been taken. But this fact proves nothing, if it is remembered that in tropical countries practically everybody takes quinine. The writer believes that blackwater fever is due to a chill acting at a certain stage of the development of the parasite in a patient predisposed by acute or chronic malarial infection. The important point is the practical one that with malarial patients, especially those who have been much exposed to infection, the greatest care should be taken to avoid a chill during the apyretic stages. Whatever may be the exciting cause of the hæmoglobinuria, the writer believes the cases which are most apt to prove fatal are those in which no quinine has been given before its onset. The theory that hæmoglobinuria is due to the use of quinine, the writer thinks, is productive of great harm to patients suffering from malaria.

Münchener medicinische Wochenschrift, January 14, 1902.

Purpura Hæmorrhagica in Pulmonary Tuberculosis.—W. Roemisch reports a case of this complication which he thinks was brought about by a reabsorption of the toxins of the tubercle bacillus. The patient was twenty-five years of age, and gave the ordinary history and physical signs of phthisis. The hemorrhagic spots were present at first upon the forearms and dorsal surface of the hands, but later they also appeared upon the upper arms and shoulders. Slight hæmoptysis was present. The purpura remained with varying intensity for about four months, at the end of which time the spots began to disappear. Although a year has elapsed, no recurrence has taken place.

Gangrene Following Scarlet Fever.—R. Seubert reports a case of mild scarlet fever in which gangrene appeared as a sequel. The latter first appeared on the anterior surface of the left thigh, and rapidly increased in severity, so that in the course of two weeks, in spite of appropriate treatment, the greater part of the left lower extremity became involved. Amputation was performed. Two days thereafter a gangrenous spot appeared on the right thigh. This, however, yielded to suitable treatment, and recovery followed. A bacteriological examination of the amputated limb showed a pure culture of the streptococcus. It is interesting to note that in this case, as well as in those previously reported by Eichhorst and Holmes, the left lower extremity was the region principally affected.

Behring's Latest Diphtheria Theory.—Fritz Schanz considers the most recent views of Behring in regard to the etiology of diphtheria. Behring now holds that true and false diphtheria bacilli, including the xerosis bacillus, are identical. He founds the view upon the ubiquity of the diphtheria bacillus, and the fact that investigation has shown that the serum of individuals, who possess pseudodiphtheria bacilli on their mucous membranes, is antitoxic against infections produced by true diphtheria bacilli. Schanz has for several years maintained this same view. According to this idea, much of the immunity to true diphtheria is produced by a previous infection with pseudodiphtheria bacilli. Endeavors, therefore, to separate true and false diphtheria bacilli are useless, for they are interchangeable, and the presence of one or the other variety is dependent upon the soil upon which they are grown. Observation has also shown that true diphtheria bacilli produce in human beings not alone the ordinary local lesions of diphtheria, but various other conditions, such as rhinitis atrophica chronica and pharyngitis sicca.

Relation of Langerhans' Islands to Diabetes Mellitus.—M. B. Schmidt endeavors to throw some light upon this interesting and at present much-discussed question. He reports twenty-three cases of diabetes mellitus in which the pancreas was examined post mortem. In eight of these, this organ was entirely normal, and in seven the localized inflammatory changes were so slight that it was not probable that they stood in a causative relation to the disease. In one the pancreas was markedly atrophied, but otherwise contained no pathological lesions. In the remaining cases the islands of Langerhans were diseased. The lesions found can be classified under three heads: (1) Hyaline degeneration; (2) Acute interstitial inflammation; (3) Chronic interstitial inflammation. This may be either interlobular or intralobular (interacinose) in character. The latter is the more common form. From this it would appear that in many cases diabetes mellitus is dependent upon well-defined lesions in the islands of Langerhans, but that such are in no way to be considered as pathognomonic of the disease.

Berliner klinische Wochenschrift, January 13, 1902.

Incandescent Electric Light in the Treatment of Internal Infections.—Dr. Krebs has undertaken a series of investigations, in order to ascertain the value of the incandescent electric light in the treatment of infectious diseases. He first observed the effect of such light upon healthy mice and guinea-pigs, and showed that upon such animals no deleterious effects were produced by this treatment. Some of the animals were then inoculated with anthrax bacilli, while others were maintained as controls. In a number of experiments some of the infected and non-infected animals were exposed to an electric light of fifteen candle-power, while the others were not so treated. Some of these investigations were carried on at the room, and others at the incubator temperature. The results showed that the light treatment had no effect in lessening the duration or severity of the infection, and the author believes that, however strong the bactericidal power of light upon microbes under artificial cultivation may be, it is certain that no such effect is produced when the organisms are present in the animal body.

Relation of Angina to Articular Rheumatism, Erythema Nodosum, Pneumonia, Scarlatina, and Measles.—In considering the relation from a bacteriological standpoint of angina to these diseases, Menzer says that there is abundant evidence to show that the tonsils normally offer resistance to bacteria in their endeavors to gain an entrance into the system, and that when general infection occurs from the throat the organisms gain admission through the mucous membrane which surrounds these organs. So far as articular rheumatism is concerned, there is much testimony to show that identical streptococci are present both in the throat and in the affected joint, and it is believed that here the throat has been the portal of entry for the infecting agent. The same may be said of erythema nodosum. A case is reported in which a staphylococcus was isolated from both the cutaneous lesion and the throat of the patient. With regard to pneumonia, it may be said that the idea of direct inhalation infection is improbable. Animal experimentation has shown that by inhalation small particles do not reach the terminal bronchi or alveoli. Pulmonary tuberculosis, which has been demonstrated to be due to direct inhalation infection, in the majority of cases, usually affects the upper lobes while pneumonia usually affects the lower. Furthermore, when we consider the symptomatology and pathology of this disease, and the fact that pneumococci are found in the throats of pneumonia patients, it seems reasonable to suppose that the organisms gain admission to the lungs by way of the blood vessels, the throat having been the portal of entry. Thus far, investigators have been unable to find any specific bacteria in scarlatina and measles. When we consider that in these diseases the mucous membrane of the throat and nares is always affected previous to the outbreak of the constitutional symptoms, it is fairly probable that the causative agents gain entrance to the system through these structures. The question now arises whether a specific microorganism is nesessary for the production of the diseases here considered. Modern bacteriological thought is more and more drifting away from the specific microbe to the peculiar individuality of the infected person. This has been brought about through the knowledge that certain bacteria supposed to be specific for given disease may, in reality, in different individuals, give rise to a variety of clinical conditions, some of which are totally different in symptomatology from the supposed specific disease. Furthermore, organisms thought to belong to other species, many of which are saprophytes, may produce conditions which cannot be differentiated clinically from the specific disease. In accordance with these facts, Menzer advances the opinion that there are habitually present in the throat a number of microorganisms which cause no trouble so long as the insusceptibility of the individual remains intact. When, however, this, from any cause, is broken down, they invade the system and produce disease. Now, the disease so produced may vary in character according to the constitution, either inherited or acquired, of the patient. The author brings forward no tangible proofs of his theory, but merely advances it as a hypothesis by means of which many hitherto inexplainable facts may be made clear.

French Journals.

A Case of Myoclonus Multiplex.—Ingelrans reports the case of a patient aged twenty-six years, who had an attack of typhoid fever. During convalescence, muscular contractions of the right side, which had existed before the typhoid fever, indeed, since the age of six years, reappeared. When these twitchings first appeared they had been attributed to chorea. Ingelrans states that they cannot be due to chorea nor to athetosis; they are exactly like those produced by the electric current. He believes that this is a case of myoclonus multiplex of Friedreich.—*Le Nord Médical*, January 15, 1902.

Latent Syphilitic Aortitis and Visceral Neuralgias.—M. L. Rénon describes a case of syphilitic aortitis which manifested itself by very painful crises, which were limited to the viscera, and which completely simulated the violent pain of biliary and renal colic. The presence of aortic insufficiency which had not existed a year before, established the diagnosis. This was verified in a decisive way by the institution of antisyphilitic treatment which rapidly put an end to these painful crises. There was no physical sign of aneurism. The cause of the violent visceral pain is not easy to determine.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, January 16, 1902.

Death by Chloroform.—Poirier reports a case of death by chloroform. The patient, a woman of sixty-three years, afflicted with a neoplasm of the stomach, had been under his charge for some time. She had reached the stage of extreme cachexia. Chloroform was given to her most cautiously, and when she had become unconscious, and the operation had proceeded to the point where the stomach was found to be adherent on all sides, and just as the liver had been separated in order to allow of an anastomosis, the patient appeared to revive. A few more drops of chloroform were administered, but the pulsations of the gastrohepatic artery ceased, and the respiration stopped. The beating of the heart stopped suddenly twenty-five minutes after the beginning of the operation. The ordinary means of restoring respiration were tried in vain, for the heart was flaccid. The cause of death was not clearly ascertained. The anæsthetizing was well done, but the patient was extremely feeble.—*Le Bulletin Médical*, January 18, 1902.

Lavage of the Stomach in the Infant.—M. L. Babonneix states that the temperature of the liquid used in this proceeding is most generally lukewarm, although it is varied according to the condition of the patient. If there is tendency to collapse and the temperature is below normal, the liquid may be 37° or 38° C. If, on the contrary, there is fever, the liquid used may be cool. It is difficult to state definitely any fixed quantity to be used, as the process is continued until the water returns limpid. The solutions used also vary according to the case. These washings are kept up every day, at least during the acute stage of gastroenteritis; but they ought not to be indefinitely prolonged. The time for lavage is at the end of the period of digestion, that is, as a rule, two hours and a half or three hours after a feeding. Accidents from this procedure are very rare. The effects of lavage are especially mechanical: evacuation and cleansing of the stomach, diminution of the fermentations, etc. Still more, lavage excites reflex intestinal contractions, contractions of the muscles of the abdominal wall, and hypersecretion of all the glands of the digestive tube.—*Gazette des Hôpitaux*, January 14, 1902.

Therapeutic Monthly, December, 1902.

Cause and Treatment of Car-Sickness.—J. N. Rhoads believes that not every person with astigmatism has car-sickness, but that every one with car-sickness has astigmatism. The gravity of the case does not seem to be proportional to the extent of the ocular defect, but rather the reverse. Some prophylactic hints for car-sickness are: Keep the eyes closed during the entire ride or else sit at the end of the car, and look out of the front or back windows, and wear very dark glasses or green shades; the best prophylactic in *steam* car-sickness is to ride backward in the rear seat of the rear coach. The writer does not believe that car-sickness can occur in a person with normal eyes, nor in one who is wearing properly fitted glasses. Concurring indigestion will be cured with the car-sickness. All cases of violent headaches should be refracted, as well as all cases of persistent indigestion and of car- and seasickness.

Tent Life and Simplicity in Therapeutics as Factors in the Treatment of Phthisis Pulmonalis.—Wm. K. Robinson describes a colony for the tuberculous, not far from Denver. The tents are arranged around a central building connected by canvas vestibules. A large coal stove in the center of the house gives facilities for dressing and sitting room. The beds are warmed with hot-water bottles; blankets instead of sheets are used; pajamas are made of heavy flannel with feet and hood. After the weather settles the patients live entirely in their tents, so separated that they do not annoy one another by coughing. Cheese-cloth is used instead of handkerchiefs. The tents have board floors and sides, two feet high. There is always perfect ventilation, and direct sunlight falls upon the contents by day. Fresh air and appropriate diet and hygiene are the principal elements for the restoration of health. Simple drugs are used, such as may stimulate the weakened digestion and circulatory functions; also incidental drugs to regulate excretions and secretions, as the case may require from time to time. There is abstinence from drugs alleged to be specifics.

The Effect of Nitroglycerin in Vascular Disturbances of Some Functions of the Brain, with Reports of Two Cases.—Alfred Gordon declares that in nitroglycerin we have a powerful drug for controlling any functional inhibition of the higher centers depending upon the circulation. It should be used chiefly when a rapid effect upon the vascular apparatus is desired. It quickly dilates the arterioles, thus lowering the arterial tension, increasing the pulse-rate, and reducing the blood-pressure. The results are more promptly obtained from this drug than from all other forms of nitrites. It is well known that the nutrition of a tissue is greatly influenced by the condition or distention of its blood-vessels. The problem of the exact mechanism of regulation of the cerebral body-supply is not yet solved, still it is accepted that the following factors have great influence in this regard: general venous pressure, general arterial pressure, and the state of pressure of the cerebrospinal fluid. Under abnormal conditions another influence must be considered—that of the sympathetic system upon vasodilatation and vasoconstriction. Experiments go to prove that sleep is accompanied by an intracranial arterial anæmia with arterial tension and venous congestion. These observations also apply to mental depression. On the other hand, psychical activity and arterial hyperæmia go hand in hand. The writer describes two cases to illustrate these theories.

The Practitioner, January, 1902.

Prognosis and Treatment of Dilated Heart as the Result of Overstrain and Exercise.—William Collier states that the most common form of heart strain as the result of athletic competitions is dilatation of the right side of the heart, especially the right ventricle. The prognosis is good, because the condition is brought about by excessive pressure thrown on the ventricle by exertion, and is not due to diseased muscle. Treatment consists in giving up for a time, if not altogether, muscular exercise which throws any strain on the heart. It is necessary to stop all athletic competition, but well to encourage a moderate amount of quiet exercise in the open air. Sculling, rowing, walking, bicycling, and in a short time golf and lawn tennis may be indulged in, provided that they are carried on in a leisurely fashion. It is probable that the heart muscle never quite recovers its original strength.

Dilatation of the Heart in Children.—Eustace Smith thinks that in childhood the heart dilates with exceptional ease. The dilatation may be found quite apart from valvular mischief, and is due to blood pressure in a flabby, ill-nourished, or degenerated heart. It occurs in anæmia; in case of rapid growth with cold extremities and poor blood; in nephritis, in bronchopneumonia; in the infectious fevers, and in allied septic states. It is especially apt to occur in diphtheria, acute rheumatism, and influenza. Treatment should consist in a continuation of the remedies used for the disease in the course of which the complication has arisen. If sodium salicylate is being taken, there should be added five or ten grains of ammonia citrate of iron to counteract the lowering effects of the sodium salt. Iron and strychnine should be our great resource, and alcohol must not be forgotten.

Points in the Prognosis and Treatment of Hypertrophied and Dilated Heart.—Arthur Foxwell prefers tepid saline baths to resisted movements as a therapeutic measure. They slow the heart and steady it, but are not without danger, and should not be given to patients who with advanced disease are functioning badly. In a visit to Nauheim there is the stimulus of change of climate and nation to be considered, as well as that brought by hopeful anticipation. Rapidity and irregularity due to organic valvular disease are greatly improved by digitalis and strophanthus, but when there is no valvular disease, strychnine and the brandies are better. Cardiac tonics are of little service if the blood pressure is unduly high. Generally speaking, it is more important to lessen the heart's work by lowering pressure than to stimulate the heart to renewed exertion. The larger the heart, especially if the condition of its muscle is doubtful, the more should this rule be insisted on.

Hypertrophy and Dilatation of the Heart.—Thomas Clifford Allbutt has not been able to convince himself of the occurrence of enlargement of the heart due only to physical exertion; again, he says, we have little evidence that a heart duly hypertrophied and dilated will degenerate unless its muscle be poisoned, be the seat of some more intrinsic degeneration, or be submitted, as in valvular disease, to stresses increasing beyond its possible resources. We have indeed learned that in certain morbid or strained conditions of the heart the skilful use of a carefully graduated system of muscular gymnastics may be restorative to the heart, even at such disadvantages. But before applying such treatment we must ascertain the state of the cardiac fiber, its intrinsic resources, and its means of nutrition, and we must postpone gymnastic exercises until by deobstruent means and by tentative cardiac tonics we have lightened the abnormal burdens of the heart and distributed the arterial and venous pressures as well as possible. After such preliminary treatment, in cases in which the heart is more overladen than unsound, graduated ascents in Oertel's method may be practised. In more serious cases "resistance cures" by skilled operators are best, but should not be practised indoors.

Cardiac Dilatation and Hypertrophy.—Richard Caton holds that in cases in which there is considerable cardiac dulness to right and left, a flickering, low-tension pulse, or an irregular one with raised tension, post-sternal discomfort, feebleness with tendency to fainting, and perhaps dyspnœa and dropsy, treatment must vary widely as to detail. In general, rest is called for with cardiac tonics, especially digitalis. A careful diet is essential diminution of the volume of the blood by restriction of fluid, and a lessened proportion of carbohydrates and fats to proteids. When the patient is strong enough, graduated exercise is of much service. The Oertel method is beneficial in certain cases where no great valvular lesion exists, when the heart is laden with fat, and the diet has been too generous. For the weak and thin it is injurious. The Schott system, with its warm baths impregnated with sodium and calcium chloride, undoubtedly does good by stimulating the cardiac nerves and muscles and promoting nutrition. The gentle resistance gymnastics which are part of the treatment also increase ventricular power. The greatest care must be taken in their use, and the patient must not be allowed to think that the improvement following constitutes a permission to take liberties with his heart and with his manner of living.

Dilated Hearts as Treated in Recent Times.—A. E. Sansom does not believe that hypertrophy and dilatation are always in the nature of a disease calling for treatment. Athletic hypertrophy may be harmless, so also dilatation of the left heart. Moreover, more than formerly do we realize the rôle of lesions of the nervous system in the pathogenesis of these forms of heart disease. The author gives detailed directions for examination of the patient, and for treatment of the various causes of the condition. Where a lesion of the nervous mechanism plays an important part, treatment by change of climate, baths, and exercises are to be instituted. A beneficial change has been effected in the treatment of these cases, whether rheumatic or otherwise in origin. The policy of coddling has given way to the policy of training. Great discretion is, however, necessary. In cases with perturbations of rhythm, digitalis does little good; a course of alkaline bicarbonates, with in some cases bromides, phenacetin, antipyrin, or occasional hypodermic injections of morphine, is better where there is hypertrophy or dilatation of the left ventricle with arteriosclerosis or atheroma; arterial relaxants should be given, and good nutrition must be maintained. Digitalis and iron are not to be given, but cod-liver oil and careful dieting often produce good results.

The Treatment of Cardiac Dilatation and Asthenia.—I. Burney Yeo considers that the following three causes have of late years given rise to the prevailing tendency to cardiac asthenia and dilatation: (1) The influenza epidemic; (2) Abuse of muscular exercises; (3) Excessive use of tobacco. Sufficient stress has not been laid on the necessity of a prolonged period of physical rest during the convalescence from influenza. This is the surest of all cardiac tonics, and in early periods, when cardiac dilatation is commencing, is, when combined with good air and suitable food, the most essential remedy. "Resisted exercises" are merely solemn trifling in many such cases, but gentle carriage exercise or gentle horse exercise is often of value. Baths are of more value in chronic cases of cardiac dilatation than are resisted exercises. The Nauheim treatment gives the best results in cases of chronic cardiac asthenia following upon acute disease. It is useful in carefully selected cases of valvular disease, the change from the worries of professional life to the wholesome dulness and quiet of Nauheim constituting a real rest treatment. In addition to open air life, gentle exercise, a light nourishing diet, free action of the bowels, and early hours for retirement, a cardiac tonic is advisable, this consisting usually of strophanthus or strychnine or nux vomica, with coca in combination with iron, quinine, or arsenic. Digitalis should be kept for cases in which there is much dyspnœa and troublesome palpitation.

The Treatment of Colds.—Coryza, if taken in hand at its commencement, is almost always amenable to treatment, but if neglected in the first instance, will cause much trouble.

Some physicians recommend that the most effective way to abort a cold is to go to bed, drink hot lemonade, eat plenty of nourishing food, and stay in bed for twenty-four hours.

A hot bath before retiring to rest is another remedy recommended, and in numerous cases has a beneficial result.

Surgical Suggestions.

Treatment of Accidents Under Chloroform.—It would appear that sudden failure of the circulation, accompanied by pallor of the face and accelerated or gasping respirations, denotes vasomotor paralysis, and requires inversion of the patient with pressure on the abdomen. On the other hand, if the dangerous symptoms are preceded by struggling, and the face is diffused, with signs of venous engorgement, the patient should be alternately raised to nearly the vertical position, in order to empty the heart, and then returned to the horizontal position. Artificial respiration should be systematically persevered in in each case. If there is actual failure of the circulation, little that is useful can be done by efforts to raise the blood pressure by such means as transfusion, etc.

In failure of respiration or circulation, hypodermic injections of strychnine and the extract of suprarenal capsule with inhalation of ether are probably the most useful measures.—*The Medical Press and Circular.*

Carcinoma of the Tongue.—W. H. Chambers (Columbus *Medical Journal*, September, 1901) concludes: 1. Sufficient experience has been accumulated to show that the removal of the tongue in lingual carcinoma prolongs life and adds to the comfort of the patient, and, further, renders a reasonable hope of a permanent cure. 2. All operations should be preceded by an effort to secure thorough disinfection of the mouth and teeth. 3. In the treatment of continued ulcers and sores on the tongue, caustics are to be avoided and all sources of irritation removed. 4. Persistent sores on the tongue should be freely removed by the knife or scissors, if they resist treatment. 5. When the disease is confined to the tongue, Whitehead's operation should be employed for its removal. 6. In this operation the advantage of primary ligation of the lingual artery is not definitely settled, but the weight of authority is against its necessity. 7. The advantage of having one-half the tongue in unilateral disease must be considered undetermined, but the weight of positive experience is in its favor. In splitting the tongue into lateral halves, Baker's method of tearing through the raphe should be employed. 8. A preliminary tracheotomy adds an unnecessary element of danger in the removal of the tongue in ordinary cases. 9. When the floor of the mouth has become involved or the glands enlarged, Kocher's operation should be performed, omitting the preliminary tracheotomy. 10. Removal of the glands by a separate incision after the removal of the tongue must be considered insufficient. 11. Volkmann's method still rests on individual experience. Its just value cannot be determined until it has been subjected to trial by a number of surgeons. 12. Thorough and complete removal should be the aim of all operations, whether for limited or extensive involvement. 13. By whatever method the tongue is removed, the patient should be up and out of bed at the earliest possible moment and should be generously fed.

Gonorrheal Arthritis is commonest in the knee; the ankle and hip are also frequently attacked, while almost any joint in the body may be attacked. It does not occur at any fixed period in the disease, but it is most usually met with between the third and sixth weeks.

Acute Synovitis is one of the commonest affections of the knee and generally occurs after sprains; it is sometimes a result of simple exposure. It may also be associated with rheumatism, although the true rheumatic inflammation of joints affects the fibrous capsule rather than the synovial membrane.

Wounds of Joints, unless they can be kept aseptic, are among the most serious injuries we are called on to treat; suppuration in a healthy joint not only leads to complete disorganization of the articulation itself, but also involves a very considerable risk of septicæmia and pyæmia.—*Cheyne and Burghard.*

Volunteer Surgical Assistants.—If you can possibly help it, never allow relatives or other outsiders to be present at an operation. They are in the way, are apt to touch instruments and dressings, and occasionally vary the monotony of the proceedings by fainting at most inconvenient times. If you are compelled to employ their assistance, you will commonly find that the women of the family make better assistants than the men.—*Lilienthal.*

Synovitis of Shoulder.—Acute and chronic synovitis with effusion are comparatively rare in the shoulders, and the condition may be readily overlooked if the distention of the capsule be only slight; when it is considerable, the swelling is most marked beneath the interior ridge of the deltoid, and the upper arm is slightly abducted and somewhat internally rotated.—*Kansas City Index,* October, 1901.

Traumatic Dislocation of the Knee-Joint is a very rare occurrence, as may easily be understood from a consideration of the size of the joint and the strength of the ligaments concerned. Very severe violence is required to produce dislocation, and hence these injuries are usually complex ones, being either compound or complicated, with fracture of the bones in the immediate neighborhood.—*Cheyne and Burghard.*

Perineal Prostatectomy.—A median perineal cystotomy is done, and the finger introduced into the bladder to examine the prostate from its vesical aspect. An incision is next made, commencing at the posterior angle of the cystotomy incision, carried straight back along the median perineal raphe, around the anus, to terminate in front of the coccyx. The left forefinger is then introduced into the bladder, and presses the prostate into the perineal wound. The capsule is incised, and the prostate either shelled out from its capsule or removed piecemeal by cutting forceps and scissors, the method of enucleation depending upon the fibrous or adenomatous condition of the gland. A full-sized drainage tube is then passed through the cystotomy wound and secured in position.—*P. J. Freyer.*

Urethral Calculus is best removed by cutting directly down upon it, especially in boys.

Danger Signs in chloroform narcosis are sudden lividity or pallor, dilatation of pupils, shallow respiration, rapid and irregular pulse, or total absence of radial beat.

In Traumatic Lumbago massage and prolonged baths are strongly indicated. Ordinary baths are just about as useful as alkaline or sulphurous baths, but the latter may have a psychic influence. When there is much effusion of blood, it is best to avoid the use of wet cupping or leeches. Compresses soaked in the following solution are often beneficial:

℞	Chloride of ammonium	20 gm.
	Tinture of arnica	10 gm.
	Water	800 gm.

—*Plicque.*

Medullary Cocainization has resulted in two more deaths in Paris, and Broca says the method is not safe in the hands of every one.—*Therapeutic Gazette,* October 15.

Pyloroplasty is the operation of selection for simple pyloric stricture, and gastrojejunostomy should be reserved for cases in which the pylorus is so bound down or involved in adhesions as to be inaccessible.—*Rutherford Morison.*

Empyæma.—Chloroform is the anæsthetic of preference. Deep narcosis is contraindicated, owing to the danger of pus being drawn into the other lung from a ruptured bronchus. In adults resect two inches of the seventh and eighth or eighth and ninth ribs in the posterior axillary line. In children, the seventh, as soon as the diagnosis is made. Simple incision is rarely advisable.—*J. A. Hartwell.*

Book Reviews.

Diseases of the Intestines, their Special Pathology, Diagnosis and Treatment. By John C. Hemmeter, M.D., Philos. D. In two volumes. Volume I. Philadelphia: P. Blakiston's Son & Co., 1901.

Until very recently there was no special work devoted to the diseases of the intestines. This want has been filled within the last two years. First by the book of Einhorn, and then by Basch's translation of Boas, and now by the present work of Hemmeter. The latter author has certainly given a very exhaustive and masterful résumé of all up-to-date knowledge with regard to intestinal disturbances. Hemmeter is not in favor of too much medication. Referring to laxatives, Hemmeter expresses himself as follows: "Laxatives should be used not in a stereotyped or aimless manner, but according to special indications. For instance, in acute constipation from atony and relaxation of the intestinal musculature, strychnine will, in the long run, be a better purgative than any other in the pharmacopœia. It cannot be emphasized too often that a proper diet is the best thing for most forms of constipation. Figs, apples, prunes, fresh rhubarb plant, and tomatoes are safer laxatives, in their way, than calomel. Substances which simply cause a more frequent, a fuller, but still well-formed, evacuation are called laxatives. Of these, the best and safest is castor oil; then come manna and tamarinds. A mixture of sulphur and cream of tartar mixed up with syrup of oranges and tragacanth is a harmless laxative. Similarly, compound licorice powder." . . .

As there is still a great deal of controversy over the use of opium in appendicitis and intestinal obstruction, it will be of interest to quote Hemmeter's views on this subject. He says: "There are some medical men, especially surgeons, who argue that opium in any dose or form, given in these conditions, is bad practice, because, in the first place, it obscures the signs and symptoms so that the diagnosis cannot be made; and, in the second place, it produces a state of pseudo-euphoria (or false improvement), which prejudices the patient against an operation that may be necessary. Against the first objection may be urged that morphine or opium may be given in such doses that they do not obtund the sensations entirely or to produce somnolence. Pain must be relieved. This demand is often so imperative that refusal to comply with it frequently causes a dismissal of the physician; and as the keen edge of the pain can always be dulled by one-sixth of a grain of morphine without destroying the chances of a diagnosis, I recommend that it should be given in all cases of appendicitis where there is much pain. There are other clinicians who go further than this, and speak of an opium treatment of appendicitis, giving from 20 to 30 drops of the tincture of opium three or four times a day. This treatment has never gained my confidence. I have seen it carried out by other practitioners, but was disposed against it by the remarkable depression which resulted in a number of cases. The second objection, that of the false improvement which might prejudice the patient against an operation, is invalid on the face of it. While it is the duty of the physician to relieve pain, it cannot be considered his duty to withold a means of relief in order to force upon the patient the conviction of the necessity of an operation. In occlusions, opium is indicated in the first periods of reaction. Its administration should be controlled by observing the pulse and general condition of the patient."

As a whole, Hemmeter's book will be read with great interest by the physicians at large, and will certainly prove of great benefit to them.

An Introduction to the Bacteriological Examination of Water. By W. H. Horrocks, M.B., Sc.Lond., Assistant Professor of Military Hygiene in the Army Medical School, Netley; Assistant Examiner in Hygiene under the Board of Education, South Kensington; Major, Royal Army Medical Corps. Octavo, 300 pages. Philadelphia: P. Blakiston's Son & Co., 1901.

This book is just what it pretends to be, an introduction to the examination of water by bacteriological methods. The author assumes a knowledge of elementary bacteriology by the reader, but goes into considerable detail concerning the questions arising when bacteriological methods are applied to the examination of water. After a brief preface, Chapter I gives careful directions for the collection of samples under various conditions. This is followed by a chapter on the estimation of the number of bacteria in definite quantities of water. The third chapter deals with the multiplication of bacteria in water and the influence of various physical and chemical conditions upon their number. The bacterial content of snow, ice, hail, and rain, and of water from rivers, lakes, springs, etc., is next considered, with a chapter on sand-filtration. The author then passes to the qualitative examination of water, devoting more than three-quarters of the book to the species of bacteria occurring in water. These are divided into three groups: (1) Those usually found in pure waters; (2) Those common in sewage, but rarely found in pure waters; (3) Those which are the specific causes of disease in human beings, and have been isolated from water supplies. The descriptions of species are good, but the classification not likely to be particularly helpful to the practical worker who seeks to identify a given species which he has isolated. To him a scheme which could be systematically followed with the successive exclusion of group after group, until the possibilities were narrowed to a few species, among which his culture must be classed, would be a great aid. Such a scheme would be a very substantial contribution to bacteriology. The question of variation in the physiological characters of species is judiciously treated in a manner likely to be helpful to those struggling with the problem of identification. The last two chapters are devoted to a consideration of the mode of action and utility of the Pasteur-Chamberlain and Berkefeld filters, a summary and brief directions for the preparation of culture media.

The value of anaerobic methods of cultivation in the bacteriological examination of water is not considered, although likely to be helpful in the detection of pollution; but this and a few other omissions that might have been avoided with but slight increase in the size of the book are not likely to be important to those who seek an introduction to this particular division of applied bacteriology. To such the book can be confidently commended.

Studies in Heterogenesis. By H. Charlton Bastian, M.A., M.D., F.R.S., Emeritus Professor of the Principles and Practice of Medicine and of Clinical Medicine in University College, London; Consulting Physician to University College Hospital, and Senior Physician to the National Hospital for the Paralyzed and Epileptic. First Part. With 210 illustrations from photomicrographs. 71 pages. London and Oxford: Williams & Norgate, 1901.

The author's thesis is the production of various forms of protozoa from the cells of entirely different species serving as "matrices," and of either vegetable or animal nature. His observations were made upon organisms found in fresh water, kept under conditions which were usually unfavorable for the normal development of the organisms. Among these observations were: "Transformation of the Endochrome of Large Confervoid Cells into Amœbæ" (p. 3), "Transformation of the substance of Euglenæ into Flagellate Monads" (p. 13), etc. From these studies, the author endeavors to reach some explanations of wide-reaching significance; *e.g.* "Explanation of the existence of lowest organisms at the present day" (p. 1), a problem which he regards as perplexing to the evolutionists. The candid reader can hardly escape a feeling that the author has failed to prove his case. The photomicrographs do not carry conviction; there are no studies of the fate of the "amœbæ" and other bodies formed within the cells observed. How is one to exclude the possibility that these bodies are not gametes belonging in the normal life cycle of the original organism? This conception of their nature is not even considered. We imagine that in studies of this sort it would be of the utmost importance not to trust to morphological characters in the determination of results, but carefully to follow the subsequent phenomena manifested by the bodies being investigated. Shape, size, motility, flagellation, do not alone reveal the nature of an organism of microscopical dimensions. One cannot controvert the generally accepted views of biologists upon such simple inferences as are contained in this work. More evidence is required and must be furnished before serious attention can be claimed for the conclusions so confidently set forth by the author.

A Textbook of Medicine. Begun by the late Charles Hilton Fagge, M.D., F.R.C.P., sometime Physician to Guy's Hospital. Completed after his death and since revised or rewritten by Philip Henry Pye-Smith, M.D., F.R.S., Fellow of the Royal College of Physicians, Consulting Physician to Guy's Hospital. Fourth edition, in two volumes. Vol. I, 1,123 pages. Philadelphia: P. Blakiston's Son & Co., 1901.

In this edition quite a number of alterations have been made, notably a general and more practical rearrangement of the material and the omission of old or abandoned ideas, together with such additions as recent medical progress has necessitated. The junior editor is practically responsible for the contents throughout, since, in the four editions which have appeared, most of the original text has gradually been changed. The work is more extensive than the majority of the two-volume textbooks, being closely printed and containing in small type the less important details and references to records of cases. A very valuable feature of the work consists in the fact that the knowledge is generally at first hand and represents the author's vast clinical experience with but little reliance on the opinion of others. The description of diseases is unusually graphic, being embellished by frequent references to necropsy and clinical records. Like most of the recent English books, the author has omitted to describe the recent yellow-fever experiments; but this can hardly be placed in the balance against the unusual excellence and completeness of the work. The publishers expect to have the second and final volume issued before the end of the year.

Transactions of the Clinical Society of London. Vol. XXXIV. 270 pages. London: Longmans, Green & Co., 1901.

This issue of the transactions maintains the high standard set by its predecessors and proves most interesting reading. Nearly fifty cases are reported, the vast majority of which depict some unusual phase of disease, while many are rendered exceptionally instructive by the incorporated illustrations, consisting of excellent radiographs and some colored plates.

The main article is that by Dr. Howard Tooth, on "Typhoid Fever Among the Troops in South Africa," with a full report of the discussions following. It is a valuable compilation.

Practical Medicine. By F. Mortimer Lawrence, A.M., M.D., Assistant in Practice of Medicine, Hahnemann Medical College; Chief of Medical Clinic, Hahnemann Hospital Dispensary. Philadelphia: Boericke & Tafel, 1901.

The author claims for this volume its adaptation only to students and not to advanced workers. It gives, in a well-ordered and condensed manner, all the main facts connected with the more common diseases, and lays special stress on pathognomonic symptoms and diagnostic laboratory procedures. In introducing each section on the special systems, the main questions to be asked of patients are given as useful hints to the beginner. The treatment includes most of the well-recognized procedures of both schools of medicine.

Studies of the Internal Anatomy of the Face. By M. H. Cryer, M.D., D.D.S., Professor of Oral Surgery, Department of Dentistry, University of Pennsylvania. 176 pages. The S. S. White Dental Mfg. Co., 1901.

This manual is a study mainly from a dentist's point of view of the upper and lower jaws, the various accessory sinuses of the nose, effects of pathological conditions in the region of the hiatus semilunaris, impacted teeth, modifications of the normal shape of the bones through abnormal forces, influence of muscular action and hypertrophy of the gums and alveolar processes. It is not a compilation, but represents the results of a careful study by the author of hundreds of skulls. The typal bone is ideal, as studied in the regions under consideration. The actual is a variant, and it is with the latter that the surgeon and dentist have to do. While nothing essentially new is presented, the book shows evidence of the most conscientious study.

A Treatise on Surgery. By American Authors. Edited by Roswell Park, A.M., M.D., Professor of Principles and Practice of Surgery, Medical Department University of Buffalo, N. Y. Third Edition. Philadelphia and New York: Lea Brothers & Co. 8vo, pp. 408.

The third edition of this, now standard, work, while having undergone a thorough revision, is very much increased in size. Excellent as the book is in other respects, it is now altogether too large and unwieldy for the students' use. As a work for ready reference for the general practitioner, it would be much better if it were divided into two volumes and more securely bound. The notable and especially valuable additions to the new edition are those of blood examinations as applied to surgery by Dr. Irving P. Lyon, and the study of tumors by Dr. Harvey R. Gaylord, whose recent investigations along the lines indicated have attracted such wide attention in the scientific world.

A Manual of Bacteriology. By Herbert U. Williams, M.D., Professor of Pathology and Bacteriology, Medical Department, University of Buffalo. 266 pages. Philadelphia: P. Blakiston's Son & Co., 1901.

This little manual is designed to give the beginner in bacteriology an outline of the technical procedures in common use in the study of bacteria, and to furnish the medical practitioner with a summary of the facts concerning bacteria which are likely to be of most importance to him. A brief introduction gives some idea of the general nature of bacteria and their place in nature. Part I deals with elementary technique. Part II treats of classification, physiological character distribution, the relations of bacteria to disease, disinfection, antiseptics, etc. Part III contains a very short summary of the chief characteristics of thirty-one species of non-pathogenic bacteria and a mere mention of yeasts and molds. Part IV consists of seventy-eight pages devoted to pathogenic species.

The book will undoubtedly be useful to those whose duty it is to know something about bacteria. The reader who desires guidance concerning the relative value of methods or aid in forming a critical judgment of the results of bacteriological research will find little help. Perhaps this is hardly to be expected in a work particularly calculated to be of assistance in a practical laboratory course.

A Textbook of Surgery. By Dr. Hermann Tillmann, Professor in the University of Leipsic. Translated from the seventh German edition by Benjamin T. Tilton, M.D., etc., and John Rogers, M.D., etc. Edited by Lewis A. Stimson, M.D., etc. Vol. I.—The Principles of Surgery and Surgical Pathology, with 516 Illustrations. New York: D. Appleton & Co., 1901.

Tillmann's work is one of the most important of the German textbooks on surgery, and is the most satisfactory with which we are familiar. The German editions have followed each other so rapidly that the translators have thought it necessary to issue another American from the last German edition. The present volume covers that part of the subject which includes general surgery, and the pathology of surgical conditions, which are discussed most satisfactorily and comprehensively. As heretofore, the book is paragraphed and arranged with the needs of the student chiefly in mind, but it will nevertheless be found a very useful work of reference to keep on the library shelf. It is hardly necessary to select separate chapters for criticism, but those on infectious diseases, and on diseases and injuries of bones, will be found specially commendable. This edition has been improved by the suppression of some obsolete material, both text and illustrations, and, as a rule, the retained illustrations serve their purpose very well. The work of the translator is, as a rule, good, and the making of the book is excellent. It will, no doubt, continue to be very popular with the student and instructor.

Traité de Médecine et de Thérapeutique. Par P. Brouardel, Membre de l'Institut, Doyen de la Faculté de Médecine de Paris, et A. Gilbert, Professeur agrégé à la Faculté de Médecine de Paris, Médecin des Hôpitaux. Tome VIII: Maladies des Plèvres et du Médiastin.—Maladies de l'Axe Cérébro-spinal. 848 pages, avec 93 figures. Paris: J.-B. Baillière et Fils, 19 rue Hautefeuille.

A list of well-known names indicated how wisely the editor has chosen his contributors, and the evident care in their presentation of the questions assigned to them in this volume serves to keep up the high aim made evident by the early volumes of the series.

Diseases of the respiratory system are completed in this issue, and those of the nervous system begun. Professor Landouzy presents a deep study of pleurisy in its varied phases; Labbé treats of hydrothorax, and Galliard of pneumothorax. The diseases of the cerebrospinal axis are taken up first in the second portion, and Klippel brings the subject to an end with articles on cerebral syphilis, cerebral tumors, and cerebral abscess.

The scope and quality of the labor here presented compares well with that of the seven volumes already reviewed in these columns.

Taschenbuch der Untersuchungsmethoden und Therapie für Dermatologen und Urologen. Second edition. By Dr. Albrecht Freiherr von Notthafft, Privatdozent an der Universität München. Munich: Seitz & Schauer, 1901.

Those familiar with the first edition of this little volume have undoubtedly been aided by the many brief suggestions as to therapy and diagnosis in the realms of cutaneous medicine and uro-sexual disorders.

Many improvements and additions are noted. The print is small, so that there is incorporated in less than 250 pages a mass of information bearing upon nutrition, dietetics, anatomy, physiology, prescribing, pharmaceutics, materia medica, special treatment, examinations of patients, secretions, and deposits, electrotherapy, and medicated baths. German-reading specialists and general practitioners will find in this a helpful little book.

An excellent idea and useful feature of the work is the addition of an international directory of reputable specialists in these branches in all large cities. The accuracy of the whole can be well argued from the few errors which have occurred in the New York list, the most important of which is making "Dr. J. Blake White, Professor fo Dermatology on the University Harvard."

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, Held January 13, 1902.

John B. Walker, M.D., Chairman.

Oophorectomy for Inoperable Cancer of the Breast.—Dr. Franz Torek made some remarks on this subject, and presented a patient illustrating this method of treatment. He said that when she was first examined there was enlargement of the axillary lymph nodes, and as this very considerable enlargement had now disappeared, he inferred that the operation of oophorectomy had the power of exerting some influence even at a distance from the mammary gland. However, the further away from the gland, the less was the effect of this operation. Although cachexia had been very marked on first coming under observation, her general condition had improved very greatly, so that now there was little apparent cachexia. Another interesting feature of the case was that at the time of the operation he had observed what appeared to be carcinomatous nodules of the peritoneum. Dr. Torek also referred to a case of recurrent ulcerating carcinoma of the breast upon which he had done oophorectomy. Shortly after the operation there had been a distinct reduction in the size of the enlarged lymph nodes. The improvement had, however, been only temporary, and she had died of a carcinomatous involvement of the pleura.

Remarkable Result from the Toxin Treatment of a Spindle-Cell Sarcoma.—Dr. William B. Coley presented a veterinary surgeon, whose home was in Minnesota. He was forty years old, and suffered from a spindle-cell sarcoma on the right superior maxilla. This growth had developed shortly after a severe blow in that region received from a steer. Dr. Wheaton of St. Paul had performed a resection of a portion of the superior maxilla, but was unable to remove all of the tumor. The operation had been done on May 7, 1901, and had been a very severe one. The man did very badly after it, and his weight was reduced from 185 to 103 pounds, and the swelling of the part was rapidly increasing. The liver had been enlarged for some time, and he was distinctly jaundiced. The man himself insisted upon being treated by the toxins of erysipelas and the bacillus prodigiosus. At that time his condition was so bad that it was thought he would soon die, and after a few injections had been given, his family physician was strongly averse to continuing them. However, the patient insisted upon having this treatment, and it was continued, with the result that the patient practically recovered in a very short time, and resumed his occupation. His weight had increased from 113 to 143 pounds. With the exception of the first few injections, which were given in the tumor, they were all made into the abdominal wall—a fact of unusual importance as showing the systemic effect of the toxins. The speaker said that in almost all of his own cases the toxins had not been injected at a remote point from the growth, and the result in this case was most remarkable. From the description given him, the man's condition was such that if he had seen him personally he would probably have advised against treatment with the toxins. The original tumor was examined by Dr. Haggard, the State microscopist of Minnesota.

Operation for Intraperitoneal Rupture of the Bladder.—Dr. James Pedersen presented a man of forty years, who, last October, while intoxicated, had fallen out of a window, a distance of about twelve feet. Dr. Pedersen had operated about nine hours after the accident through a suprapubic opening, and had found a transverse rent in the summit of the bladder, between two and one-half and three inches in diameter. It was closed by continuous suture of sixteen-day chromic catgut, and the rest of the wound by layer sutures. An opening was made into the membranous urethra.

Removal of Malar Bone for Epithelioma of Cheek.—Dr. Charles H. Peck presented a woman of thirty-three years, who had come to him last January with an ulcer of the face. Two years and a half before she had first noticed a small nodule on the cheek, and in May, 1898, the nodule had been removed and the wound grafted with skin. Six months later an ulcer had appeared at the site of the operation. When first seen, the ulcer was about one inch in diameter, and extended down to the malar bone. A wide excision was performed, and the anterior portion of the zygoma and the entire body of the malar bone were removed, and the wound grafted with skin. The chief feature of interest was the age of the patient. This operation was done one year ago. The pathologist reported that the epithelioma was of a malignant type.

Removal of the Whole Omentum for Intra-Abdominal Torsion.—Dr. J. Wiener, Jr., presented a young man who had been sick three days before coming under observation with symptoms pointing to appendicitis. His pulse was 100, and the temperature 101° F. The patient was admitted to the service of Dr. Lilienthal with the diagnosis of appendicitis. On examination, a mass was to be felt in the upper right quadrant of the abdomen, and his only diagnosis before opening the abdomen was peritonitis in the region mentioned. He was operated upon the day after admission, a small exploratory incision being made first. This revealed a deeply congested omentum, and led him to make a diagnosis of torsion of the omentum. The incision was then increased until eight inches in length. There was a little bloody fluid in the general peritoneal cavity. The omentum was almost black, and was very freely adherent in the right half of the abdomen. After freeing the adhesions, the pedicle of the omentum was found to be situated about one inch from the transverse colon. The entire omentum was affected by the torsion. There were two twists from left to right, and a twist in the opposite direction. The pedicle was ligated, the whole tumor removed, and the wound closed without drainage. The patient left the hospital four weeks afterward. A very interesting feature of the specimen was an enormous dilatation of the lymphatics. Dr. Wiener said that about one year ago he had presented to this section a case of omental torsion, which he had diagnosticated as appendicitis. There had been only six cases of omental torsion placed on record up to 1900.

Radical Cure of Hydrocele.—Dr. A. A. Berg presented a man to illustrate the result of operation for the radical cure of hydrocele. The operation had been done one year ago. The speaker said that he had performed this operation twice for hydrocele and twice for hernia. The technique was described by means of a diagram, and the comment made that when the peritoneal prolongation was very thin and brittle, as was often the case in infants, this method was particularly valuable.

Dr. W. R. Pryor, speaking of the case presented by Dr. Torek, said that the operation of oophorectomy for carcinoma of the breast was based solely on a clinical experience comprising forty-one cases, and had no strictly scientific basis. Roger William had analyzed 12,000 of Sir Spencer Wells' cases, and had found that the removal of the ovaries increased the chances of cancer six times. Of seventeen cases favorably influenced by oophorectomy, twelve had received thyroid extract. Twenty-one cases received no benefit from oophorectomy, and of these only five received the thyroid extract. This in itself was a very significant fact. Thyroid extract was known to improve cancer; indeed, any agent which would markedly disturb metabolism would exert a potent influence on cancer. It was known that oophorectomy would check phthisis, but certainly no one would think of performing oophorectomy for this purpose. He hoped this new treatment would not be followed, as it was founded on an absurd argument, and this operation for an incurable disease carried with it a mortality of 5 per cent.

Dr. Fred. Kammerer said that the disappearance of the enlarged glands in the neighborhood of the breast had been cited by Dr. Torek as evidence of the improvement effected, but it seemed to him more than probable that this diminution in the size of the lymph nodes was due to the removal of the ulcerated surface, and that these nodes were not really carcinomatous.

Dr. Coley said that he had followed out quite carefully all of the cases that had been reported as cured by this operation, and had not been convinced that there had been an undoubted cure by this method. Only 6 per cent. of the cases reported as having been treated in this way had been followed more than two years. He recalled having seen a case of carcinoma which Dr. W. T. Bull had declared to be inoperable, and yet the patient lived for seven years afterward.

Dr. Robert T. Morris said that we all recognized the fact that rapid degeneration of the whole sex apparatus followed removal of the ovaries. Further changes, when the ovaries were removed after the menopause, must be put down to the removal of the "internal secretion of the ovaries." We might reason that the rapid degeneration of the mammary glandular tissue made that tissue an unfit culture ground for the protozoa of cancer, assuming for the purpose of argument that cancer was of protozoan origin; but the curious fact was that the mammary-gland tissue had already been removed in cases of recurrent cancer that were thought to be suitable for ovariotomy, and we were dealing with a different set of tissues altogether. It was no argument against the operation of ovariotomy to say that statistics showed that the liability to cancer was increased six times by ovariotomy. The homœopathists might seize upon the fact to show that this was in accordance with their doctrine, if we turned about and did for inoperable carcinoma the thing that favored its development in normal individuals. It was true that different forms of carcinoma run a very different course without interference. It was the pathologist, rather than the surgeon, who should give us the prognosis in these cases to-day. Two of the forms of adenocarcinoma were comparatively benign. We could not toss aside the statistics of beneficial results of ovariotomy in cases of inoperable carcinoma. They came from sources that were too responsible, and hence we should accept the empirical fact and proceed to reason backward. We could not deny certain facts on the ground that they were not in accord with *a priori* deductions. If some inoperable carcinomata distinctly underwent favorable changes after ovariotomy, then some patients should be given that advantage. He had recently operated in two cases, telling the patients that the treatment was largely experimental.

Dr. Torek said that he did not wish to be understood as recommending oophorectomy whenever there was any possibility of doing one of the recognized direct operations. He had approached this subject with even more skepticism than had been evinced by those who had just spoken, but he had been profoundly impressed by the disappearance of a marked cachexia in the cases reported by him. The infiltrations in the axilla were very large and hard, and must have been carcinomatous. He had no explanation to offer concerning their disappearance, but the subject seemed to be sufficiently obscure and of enough importance to warrant surgeons in carefully reporting individual cases.

Dr. Frederick Holme Wiggin, referring to Dr. Pedersen's case, said that he had found no difficulty whatever in securing healing of wounds of the bladder. In one case, already reported, the wound, although three and one-quarter inches long, had healed very kindly after suture and drainage of the bladder. When cystitis was not present, he thought wounds of the bladder healed as readily as wounds of the intestine. He was in the habit of using two rows of stitches and bringing the peritoneum over the line of suture.

Dr. A. A. Berg said that he had recently seen a number of cases of epithelioma that had been subjected to the *x*-ray. All of the cases of flat epithelioma of the skin had done very well under daily applications of the *x*-ray from a low vacuum tube, the latter being applied very closely. In none of the cases had an *x*-ray dermatitis developed. In all the other cases of carcinoma treated in this manner, a number of them being recurrent carcinomata of the breast, it seemed to him that the *x*-ray acted by producing superficial cauterization, and at the same time stimulating the growth in the tissue at the periphery.

Dr. Torek said that, according to his experience, both epithelioma and carcinoma were far more malignant in younger than in older subjects. He could not recall a single case in which he had succeeded in curing a carcinoma of the breast in a woman under thirty years of age. In such persons the recurrence seemed to take place very early.

Dr. Martin W. Ware said that he had found three additional cases of torsion of the omentum reported in an article by Hussey. The mortality in these cases was about 15 per cent. The torsion occurred in persons having hernia. Such cases generally called for a very large and wide incision.

Dr. J. Wiener showed for Dr. H. Lilienthal a specimen of torsion of the omentum, removed from a man who had come into the hospital with symptoms of appendicitis. Hernia, he said, did not always take place in connection with torsion; it was simply a coincidence. This case of Dr. Lilienthal's had no hernia. In at least four of the cases there had been nothing in the hernial sac; in others a portion of the omentum had been found in the sac. In all of the cases that he had collected there had been no mortality, and he did not think there should be any in cases diagnosticated early and promptly subjected to operation.

The Cure of Hydrocele by the Injection of Minute Amounts of Carbolic Acid.—Dr. William B. Coley read a paper on this subject. The carbolic-acid method of treating hydrocele, he said, had been introduced to the profession by Levis, in 1881, and he had used from 30 grains to a drachm and a half of the acid. These patients had not exhibited any evidence of carbolic-acid poisoning, had suffered no pain, and had not been incapacitated from attending to their usual work. Various accidents had followed the use of both iodine and carbolic-acid injections, and some surgeons had gone so far as to advise the open incision method as safer and more satisfactory. From 1891 to 1900, 2,240 cases of hydrocele had been treated at the Hospital for Ruptured and Crippled. Of this number, 1,603 had been in children under fourteen years of age. Nearly all of the hydroceles in infancy either disappeared spontaneously or could be cured by the application of equal parts of tincture of iodine and tincture of belladonna. For hydrocele in the adult, the speaker said he now made use of small injections of carbolic acid. Each injection consisted of two and one-half minims of Schering's carbolic acid, with the smallest quantity of glycerin necessary to liquefy the acid. He had found the results just as good as from the larger injections of this acid, and they were associated with less risk and discomfort. It was of the greatest importance that the solution of carbolic acid should be sufficiently concentrated. A number of the earlier cases had been treated with the ordinary commercial carbolic acid, and the results had not been nearly so good as when the more concentrated acid of Schering had been used. It had been found convenient to make use of a small double trocar. The hydrocele fluid having been very thoroughly evacuated through the outer trocar, the carbolic acid should be injected through the inner trocar attached to a hypodermic syringe. He was certain that the carbolic-acid injection-method was the best yet devised for the cure of hydrocele. He believed the use of this very small amount of carbolic acid was absolutely free from risk, and careful examination of the thirty-six cases so treated showed a very uniform induration. The cases had not been selected, and had varied from recent hydroceles in young boys to hydroceles of long standing occurring in old persons.

Dr. J. Wiener, Jr., said that he had been accustomed to treat hydrocele by the injection of the ordinary so-called "pure carbolic acid" in quantities of ten or fifteen minims. There had been quite a number of relapses, and it had seemed to him that the injection of the larger quantities was responsible for undue inflammatory reaction.

Dr. Ware said that he had tried the injection-method in about 100 cases of hydrocele treated during the past six years. He had selected for this treatment cases with a very thin sac, and had been able to follow a fair proportion of them. He could only recall six cases in which there seemed to have been a cure effected. He had made use of the crystallized carbolic acid liquefied by heat, using a trocar and a hypodermic needle.

Dr. A. Ernest Gallant said that he had followed 239 cases in children that had been treated in dispensary practice with the minute injections of carbolic acid. It was almost impossible to inject the carbolic acid and withdraw the cannula without some of the carbolic acid coming down through the puncture opening. This, he believed, produced an eschar, and made the sac permeable. It was desirable to make free use of vaseline on the scrotum, in order to avoid the unpleasant effects arising from the spilling of the acid. The injections had been followed by a good deal of soreness and considerable pain.

Dr. E. M. Foote said that at the Vanderbilt Clinic he had probably seen several hundred hydroceles treated, and he was sure that many hydroceles would recur after any method, even the open method. He had seen many recurrences even after the injection of carbolic acid. He recalled one case of double hydrocele in which one side had merely been tapped and the other side injected. The man returned some time afterward with a recurrence, but only on the side that had been injected with the acid. It was certainly most important to secure the evacuation of all the hydrocele fluid prior to making the injection.

Dr. Coley said that if the double trocar employed by him were used, there would be no trouble from leakage of the acid. This instrument was most useful in enabling the operator to squeeze out every drop of the hydrocele fluid, and be sure that the carbolic acid was then injected into the sac.

A Stethoscope for Anæsthetists.—Dr. Frederic Griffith presented a simple stethoscope so constructed that it might be kept in position on the patient and in the ears of the anæsthetist during the administration of an anæsthetic, thus leaving free the hands of the anæsthetist.

A Case of Extreme Deafness with Tachycardia.—Douglas Stanley reports the case of a man who had recently recovered from typhoid fever and who was suffering from tachycardia and extreme deafness. Ears and throat were in normal condition. The patient had not been taking any drug of importance, but had been smoking a very strong form of twist, eight to nine ounces per week. He was ordered to give up smoking, and given rhubarb and soda. The treatment was, of course, directed to the tachycardia, and a month later this was greatly improved. To the physician's surprise, the deafness had practically disappeared, and the man, from looking a stupid idiot, turned out to have very fair mental power. The question is, what was the nature of the deafness? The account of how it began, and the normal appearance of the membranes negatived the view that it was a relic of typhoid fever. Its disappearance on withdrawal of the tobacco seemed to support the idea that it was a toxic deafness similar to tobacco amblyopia.—*The Birmingham Medical Review.*

NEW YORK ACADEMY OF MEDICINE.

SECTION OF MEDICINE.

Stated Meeting, Held January 21, 1902.

James N. West, M.D., Chairman pro tem.

Ergot in Graves' Disease.—Dr. R. Van Santvoord read a paper on this subject, in which he called attention to the fact that in all the cases of Graves' disease that he had observed the sphygmographic tracings had shown good amplitude with a rapid falling off after the primary wave, with a well-marked dicrotism. It was recognized by medical authorities that the ordinary heart tonics had little effect upon the heart in Graves' disease. A few cases were reported to emphasize the desirability of giving attention to the peripheral circulation in connection with the symptomatic treatment of this disease.

Dr. James K. Crook said that at one time he had used ergot in this disease, but with a somewhat different object in view. If the thyroid gland could be restored to its normal size, the normal action of the heart restored, and the nervous phenomena controlled, one could practically cure the disease. The general opinion at the present time was that Graves' disease was due to an enlargement of the thyroid gland and an excessive formation of thyroid secretion. Experience seemed to show that drugs which possess the power of lessening glandular activity ameliorate the symptoms of Graves' disease. If ergot were capable of diminishing the supply of blood to the thyroid gland, it should be of service in this disease, and certain observers had reported observations apparently confirmatory of this view. The speaker said that he had injected ergotin into the thyroid gland once a week for some time in such a case, and thought there had been some diminution in the size of the gland. However, he preferred to make use of belladonna or atropin, or else the phosphate of sodium.

Dr. Van Santvoord said that it had seemed to him in watching the last two cases particularly, the action of the ergot had been very immediate and direct, and had lessened the pulse and added to the patient's comfort. He had given this drug as a symptomatic remedy, and without any idea of effecting a cure.

Loud Bleating Heart Murmur.—Dr. Louis Faugères Bishop presented a colored woman, who, four years ago, following immediately upon a fright, had developed symptoms of cardiac disease. These symptoms had continued up to the present time. On examination, a bleating murmur was audible over the heart, and was so loud that it could be heard by the patient herself, and by the physician without placing the ear directly against the chest.

Tenderness at the Ensiform Cartilage as a Sign of Cardiac Incompetency.—Dr. Bishop also presented two cases illustrating this sign. The first patient was a colored woman having myocarditis. At intervals the heart would fail, and at such times the first thing noted was a pain and tenderness below the ensiform cartilage. The other patient was a man with rheumatic valvular disease of the heart. On admission to the hospital there was acute dilatation of the heart, accompanied by decided enlargement of the liver and marked anasarca. This patient also exhibited tenderness at the xiphoid cartilage.

Dr. S. S. Burt said that he had had a similar case to the one with the musical murmur. In his case the murmur could be heard at the distance of two feet, and the patient had sought advice because conscious of this noise himself. It was probable that the stream of blood had been broken up by a band, the latter being set in vibration. The murmur had diminished so that in a few months it could only be heard with the ear on the chest. Singularly enough in this case, the prominent point in the history was also a fright.

Aneurysm of the Ascending Arch of the Aorta with Bovine Heart.—Dr. S. S. Burt presented a man with a greatly enlarged heart. There was a soft double murmur at the apex, which became rough at the base. At the second interspace a decided systolic thrill could be felt. The aorta was dilated, and the heart was dilated and hypertrophied. An *x*-ray photograph of the heart and aneurysm was exhibited. Both alcoholism and syphilis had been excluded.

Mitral and Tricuspid Insufficiency with Pulsating Liver.—Dr. BURT also presented this case. The man had been tapped and the fluid allowed to escape gradually from the abdomen. In this case a small trocar was used, but he preferred to make use of the aspirating needle. He was compelled to say, however, that although he had removed the ascitic fluid very gradually in this way in many cases, the fluid seemed to reaccumulate as rapidly as it was evacuated.

A Case of Long-standing Mitral Regurgitation.—Dr. JAMES K. CROOK presented this historical case. The patient, a journalist, had had an attack of acute articular rheumatism in 1864. The diagnosis of mitral regurgitation was made by Dr. Austin Flint, Sr., in 1865, and the man was under the care of this physician as well as of others of note, such as Dr. George M. Beard and E. Darwin Hudson, all of whom were now dead. The patient had been under Dr. Crook's care since 1890, and had been presented to the New York State Medical Society in 1897. The man had had several subsequent attacks of acute articular rheumatism, but there had been no increase in the cardiac lesions. The chief point of interest in this case was that the mitral regurgitation had lasted for thirty-eight years, and the man was still in the perfect possession of his mental and physical powers.

Dr. J. J. WALSH said that he had seen in Vienna a hale and hearty man of sixty-nine years, who had had mitral regurgitation for forty-six years.

Dr. BURT said that he had long maintained that in many of these cases of mitral regurgitation the prognosis was good, and he believed the life insurance companies were beginning to realize that these heart cases were often good risks.

Loud Musical Diastolic Aortic Murmur.—Dr. ALFRED MEYER presented a man of thirty-three years, the father of three healthy children. His family history was negative, and he claimed never to have had rheumatism. He had been accustomed to smoke ten cigarettes daily for fifteen years, and to take four whiskeys a day during most of this time. The symptoms of which he complained had been first noticed three years ago. Auscultation showed a diastolic murmur developed at the aorta, and of a distinctly musical character. In hearing such a murmur, one should attune the ear first by listening with the stethoscope. The murmur could be heard at a distance from two to six inches from the chest, varying with the conditions present at the time. It could be heard down the spinal column as far as the sacrum. There was marked pulsation in the vessels of the neck, a distinct Corrigan pulse, and a very plain capillary pulse, though no centripetal pulse. These distance murmurs were quite rare even in the experience of those who saw a great deal of cardiac disease. Perhaps one such case in 300 of cardiac disease would fairly represent the frequency of these distance murmurs. It was probable that there was an enlargement of the aortic orifice or a dilatation of the root of the aorta, thus involving the cusps of the valve in a relative insufficiency. In order to produce a musical murmur the surface must be quite smooth; rough surfaces did not give them. A few autopsies seemed to support the theory just given regarding the causation of these musical murmurs.

Aortic Musical Murmur and Visible Arterial Pulsation.—Dr. WILLIAM H. KATZENBACH presented a man having an aortic systolic and diastolic musical, though not a distance, murmur. The Corrigan pulse was very marked, the "brachial tap" could be readily elicited, and there were visible pulsations in almost all of the superficial arteries. The history of heart disease dated back many years, and the etiology was supposed to be an attack of syphilis in youth. By the brachial tap was meant a "water-hammer pulse," obtained by applying the fingers lightly to the brachial artery.

Dr. BURT said that Dr. Meyer's case was the first diastolic musical murmur that he had heard. He had listened to a number of musical murmurs audible on placing the ear upon the chest, but to only two musical distance murmurs, and these were both systolic.

Chronic Myocarditis.—Dr. U. F. MARTIN reported the case of a woman of forty-nine years, in the wards of St. Luke's Hospital, suffering from chronic myocarditis. She was non-alcoholic, and had no specific history. About eighteen months ago, she had been suddenly seized with dyspnœa at night. She had since then suffered considerably from cardiac incompetency, and had made the rounds of the hospitals. The heart was enlarged, and its action was very irregular. The only cause for the myocarditis that was discoverable was a general cirrhosis involving the kidneys and other organs. Such cases were usually greatly improved after a few weeks of treatment, but they were not in a condition to become self-supporting. The case was presented as a text for some timely and practical reflections as to the best way of caring for these persons, without interfering with the work of the hospitals for acute diseases.

Dr. BURT said that there should be a well-endowed hospital for chronic heart disease in this city, just as there should be ample hospital accommodation for consumptives. He hoped that when we got through endowing libraries, something would be done for these poor people. It was well to take care of the head, but he thought it was equally important to look after the heart.

Dr. MEYER commended the remarks of the last speaker, and added that there were already a number of institutions for chronic invalids. The question under discussion was akin to that of the care of the consumptive poor; for it was not enough to have institutions for the sick, but for the families of these invalids.

A Scientific Treatment for Deafness.—M. Marage, says the New York *Sun*, has lately communicated to the Paris Academy of Sciences a scientific treatment for deafness which is substantially as follows:

(1) Measures accurately the auditive sensitiveness by causing the patient to listen, at a constant distance, to the sounds of a siren reproducing the fundamental vibration of the vowel sounds. The intensity of sound being proportional to the pressure of the air, the auditive acuity is — when the pressure must be *n* millimeters in order that the sound may be heard. The normal acuity, unity, is that of an ear which hears the sound under a pressure of one millimeter.

(2) Make the patient listen to the sounds of the same siren through a tube provided with a membrane which transmits all vibrations without introducing or suppressing any of the harmonics. This is a kind of massage of the ear, made by vibrations, which it is destined normally to perceive. This treatment is never painful, and never produces buzzings or increases the deafness, and has frequently produced excellent results.

India's Animal Hospital.—Europeans and Americans boast much of their kindness to animals, and yet there is a hospital for animals in India which surpasses anything of the kind in the western world.

This hospital is at Sodepur, and was established fourteen years ago, the object of its founders being to provide not only a place in which sick and injured animals could obtain medical and surgical attendance, but also a home in which old animals could pass their remaining days peacefully. Since the hospital was opened, thousands of animals, birds, reptiles, and insects have been cared for in it, among them cows, sheep, horses, donkeys, dogs, cats, monkeys, goats, parrots, pigeons, chickens, elephants, and snakes.—*New York Herald.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending February 1, 1902:

	Cases.	Deaths.
Measles	706	22
Diphtheria and croup	346	51
Scarlet fever	351	29
Smallpox	42	15
Chickenpox	85	..
Tuberculosis	279	119
Typhoid fever	33	8
Cerebro-spinal meningitis	..	4

The Social Evil in Cincinnati.—The Cincinnati Board of Health was recently made defendant in a suit brought at the instance of a taxpayer to restrain the Health Officer, Dr. Clark W. Davis, from enforcing a regulation for the medical examination of prostitutes. The petition of the plaintiff stated that the defendants "have adopted and are enforcing a regulation requiring all known prostitutes in said city to submit to a personal examination once every week by the district physicians, to determine whether they are affected with any venereal disease, and if found free therefrom, each prostitute receives a certificate containing her personal description, and the recital of the fact that she is free from disease, which certificate can only be obtained from the health office, and must be conspicuously displayed in the room of such prostitute; that these certificates are made out in triplicate, one for exhibition by the person examined, one for the health department, and one for the chief of police; that if any prostitute is found to be affected with venereal or other infectious disease, she is not permitted to remain an inmate of such house of prostitution or assignation, but is sent to the city hospital or branch hospital of the city; and, finally, that said district physicians charge each prostitute the sum of fifty cents for each examination and certificate." The plaintiff averred that such examinations and charges therefore were an abuse of the corporate power of the city of Cincinnati, and prayed for a restraining order. The defense was that it was known to the health officer that in certain houses and localities contagious or infectious diseases prevailed more than elsewhere, and that periodical visits and inspections of such places, together with examinations of those suspected of disease, were made in the interests of public health and to prevent or restrict disease. The suit was dismissed. During the past year, Dr. Davis has had regular examinations made of the women of disrepute in Cincinnati, has been prosecuted in almost every court in the city, and has successfully defended the right of the health officer to make examinations for the suppression of this disease. The result of these examinations is shown in a very material decrease in the number of cases of venereal disease in the city.

Philadelphia Pediatric Society.—At a stated meeting held January 14, Dr. J. H. McKee presented "A Case of Asthma Apparently Due to Enlarged Bronchial or Mediastinal Glands," and also "A Case of Specific Dactylitis." Dr. Alexander McAllister read the report of "A Case of Tetany," occurring in a child in whom following vaccination symptoms previously present became intensified. Trismus developed, but recovery ensued. Dr. J. Alison Scott presented a child exhibiting general cyanosis, with marked clubbing of the ends of the fingers and toes and progressive impairment of vision. No adventitious cardiac sound could be heard, and the suggestion was made that the lesion consisted in some congenital defect, such as imperfect closure of the interventricular or interauricular septum, or stenosis or occlusion of the pulmonary artery, or the presence of a single ventricle from which both aorta and pulmonary artery arose. Dr. E. E. Graham presented the "Report of a Case of Congenital Heart Disease with Exhibition of the Specimen; Pathological Report by Dr. Randle C. Rosenberger." In this case there was found after death stenosis of the pulmonary artery, and a deficiency in the interventricular wall, while the aorta arose from both ventricles. During life, examination had failed to disclose evidence of the conditions found, although at the time both respiration and heartbeat were greatly accelerated. Dr. S. McC. Hamill read as Secretary a "Review of the Work of the Milk Commission for the Year 1901." Dr. Thompson S. Westcott delivered the "Annual Address of the Retiring President." The following officers were elected for the ensuing year: *President*, Dr. S. McC. Hamill; *Vice-Presidents*, Drs. D. J. Milton Miller, John H. Jopson, Augustus A. Eshner; *Secretary*, Dr. C. H. Weber; *Treasurer*, Dr. H. B. Carpenter; *Recorder*, Dr. D. L. Edsall.

Vaccination Creed of the Chicago Board of Health.—One method of the Chicago Board of Health in its war against smallpox is the distribution of circulars in all lodging houses, police stations, cheap hotels, waiting rooms, and all places frequented by numbers of people, especially of the tramp or migrant class. Attention is called to them by placards 10 x 14 inches in size, which contain the text of a *Vaccination Creed*, reported also on the fourth page of the circular. These placards are posted in conspicuous places about the premises, and a note at the bottom informs the reader that "Further information as to vaccination and smallpox is contained in the *Supplement to a Vaccination Creed*—copies obtainable on the premises." The following is the text of the "Vaccination Creed":

We, the undernamed, hereby publicly profess our firm belief—based upon positive knowledge, gained through years of personal experience and study of smallpox and vaccination —(1) That true vaccination — repeated until it no longer "takes"—always prevents smallpox. Nothing else does. (2) That true vaccination—that is, vaccination properly done on a clean arm with pure lymph and kept perfectly clean and unbroken afterward—never did and never will make a serious sore. (3) That such a vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life, and is the only conclusive evidence of a successful vaccination. (4) That no untoward results ever follow such vaccination; on the other hand, thousands of lives are annually sacrificed through its neglect—a neglect begotten of want of knowledge. ARTHUR R. REYNOLDS, M.D., Commissioner of Health, City of Chicago. HERMAN SPALDING, M.D., Chief Medical Inspector, Department of Health.

The Norwegian Hospital of Brooklyn has, since 1887, been in receipt of nearly $4,000 annually from an anonymous donor. The amount was paid regularly in quarterly instalments of $960, but the Deaconesses in charge of the institution have only just learned whence the gifts came. The amount was the interest at 6 per cent. on $64,000, which the late Mr. Alfred Corning Clark left in trust for this purpose, with the express understanding, however, that the donation be made anonymously, and the donor's name be kept a secret until such time as it should be decided to hand over the principal. Mr. F. G. Bourne, who has had charge of the fund, has now made public the giver's name, while handing over the sum to the trustees of the hospital as a permanent trust fund to be known as the "Skougaard-Severini Memorial."

Congress on Tuberculosis.—The third annual session of this congress is announced to be held on the 14th, 15th, and 16th of May, 1902, in this city, in Joint Session with the Medico-Legal Society. There will be two sessions each day, and no evening session, except on the 15th, when the banquet will be given. There will be, aside from all papers of a miscellaneous nature, four symposiums arranged, each to occupy one session of the body: (1) Preventive Legislation, Embracing the Social, Municipal, and State Aspects of Tuberculosis. (2) Tuberculosis in Its Pathological and Bacteriological Aspects. (3) The Medical and Surgical Aspects of Tuberculosis. (4) The Veterinary Aspects of Tuberculosis. The Secretary of the Congress is Mr. Clark Bell of this city.

Mortality in Michigan During December, 1901.—The returns of vital statistics of Michigan show that during the last week of 1901 there were 2,770 deaths returned, corresponding to a death rate of 13.5 per 100,000 population. This number is an increase of 316 over the previous month, but is only 95 more than the number returned for December, 1900. There were 387 deaths of infants under one year of age; 182 deaths of children aged one to four years, both inclusive, and 853 deaths of persons aged sixty-five years and over. The most marked increase of the month was in the mortality of the aged. There were three deaths from smallpox during the month.

War Against Mosquitos in New Jersey.—Professor Smith, New Jersey State Entomologist, announced, at the recent annual meeting of the State Agricultural Society, that he intended to ask the Legislature for an appropriation of $10,000 for the further investigation and possible extermination of the New Jersey mosquito. Certain members, it is expected, will fight the proposed legislation on the ground that the mosquito is beneficial to rheumatic natives. One Assemblyman, who fought valiantly all efforts to legislate against the New Jersey mosquito a few years ago, declared that the bite of the mosquito had proved a sure cure for rheumatism.

The National Health Service.—The following resolution was passed by the American Society of Naturalists and by the Council of the American Association for the Advancement of Science, Chicago, Ill., at meetings held during the last week in December, 1901:

Resolved, That the Council of the American Association for the Advancement of Science approves of the efforts to strengthen the administration and work of the Marine Hospital Service by its establishment as a National Health Service in the direction of promotion of the public health, the furtherance of scientific investigation relating thereto, and the securing of the coöperation of experts in hygiene and related subjects.

Opposition to Camps for the Tuberculous.—A meeting of a number of residents of the townships of Pocono, Paradise, and Coolbaugh, Penn., was held recently at Stroudsburg, to organize a health association for the Pocono region, and to prevent the location of consumptive camps in that region. The residents of the Pocono Mountains, whose interests are largely centered in the hotel and boarding-house business, have been aware for some time that a movement has been initiated for the establishment of sanitariums for consumptives in that region, and they oppose it bitterly.

"Raccolta di Memorie Italiane Sulla Laringologia, Rinologia ed Otologia."—This is the title of a new publication established in Turin under the editorial management of Dr. I. Dionisio. It is to be a collection of medical monographs on subjects in the specialty noted, published at varying intervals. The articles are published in both Italian and French. There are two memoirs in the first fasciculus, the first by Dr. Ignazio Dionisio, on the prevention of obstruction and expulsion of laryngeal tubes; and the other by Dr. Adolfo Casassa, on the results obtained by intubation with laterally perforated tubes.

Smallpox a Crime.—It is reported in the papers that Dr. H. M. Bracken, secretary of the Minnesota State Board of Health, in a public address delivered recently in Minneapolis, declared that everybody of discretionary years found afflicted with smallpox ought first to be cured and then sent to jail for ninety days. Dr. Bracken explained that thorough demonstration had been given of the preventive value of vaccination, and there was no excuse for smallpox in civilized countries.

Filthy Lucre.—The Ohio State and local boards of health, before ending their annual session, held recently in Columbus, adopted a resolution declaring against the continued use of paper money after it has become soiled from constant handling. Dr. Thomas Clarke of Massillon said that the paper currency of the country, after it has been in use long enough to become dirty, is one of the prolific sources of disease, and one of the most dangerous carriers of bacilli in existence.

The South African Reconcentrado Camps.—A blue book recently presented to Parliament shows an improvement in the conditions in the Boer concentration camps over those that prevailed some months ago. The report states that in the month of December there were 117,017 whites in the concentration camps in South Africa. The total number of deaths in the month was 2,380, being an annual death rate per 1,000 of 244 compared with 285 for the month of November.

A Woman House Surgeon.—A woman was appointed by the committee house surgeon to the Macclesfield Infirmary some time ago, and now refuses to resign, although the entire honorary staff object to a female in that position. She pretends she is contending for a principle, but it seems to be going rather far for a woman doctor, however competent and wedded to science, to force her attendance on males, especially on patients with genitourinary diseases.

Mortality of Alpine Climbing.—A report in the *Sun* states that statistics just published in regard to the number of accidents in the Swiss Alps during the past year show that 119 lives were lost. This breaks the record, and is twice as large as the fatalities in 1900. Chamounix, which has been the principal death center since the first ascent of the Matterhorn in 1850, was responsible for the loss of thirty lives.

Philadelphia Academy of Surgery.—At the annual meeting held January 6, the following officers were elected for the ensuing year: *President*, Dr. Richard H. Harte; *Vice-Presidents*, Drs. Henry R. Wharton and John B. Deaver; *Secretary*, Dr. William J. Taylor; *Treasurer*, Dr. William G. Porter; *Recorder*, Dr. John H. Gibbon; *Council*, Drs. Robert G. Le Conte and W. Joseph Hearn; *Business Committee*, Drs. J. H. Jopson and G. G. Davis.

Homesickness in the Philippines.—It is said by medical men in Manila that a considerable amount of the breaking down in health among American residents of the Philippine Islands is due to their nostalgia. The newspapers of Manila are urging the Philippine Commission to make an appropriation for a daily cable-news service from the United States, thus bringing Americans there into closer touch with their home life.

Philadelphia County Medical Society.—At the stated business meeting held January 15, the following officers were elected for the ensuing year: *President*, Dr. Thomas H. Fenton; *First Vice-President*, Dr. Francis M. Perkins; *Second Vice-President*, Dr. J. Chalmers Da Costa; *Secretary*, Dr. Ellwood R. Kirby; *Treasurer*, Dr. Collier L. Bower; *Assistant Secretary*, Dr. William S. Wray.

Drug and Food Adulteration.—According to a report presented at the recent annual meeting of the Drug Trade Section of the New York Board of Trade and Transportation, extensive adulteration of the essential oils used in the manufacture of confectionery is being practised in this city. The section decided to take steps to stop this practice.

Jefferson College Alumni.—An attempt is being made to secure the names and present addresses of the living officers of each class graduated from the Jefferson Medical College since its foundation, and the alumni are therefore requested to send such information concerning the officers of their respective classes to *The Jeffersonian*, Jefferson Medical College, Philadelphia.

A Sanatorium for Consumptives in Colorado.—General William J. Palmer has announced his intention of giving 100 acres of land and $50,000 to establish a semi-philanthropic sanatorium in Colorado Springs for consumptives, the institution to cost in all $250,000. The remainder of the money is to be raised by subscription.

The New "Journal of Obstetrics and Gynecology of the British Empire" appeared on January 1, with Mr. Alban Doran as editor-in-chief. His colleagues are scattered through the empire. The list is so lengthy, they can only be regarded as contributors, or, if otherwise, Mr. Doran's task of driving is not to be envied.

Habitual Drunkards in Lauben.—The names of habitual drunkards in Lauben, Silesia, are printed, and a list is given to each saloonkeeper. Any person supplying one of them with intoxicants is subject to a heavy fine.

Dr. Seymour Oppenheimer has been appointed Laryngologist and Otologist to Gouverneur Hospital, New York City.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended February 1, 1902:

SMALLPOX—UNITED STATES.

		CASES.	DEATHS
Arkansas, Little Rock	Jan. 20..	17	1
California, Los Angeles	Jan. 11–18..	8	
San Francisco	Jan. 12–19..	4	
District of Columbia, Washington	Jan. 11–18..	2	
Illinois, Belleville	Jan. 18–25..	1	
Chicago	Jan 18–25..	8	
Danville	Jan. 18–25..	1	
Freeport	Jan. 18–25..	3	
Galesburg	Jan. 18–25..	2	
Indiana, Evansville	Jan. 18–25..	4	
Iowa, Clinton	Jan. 18–25..	5	
Kentucky, Lexington	Jan. 18–25..	3	
Maine Portland	Jan. 18–25..		1
Massachusetts, Boston	Jan. 18–25..	44	6
Cambridge	Jan. 18–25..	3	1
Lowell	Jan. 18–25..	1	
New Bedford	Jan 18–28..	6	
Somerville	Jan. 18–25..	1	
Weymouth	Jan. 11–18..	1	1
Woburn	Jan. 18–25..	1	
Michigan, Detroit	Jan. 18–25..	6	
Minnesota, Minneapolis	Dec. 28–Jan. 18..	57	
Missouri, Hannibal	Jan. 11–18..	1	
Nebraska, Omaha	Jan. 18–25..	54	
New Hampshire, Nashua	Jan. 18–25..	3	
New Jersey, Camden	Jan. 18–25..	19	1
Jersey City	Jan. 18–26..	13	1
Newark	Jan. 18–25..	35	8
New York, Binghamton	Jan. 18–25..	1	
New York	Jan. 18–25..	54	11
Ohio, Cincinnati	Jan. 17–24..	17	
Middletown	Jan. 18–25..	1	
Toledo	Jan. 18–25..	1	
Youngstown	Jan. 18–25..	4	4
Pennsylvania, Altoona	Jan. 8–25 ..	1	
Norristown	Jan. 18–25..		1
Philadelphia	Jan. 18–25..	90	19
Pittsburg	Jan. 18–25..	2	
Reading	Jan. 20–27..	1	
Scranton	Jan 15–22..		1
Rhode Island, Providence	Jan. 18–25..	2	
Tennessee, Memphis	Jan. 25–25..	16	
Vermont, Burlington	Jan. 18–25..	31	
Washington, Aberdeen	Jan. 18—Prevalent.		
Coupeville	Jan. 16	2	
Hoquiam	Jan. 18—Prevalent.		
Tacoma	Jan. 12–19..	3	
Wisconsin, Greenbay	Jan. 19–26..	13	
Fond du Lac	Jan. 18–25..	1	
Milwaukee	Jan. 18–25..	3	
SMALLPOX—FOREIGN.			
Austria, Prague	Dec. 28–Jan 4..	13	
Canada, Halifax	Jan. 18–25..	1	
Winnepeg	Jan. 11–27..	6	
Colombia, Cartagena	Jan. 1–12..		7
France, Marseilles	Dec. 1–31..		1
Nantes	Dec. 1–31..	3	
Paris	Jan. 4–11..	6	
St. Etienne	Dec. 15–31..	1	
Great Britain, Glasgow	Jan. 10–17..	4	
Liverpool	Jan. 4–11..	3	
London	Jan. 4–11..	872	56
Newcastle on the Tyne	Jan. 4–11..	5	
Greece, Athens	Jan. 4–11..	1	
India, Bombay	Dec. 17–24..		1
Karachi	Dec. 15–22..	14	3
Italy, Naples	Jan. 4–11..	12	4
Palermo	Dec. 28–Jan. 4..		1
Russia, Odessa	Dec. 28–Jan. 4..	4	2
St. Petersburg	Dec. 28–Jan. 4..	8	1
YELLOW FEVER.			
Mexico, Vera Cruz	Jan, 11–18..	3	2
CHOLERA.			
Straits Settlements, Singapore	Nov. 30–Dec. 7..		2
PLAGUE.			
India. Bombay	Dec. 17–24..		175
Karachi	Dec. 15–22..	55	43

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

CLINICAL HÆMATOLOGY. By JOHN C. DACOSTA, JR., M.D. 8vo, 474 pages, illustrated. P. Blakiston's Son & Co., Philadelphia. Price, $5.00 net.

TRANSACTIONS OF THE LOUISIANA STATE MEDICAL SOCIETY, 22d Annual Session. 8vo, 467 pages.

NEUROLOGICAL TECHNIQUE. By IRVING HARDESTY. 8vo, 183 pages. The University of Chicago Press, Chicago, Ill.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. By GUSTAVUS P. HEAD. 8vo, 515 pages, illustrated. Vol. II. The Year Book Publishers, Chicago, Ill. Price, $2.00.

A MANUAL OF VENEREAL AND SEXUAL DISEASES. By HACKETT & ARONSTAM. 8vo, 208 pages. G. P. Engelhard & Co., Chicago, Ill.

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TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS. Vol. XVI. 730 pages, illustrated. Printed by the Association.

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ALCOHOLISM, A STUDY IN HEREDITY. By G. ARCHDALL REID. 12mo, 293 pages. William Wood & Company. Price, muslin, $2.50 net.

THE POCKET GRAY. By EDWARD COTTERELL, M.D. 5th edition, 16mo, 269 pages. New York: William Wood & Co. Price, $1.25 net.

A RETROSPECT OF SURGERY DURING THE PAST CENTURY. By JOHN POLAND, M.D. 8vo, 97 pages. London, Eng.: Smith, Elder & Co.

MUNICIPAL ENGINEERING AND SANITATION. By M. N. BAKER. 12mo, 317 pages. New York: The Macmillan Co. Price, $1.25.

THE VIVISECTION QUESTION. By ALBERT LEFFINGWELL, M.D. 8vo, 267 pages. New Haven, Conn.: The Tuttle, Morehouse & Taylor Co.

VARIOLA, VACCINATION, VARICELLA, CHOLERA, ERYSIPELAS, WHOOPING-COUGH, HAY FEVER. By H. IMMERMANN; Th. von Jürgensen, C. Liebermeister, H. Lenhartz, G. Sticker. 8vo, 682 pages. Philadelphia: W. B. Saunders & Co. Price, cloth, $5.00 net; half morocco, $6.00 net.

THE HEALING OF NERVES. By CHAS. A. BALLANCE AND PURVES STEWART. Folio, 112 pages, illustrated. London, Eng.: Macmillan Co. Price, 12s. 6d.

DIRECTIONS FOR CLASS WORK IN PRACTICAL PHYSIOLOGY. By E. A. SCHAFER. 8vo, 76 pages, illustrated. London: Longmans, Green & Co.

MOSQUITO BRIGADES AND HOW TO ORGANIZE THEM. By RONALD ROSS. 8vo, 100 pages. London, Eng.: Longmans, Green & Co.

A GUIDE TO THE MICROSCOPIC EXAMINATION OF THE EYE. By Prof. R. GREEF. 12mo, 171 pages. P. Blakiston's Son & Co., Philadelphia, Pa.

A MANUAL OF CLINICAL DIAGNOSIS. By CHARLES E. SIMON, M.D. 8vo, 599 pages. Illustrated. Fourth edition. Lea Brothers & Co., Philadelphia, Pa. Price, cloth, $3.75 net.

THE MEDICAL NEWS POCKET FORMULARY FOR 1902. By E. QUIN THORNTON, M.D. 287 pages. Fourth edition. Lea Brothers & Co., Philadelphia, Pa. Price, $1.50 net.

ROUGH NOTES ON REMEDIES. By WM. MURRAY, M.D., 176 pages, 12mo. Fourth edition. P. Blakiston's Son & Co., Philadelphia, Pa.

LEITFADEN ZUR KLINISCHEN UNTERSUCHUNG DES BLUTES. By Dr. C. S. ENGEL. Second edition. August Hirschwald, Berlin, Germany.

OUTLINES OF ANATOMY. By EDMUND W. HOLMES, M.D. 12mo, 185 pages. Second edition. The New Era Printing Co., Lancaster, Pa.

LE CANCER DU SEIN. By A. LE DENTU. 8vo, 122 pages. J. B. Baillière et Fils, Paris, France. Price, Fr. 3.50.

SHORT TALKS WITH YOUNG MOTHERS. By CHAS. G. KERLEY, M.D. 12mo, 262 pages. Illustrated. G. P. Putnam's Sons, New York.

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Original Articles.

TUMORS OF THE CENTRAL NERVOUS SYSTEM—REMARKS ON NOTEWORTHY CASES.

By JOSEPH COLLINS M.D
NEW YORK.

PRESIDENT OF THE NEW YORK NEUROLOGICAL SOCIETY AND OF THE AMERICAN NEUROLOGICAL ASSOCIATION.

I.—**Brain Tumors.**—Tumors of the central nervous system are of such frequent occurrence, and their diagnosis is usually so readily made, that it is within the experience of every practitioner to have encountered them. Unfortunately, they still constitute a forlorn chapter in therapeutics, medical treatment being of little value save in the gummatous variety, and it is generally agreed that only one case in twenty is amenable to surgical interference. Judged by my individual experience, the percentage is even less than this. This is quite a different position to that which every one who spoke of the subject held a few years ago. After Godlee and Bennett and Horsley demonstrated that the skull could be opened, the cavity more or less explored, and the tumor removed, cases of brain tumor were encountered more enthusiastically than they are to-day, and many reports of successful operation were published. Experience and time have shown that the glowing promise of the surgeon has not been realized. The reason thereof is not difficult to give. It is due to the commonest characteristic of intracranial growths, malignancy; their commonest mode of extension, infiltration; their frequent location in portions of the brain that are inaccessible to the surgeon; and, finally, to inability on the part of the physician to locate them, because of the indefiniteness of the symptoms and other clinical phenomena.

The question, What promise does surgery hold out in the treatment of tumors of the spinal cord? is quite a different matter. Although we have not as yet had sufficient evidence to warrant a final decision, the trend of testimony is to show that the surgeon's field for usefulness is larger in spinal-cord tumor than in brain tumor. It will be larger still when the diagnosis of the former is made with more certainty and frequency. Tumors of the spinal cord offer much greater difficulty of diagnosis than those of the brain. The latter are almost constantly attended by a symptom group, made up principally of headache, vertigo, vomiting, hebetude, apathy, staggering, spasm, or paresis of an extremity and optic neuritis, which can scarcely be paralleled by any other condition. On the other hand, tumors of the cord have no such constant clinical picture, and to make the diagnosis much more minute observation and closer analysis are called for than when the brain is similarly affected.

Although the study and report of brain tumors do not add to our capacity to deal with them more successfully, they may do so indirectly by contributing to readiness of diagnosis, and thus to early treatment. Such study may materially add also to our knowledge of the functions of the brain. Despite the fact that brain tumor usually calls forth symptoms that are so constant and significant that they are called cardinal, there are many cases in which these symptoms are absent. In attempting to localize a new growth within the skull, we depend almost entirely upon focal symptoms. Unfortunately, in not a few cases it is found on the autopsy table that such focal symptoms are misleading. The functional topography of the brain is not so well known as one might infer from reading hastily our books on localization. There are still vast regions of the brain that have no special or definitely allocated function, and it is the trend of one school of psychologists to deny that different parts of the brain are concerned uniquely with different functions. It may be said in passing that this teaching is steadily gaining adherents. Careful observation of tumors of the so-called silent regions is bound to give most valuable aid in settling some of the questions that are baffling the localizationists and the psychologists.

From the number of cases of tumor of the nervous system that have come under my observation in the past two years, and upon which an autopsy was made, I have selected the following: Each one presents, I believe, some feature that makes it worthy of record. I shall follow the recital of each case with a few remarks:

Case I.—Tumor of the Pons; Angio-sarcoma.—Summary: Sudden onset of apoplectic symptoms; vertigo followed by loss of consciousness, lasting two hours, no hemiplegia. Later vertigo, diplopia, headache, progressive ataxia of the left side, dysarthria, dysphagia, nausea, and occasional vomiting, the symptoms increasing from week to week. *Examination:* Paralysis of both abducens, paresis of the right seventh nerve, hyperesthesia in the domain of the right fifth nerve; pronounced ataxia of the left extremities, with progressive impairment of strength; exaggeration of the tendon jerks, ankle clonus, and the Babinski phenomenon (extension of the big toe, and flexion of the small toes, with drawing up of the thigh on irritating the sole) on the left side, and some exaggeration of the tendon jerks on the right side. Duration of illness, ten weeks. Death under auspices of intracranial pressure.

The patient, a married woman, forty years old; was seen October 27, 1900, with her physician, Dr. W. A. Seimel of Brooklyn. Her family history was negative. From childhood until the present attack she had been quite well, save that for the past five or six years she had suffered from indigestion, and occasionally she vomited after eating. There was no history of intemperance or of venereal disease. She had borne several healthy children, and had worked hard in bringing them up.

The story of her attack was as follows: On the evening of August 24, 1900—*i.e.* two months before she was first seen by me—she went to a dance. The night was hot. After having danced once around the room, she experienced a fulness of the head and increasing vertigo. While endeavoring to get to a seat she fell to the floor unconscious, in which state she remained about two hours. At the end of that time she was well enough to be assisted home. Save for some dizziness, she maintains that she could walk fairly well. Her head continued to feel heavy. The next day she arose and started to do her housework, but she soon had to go back to bed. She found that she was dizzy, unsteady on her feet, and that at times she saw double. She began to menstruate that day, the flow being a week in advance, but otherwise normal. During the next three weeks she grew gradually worse, the left extremities becoming clumsy and weak, and she had two attacks resembling the first, but much less severe; *i. e.*, she got a peculiar feeling of fulness of the head, accompanied by vertigo and transitory loss of consciousness.

Most of this time she remained in bed, essaying occasionally to arise, but always with the same result. For a short time after this the symptoms seemed to be quiescent; she was about the house somewhat, but at the end of September she had to keep the bed constantly, the chief symptoms being headache, dizziness, some difficulty in swallowing, with occasional regurgitation of fluids through the nose, nausea, and the ataxia of the left side already mentioned. These were the principal symptoms on October 27, the date of the first examination; but in addition she had difficulty in articulation, the speech being typically inebrieuse, and a sensation as if her face was in a mask. She was troubled, also, with palpitation. On close questioning and repeated inquiry, the patient recalls that for some days, possibly a week before the evening of the dance, she had some vertigo, and thought there was something wrong with her eyes; but the symptoms were not of such severity as to give her any concern. The following is a transcript of the notes of the physical examination made at the first visit:

Physical examination.—Eyes. Paresis of both external recti. Diplopia. Images side by side (to outer side). Convergent strabismus, left pupil larger than right. Pupils react to light and in accommodation. No evidence of conjunctivitis. Sensibility of the cornea seems keen. No optic neuritis.

Face.—Left facial innervation greater than right. Right side of the face is immobile. Upper branch of facial less involved. On emotional display same facial inequality. Dermographic character of the skin marked (more on right). Partial loss of the sense of touch over the left fifth nerve. Sensibility of the right side of the face somewhat obtunded. Sense of smell unimpaired.

Palate.—Immobile. Tongue, thickly coated, light brown. No tremor. Moves it with effort. No atrophy.

Head.—Large. Forehead bulging. Fontanelles bulging. Percussion of skull, duller on the right side than on the left. Extreme sensitiveness over the occiput, especially on right side, and around the foramen magnum. No disturbance of hearing.

Upper extremities.—In the left upper extremity the motor power is markedly diminished, and the ataxia is very striking. The entire musculature of left upper extremity is much less than the right (flabby). The left upper extremity is flaccid, and there is no resistance to passive motion. The left wrist and triceps jerks are exaggerated; those of the right side are lively.

Abdominal reflexes cannot be elicited. The patellar reflex is exaggerated on both sides, but especially on the left. Tendon Achilles reflex ditto. Plantar reflex markedly exaggerated (with lively extensor responses), especially on the left side. Babinski reflex marked on the left side, but it cannot be elicited on the right.

Ankle clonus very lively, especially on left side. Increased resistance to passive movement in left lower extremity. Musculature of both sides very flabby, especially on right side. Motor power diminished on both sides, especially on left.

She was seen again a week later. The symptoms were the same as before, only more severe. The physical examination revealed nothing further, save that the ataxia of the left extremities was now associated with diminished motor power, amounting almost to paralysis, and there was diminution of sensibility on the left side of the body and the right side of the face. The ocular and facial conditions are the same as mentioned in the notes of the first examination. There was slight sluggishness of reaction to the faradic current in the right facial nerve. There were no evidences of choked discs. When the patient was lying quite still, with one eye bandaged, she seemed to be without much pain. The moment she stirred or was moved, she was agonized with vertigo. As her vital forces became impaired, she began to be semi-stuporous and lethargic. She died on the 9th of November, the symptoms that preceded death for a few days being those of a lesion of the oblongata.

I opened the cranium a few hours after death and removed the brain. The appearance of its exterior and its membranes was quite normal. There was no sign that excessive intracerebral pressure had existed, and the ventricular system was of normal shape, size, and content, when the brain was laid open. A cross-section made through the middle of the pons showed that the right half of this segment of the nervous system was almost entirely usurped by what seemed to the naked eye to be a cystic area, or an area of acute softening. The left half of the pons was apparently slightly affected in a similar way. No further examination was made until the brain was ready for microscopical examination, when it was found that the apparent softening was an angiosarcoma.

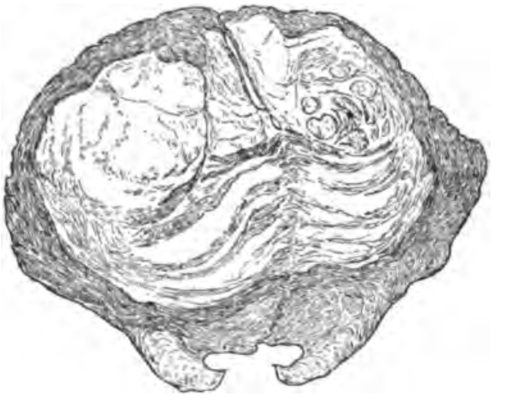

Fig. 1.

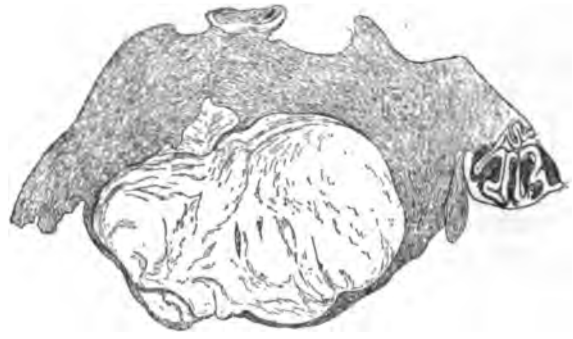

Fig. 2.

The tumor occupies the lower part of the pons; that is, the pons proper. At about the middle (caudo cephalad), it occupies the whole width and height of this level, leaving only a border of about ½ cm. free on all sides (Figs. 1 and 2). It is most extensively developed on the right side. It extends from the very beginning of the pons (encroaching even slightly on the middle of the pes pedunculi), throughout its entire length, and terminates at the oblongata at the level of the twelfth nerve; but it does not include this level.

Both abducens nerves are taken in by the tumor. The right facial nerve, which passes directly through the tumor, appears entirely degenerated (brown in Weigert, white in Pal, specimens). The left facial nerve seems to be compressed and thin, but its fibers take the stain deeply.

The right eighth nerve does not seem involved, or, if so, at least only its anterior root. The left eighth nerve is entirely intact.

The ninth nerves (evidently also the tenth and eleventh nerves) of both sides are entirely beyond the domain of the tumor, as is also the vagoglossopharyngeal nucleus and the solitary fascicle on both sides.

The twelfth nerves and nuclei are likewise entirely spared. The spinal root and the gelatinous substance of the right fifth nerve are wholly replaced by the tumor mass; on the left side, they are involved to a comparatively slight degree.

The fifth motor nuclei seem intact, likewise the outgoing roots.

The third and fourth nerves and nuclei are intact.

The fillet and formatic reticularis, especially of the right side, are strongly pressed upon, the right side being much distorted, but not otherwise involved.

The tumor being most extensively developed on the right side, the raphe is curved over to the left (*id est*, with convexity to left). The mesial portions of both trapezoid bodies are impinged upon by the tumor. The lateral portion of the right trapezoid is unusually thin, as if it had been compressed upon both sides. The cerebellum, restiform body, the superior and middle peduncles are intact.

Below the facial region, the lesion is almost entirely confined to the right side, involving exquisitely the region of the anterior pyramidal tracts, reaching a little beyond them. The secondary degeneration produced in the right pyramidal tract is striking in cross-sections of the oblongata.

The nature of the tumor is that of a sarcoma, which is very vascular, the blood vessels forming in some places great networks of dilated, tortuous masses, the dilatation being aneurysmatic in character in many places. The tumor shows a number of large softenings, a few of them being seemingly of older date, partly organized; others, evidently of recent date, show clearly as extensive hemorrhages. It is interesting to note that, in the midst of the tumor and throughout it, a large number of nerve fibers is preserved.

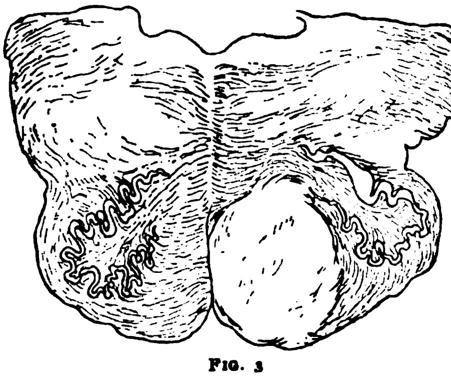

Fig. 3

The finer microscopical structure is typical of angiosarcoma, and needs no further description. The secondary degeneration produced in the right pyramidal tract is well shown by figure.

The case is of interest, not only because of the difficulty of diagnosis which it presented, but because of the course of the disease and the proof that it seems to offer that the pons can be the seat of extensive disease in the shape of a tumor for a considerable period without causing symptoms of any severity. It reminds one in this respect of a case of tumor of the oblongata that was reported a few years ago by the writer in the *American Journal of Medical Sciences*. The mode of infiltration of the neoplasm, leaving so many fibers functionable even to the end, and the absence of œdema account for this feature of the case. When the patient was first seen, a diagnosis of acute softening in the right half of the midpons was made, but the probability that it was a tumor increased with opportunity to observe the patient.

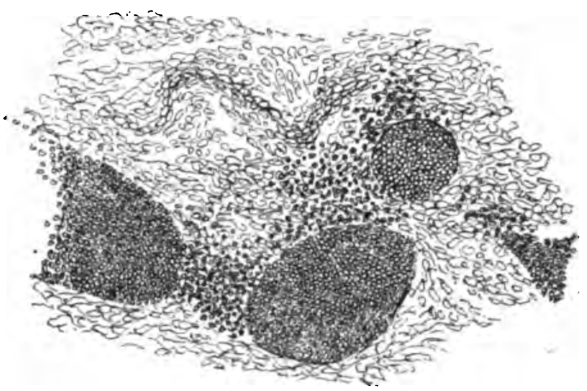

Fig. 4.

Tumor of the pons in the adult is a very rare disease, and especially angiosarcoma. Tuberculous growths in and upon the pons are not very uncommon in childhood. The symptoms of pons-tumor are supposed to be very characteristic, because this small segment of the nervous system contains in close juxtaposition the nuclei of the fifth to seventh nerves, the central pathway of the eighth to twelfth nerves, and the sensory and motor pathways for the body and the extremities. The pathognomonic symptoms are one form or another of so-called alternate hemiplegia; *i. e.*, one side of the face (the seventh nerve, more rarely the sensory branches of the fifth), and the contralateral extremities, associated with inability to glance toward one side (the side corresponding to the half of the pons that contains the tumor). When the lesion is in the lower segment of the pons, the function of one hypoglossal nerve (the one on the side of the paralyzed extremity) is impaired up to complete abolition.

A number of variations of this form of paralysis (often called Gubler's paralysis) have been described, but it is not necessary to mention them here.

The most striking symptom that this patient presented was unilateral ataxia. It existed from soon after the beginning of her illness to the end, and only for a short time before death was it associated with paralysis. In its clinical features, it resembled the acute ataxia that one sees occasionally associated with anæmias and cachexias. It is an extremely uncommon accompaniment of tumor of the pons. Its occurrence therewith is conditioned by lesion of certain fibers or pathways of the fillet, the central sensory pathway. Other noteworthy clinical features were absence of choked discs, of reaction of degeneration in the right seventh nerve, and of pressure symptoms. It has already been suggested that the mode of infiltration accounts for these. The sense of hearing, which one might likewise expect to find impaired, seemed to be intact.

Looked upon wholly as a tumor growth, one is impressed with the fact that it is unlike most sarcomas of the central nervous system, in that they do not tend to infiltrate; they grow in a solid mass.

The acute symptoms which the patient had, and the different attacks, it is readily seen, were dependent upon the different hemorrhages and consequent softenings, which were to be seen in the specimens (see Fig. 4).

A case of brain tumor which was watched by me for a short time with great interest, because of the fact that many of the symptoms seem to indicate pons-involvement, was the following:

Case II.—Tumor of the Left Hemisphere, Anterior pole; Syphiloma.—F. P., twenty-eight years old, a Russian Pole, was admitted to the New York City Hospital on March 9, 1899. Very little could be learned of his personal history, because of his forgetfulness. His parents are living and well, and there seems to be no family history of any interest. The patient does not recall having had any of the diseases of childhood, and he says that he had never been so sick that he had to remain in bed before this attack. He has not been addicted to excesses of any kind, although he has worked hard as a laborer, and has been very much exposed to changes of temperature and inclemencies of weather. Nearly two years ago he had a chancre. He does not know whether it was called hard or soft, but he is sure that there was no cutaneous eruption, no loss of hair, no sore throat, and other common secondary manifestations. He was treated until the chancre got well, but not after that.

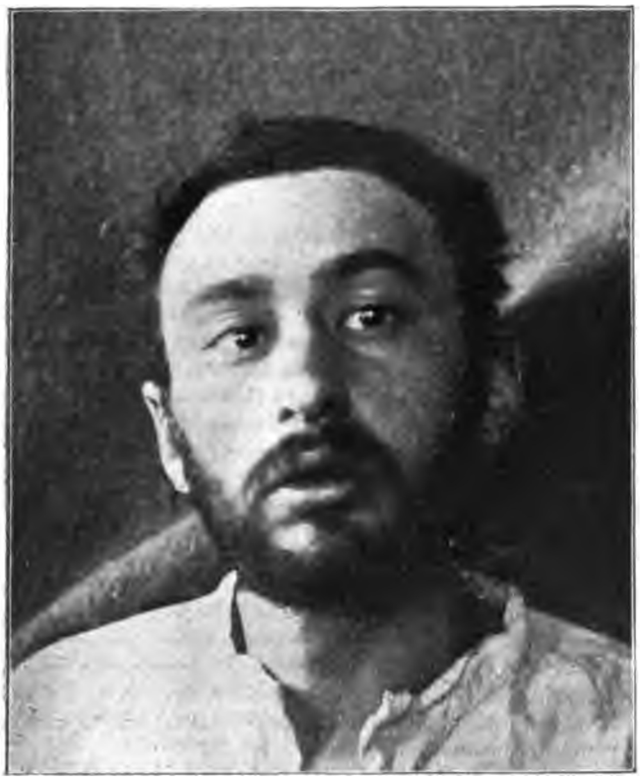

Fig. 5.

The only history of the present illness that can be obtained is that he thinks it came on suddenly. Headache, he says, has never been a symptom, nor has he vomited. He does not recall coming to the hospital. He was able to walk when he entered, but it is noted that he was very weak, and shook all over for several hours after his entrance.

The following is a transcript of the notes made on April 3, 1899, when I first saw the patient: The man is of stupid, emotionless appearance, the features being listless and expressionless (see Fig. 5). There is an apparent convergent strabismus, due to paralysis of the external rectus. He is unable to move the right eye outward beyond the median line, and this eye remains immobile on attempts at convergence. The left eye seems to be freely movable. The pupils react to light very sluggishly. Ophthalmoscopic examination shows well-marked choked discs, with beginning nerve atrophy of the left eye, the right being apparently normal. There is conspicuous fine tremor of the face and tongue, when the patient essays voluntary movement. There is profound anæsthesia over the area of distribution of both fifth nerves. This anæsthesia and analgesia is more marked on the left side. It is impossible to secure reliable information concerning the state of the functions of smell and taste, for the patient cannot be made to take any interest in the examination. The sense of hearing seems to be preserved on both sides. There is no ataxia of the upper extremities. The lower extremities, and particularly the muscles of the buttocks, are often in a state of profound tremor or agitation, such as is sometimes seen on exposure to cold. The knee-jerks and the ankle-jerks are exaggerated, more so on the right than on the left side. The patient seems to be incontinent of urine, and occasionally of fæces. Tests for cutaneous sensibility shows that although the patient is not acutely sensitive to the prick of a pin, he resents it by word and by gesture, except when the face is pricked.

Two days later, it is noted in the history that the knee-jerks are very sluggish, and, in fact, scarcely elicitable. The face seems very insensitive when a pin is jabbed into it. On the following day the knee-jerks were sluggish, but the right was more easily elicited than the left. On this day it was noted that he could feel a pin when it was stuck into the skin of the face, and that the sensibility of other parts of the body was more acute than usual. On April 12 it was noted that the knee-jerks were absent on both sides, while on the next day they were somewhat exaggerated, and I was able to elicit well-marked ankle-clonus. On the evening of this day the patient seemed to have a violent chill, and he put on the appearance of collapse. He became so apathetic that he could scarcely be aroused. The breathing was shallow, and the pulse accelerated. It was also noted at this time that there was a striking difference in the surface temperature and color between the right and the left side. The right side was red and warm, the left cold and white. At this time, there was pronounced tremor of the right hand, and a considerable rigidity of the right upper extremity. The knee-jerks were exaggerated, and it was possible to elicit ankle-clonus. The patient remained in this condition the next day, but gradually became so apathetic that he could not be aroused, and on April 15th he was in a condition of profound coma. The discharges from the bowels and bladder were both of a bloody nature shortly before the patient died. Study of the pulse during the time the patient was in the hospital, six weeks preceding death, shows that for the first few days of this time it beat from 60 to 70 times per minute. Then, without apparent cause, it became very much accelerated, averaging about 85 per minute, occasionally going up to 100, and again dropping as low as 70. During the week preceding death, it varied from 120 to 160 per minute, it having reached the former figure before the chill with which he was taken three days before death. Respirations were somewhat accelerated during the entire time that he was under observation, 20 to 22 per minute. Until the chill occurred, there had been no elevation of temperature, nor subnormal temperature. For four days preceding death the temperature was about 105

No signs of pneumonia could be made out by physical examination.

Autopsy, made thirty-nine hours post mortem: The body of a fairly well-nourished man. No scars or marks on the cutaneous surface save a slight scar on the glans penis. Post-mortem rigidity well marked in the lower extremities, beginning to disappear in the upper extremities. When the calvarium was removed, it was found to be very thin, especially over the left frontal region. There was some difficulty in getting it away after it had been cut through, on account of adhesion of the dura to the bone over the left frontal region. When removed, the internal surface of the calvarium showed the thinness of the bone at this point, and gave a condition of the skull which looked like sieve-depressions. After the skull-cap had been taken off, a large granular-looking mass was seen in the anterior pole of the left hemisphere (see Fig. 6).

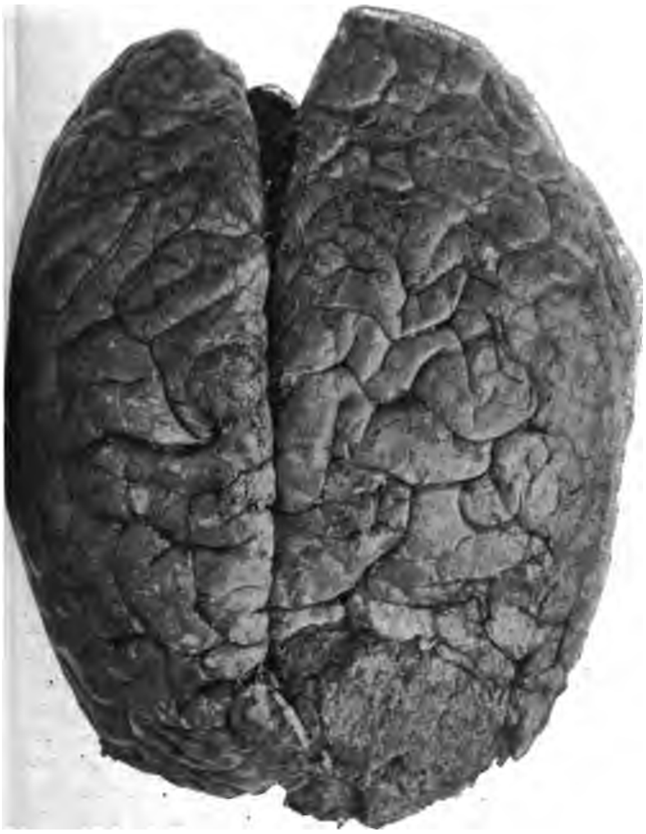

Fig. 6

When the brain was removed, it was seen that this granuloma, the size of a hen's egg, was firmly attached to the dura, and usurped the substance of the first and second frontal convolutions, extending backward as far as a line reaching from a continuation of the ascending limb of the fissure of Sylvius up to the longitudinal fissure. In front and below it was nearly limited by the frontomarginal fissure. The remainder of the cortex seemed to be normal. Examination of the inferior surface of the brain showed no particular abnormality. The left lobus rectus seemed smaller than the right and somewhat flattened out, as did the olfactory bundle of that side. The optic chiasm was of normal appearance. The anterior perforated space was free, and bridged over by a layer of thin pia. The pons and oblongata seemed to be entirely normal.

So far nothing had been discovered to account for the nuclear symptoms which this man had, and which are distinctly apparent in the photograph (Fig. 5). The case was looked upon as one of the syphiloma of the pons, particularly on account of the well-marked analgesia over the fifth nerve and the ocular symptoms. Although it was borne in mind that the apathetic condition in which he was precluded very accurate investigation, yet it was not at all suspected that the patient had a tumor of the frontal lobes. The variability in the knee-jerks and the accession of clonus was thought to indicate an encroachment upon the motor areas or fibers of the pons. It did not seem that any other explanation save the existence of tumor within the pons could be made to explain the paralysis of the right external oblique, the slight amount of ptosis, the anæsthesia in the area of the distribution of the trigeminal, and the peculiar expression of the face. These, taken in connection with the mental apathy, were thought to be peculiarly suggestive. The patient's mental condition was very much like that described by all writers on brain tumor as indicative of pons lesion (*vide* Case No. 1). He would lie in a more or less fixed position for hours at a time, capable of arousing himself or being aroused, of answering a question, but often lapsing in the middle of the answer. Tumor of the frontal area was not suspected for the reason that none of the cardinal symptoms of brain tumor were present, and because the only localizing symptoms that existed pointed to involvement of the basal structures. The skull had been carefully percussed on different occasions, and nothing approaching difference in percussion note was ever obtained over the area which was later found to be the seat of tumor. One of the most impressive lessons of the autopsy was that the tumor was an extremely removable one, if we had been able to locate it. It was not of the brain substance at all, but grew from the dura, usurping the cortex on which it encroached. Another interesting fact is that large doses of iodide did not seem to have any effect on it, nor did small doses, for that matter.

Case III.—Sarcoma of the Cerebellum in a Child.—The male child, six and one-half years old, from whom the specimen depicted in the accompanying sketch (Fig. 8) was taken, was brought to my clinic at the Post-Graduate Medical School on January 31, 1899, where he had been sent by a physician to be treated for neurasthenia. It was learned from his parents, in whom there seems to be no evidence of disease, that when he was four years old he had an attack of measles, followed by slight discharge from one of the ears, which quickly subsided. After this, he had symptoms of catarrh of the stomach which did not yield readily to treatment. Apart from these he was well until the onset of the present illness, which dated back about one year. The history is that without apparent cause he sickened with headache, which was soon followed or accompanied by attacks of vomiting. The headache increased in severity for about a month, and the vomiting seemed to keep pace with it, for it is reported that he had from one to three severe attacks of vomiting each day during two months. For the first few days after the symptoms came on, he had to remain in bed, but later he was about the house and out of doors. After about three months the attacks of vomiting ceased, but the headache continued. In addition to these symptoms the child seemed to be very weak, and was treated for neurasthenia in a desultory fashion. Gradually the headache got less severe, and for a month before coming to the clinic he had not complained. The parents said that they brought him that he might get relief from pain in the hands, feet, and neck, particularly the right hand. The character of the pains he was not able to describe. Apparently, the pains were intermittent, the exacerbation lasting about one-half hour. During this tim he would shriek, and the parents say the right hand would tremble. At times, he complained also of headache, but there had been no vomiting for several months.

Examination showed a fairly well-nourished boy, who clings to his father in fear of falling. The eyes are staring, and the face expressionless; better said, the emotional muscles are relaxed. When he attempts to stand, slight titubation is apparent; and when he essays to walk, he staggers in a reckless sort of way, as if he had no control over the lower extremities. He can use both hands, and apparently there is no ataxia or amyosthenia of the upper extremities, although he does not use the left hand as freely as the right. The knee-jerks are elicitable on both sides. Without reinforcement, they are rather sluggish. The ankle-jerks are likewise elicitable. There was no paralysis of the lower extremities, but the muscles were in a toneless, flabby condition, even when he attempted to walk. He passes urine and fæces without concern, in bed or in his clothes, wherever he may happen to be. Mentally, the child seems to be all right. He answers questions readily and correctly, and indeed seemed to have greater mental capacity than many children of his age and social grade.

Examination of the eyes showed an internal strabismus, apparently due to paralysis of the right abducens, which the parents said they had noticed first five months before. The pupils were widely dilated, and slightly responsive to bright light. Vision was reduced to perception of large objects held immediately before the eyes. Ophthalmoscopic examination showed double-choked disks, the elevation of the right being somewhat greater than that of the left. No disturbance of the sense of hearing or the senses of smell and taste could be made out.

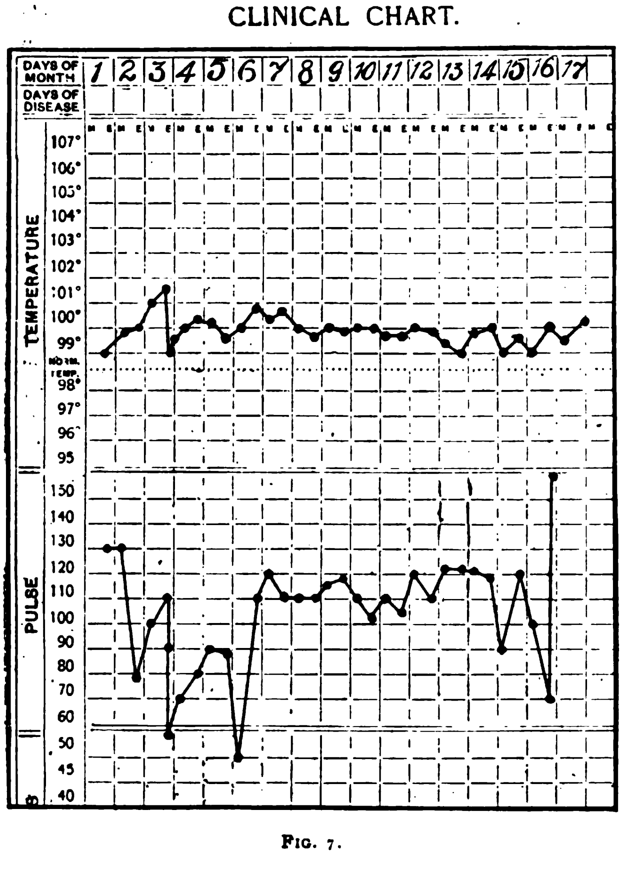

Fig. 7.

A diagnosis of cerebellar tumor, probably vermicular, was made, and the child sent into the hospital. His condition did not materially change for the first few days, but after about a week he began to be somewhat restless and sleepless, while the inability to stand and walk became so great that, when put upon his feet, he tumbled about in the most reckless fashion. Mentally, however, he remained quite clear. This was markedly in contrast with the complete indifference with which he constantly wet and soiled the bed. While in the hospital, it was noted that the strabismus was by no means constant. At times it would seem to completely disappear. The facial expression, however, became more typical of brain tumor, and the slightly deficient innervation of the right side of the face, which had been noticed on first examination, became more evident. Two weeks after he was first seen, he became worse, somewhat abruptly. He vomited his breakfasts, the strabismus became very marked, and the temperature rose to 100°. Dr. A. E. Davis, who at this time kindly examined his eyes, corroborated the findings mentioned above, and reported an elevation of each papillæ of about six diopters, the veins of the fundus somewhat enlarged, and extravasations of blood on and near the discs. The pupils were widely dilated and not responsive to light, and vision in both eyes was reduced to perception of light. During the night following this examination he was delirious, but the following day he talked very sensibly and complained of frontal headache. The following afternoon he passed into a condition of collapse, and died late in the day under the auspices of respiratory failure. A temperature chart showing the fever and pulse variations is herewith appended, covering the entire time during which he was under observation, viz., from the 1st to the 17th of February. It might be said that repeated examinations of the urine showed no noteworthy departures from normal, except a rather constant high specific gravity.

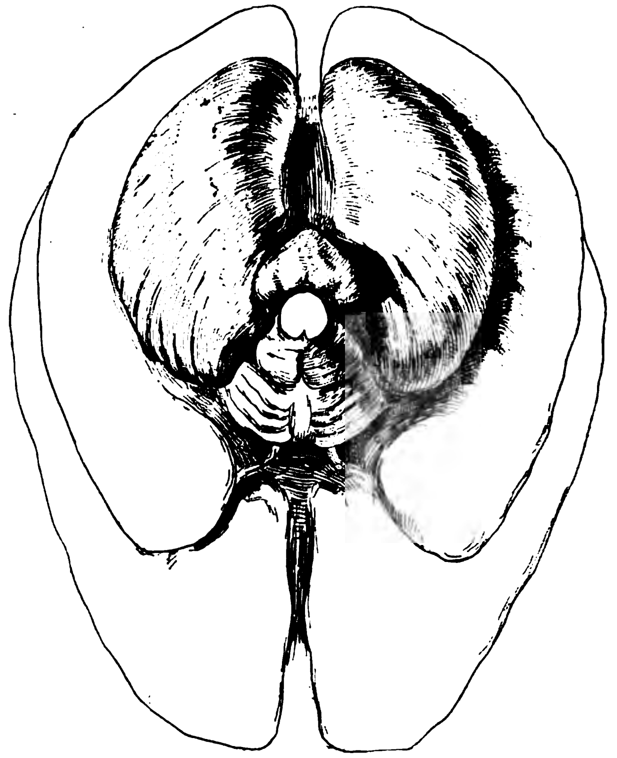

Fig. 8.

The autopsy, made twenty-four hours post mortem, showed no abnormalities of the cranium, except that it was thinner in spots than crania of six-year-old children usually are. The membranes and their blood vessels seemed to be normal. The brain was not distended, and as it lay in the skull cavity it appeared quite normal. Upon removing it, there was seen posterior to the upper border of the oblongata, and lying between the lobes of the cerebellum a mass the size of an English walnut or of a pigeon's egg of irregular lobulated appearance, pinkish in color, with numerous small blood vessels running across its surface (Fig. 8). It had no attachment to the oblongata, but projected from between the hemispheres of the cerebellum, having its origin from the posterior end of the inferior worm, and extended through the vallecula for nearly an inch. The pressure which it caused upon the right amygdala was plainly apparent in the atrophy of that portion of the cerebellum and in the postero-inferior lobe, which causes the entire right hemisphere to look smaller than the left. The tumor was enveloped in the pia, and in the recent state the arborizations of the vessels seen in the congested state were very striking. The tumor was more resistant to the touch than the brain substance, and to the naked eye it had the appearance of sarcoma. This was corroborated by microscopical examination, the shape of the preponderating cells being round.

The case offers very little to comment upon, save to point out the infrequency of this variety of tumor in a child so young, and the non-characteristic symptoms which led to the boy being treated for neurasthenia. It should teach us that we must not expect all the features of the typical clinical syndrome in every case, and that the diagnosis need not depend upon the existence of the fully portrayed typical picture.

Case IV.—Sarcoma of the Right Lateral Ventricle.—Mrs. E. S., a Swede, twenty-four years old, was sent to me on May 8, 1898, by Dr. F. K. Halleck, with the request that she be admitted to the City Hospital under my care, in order to determine the location, and, if possible, to operate upon the brain tumor which he had diagnosticated. The history of the patient was that she had been in good health until November, 1897, that is, about seven months before coming under my observation. The initial symptoms seem to have been pain all over and through the head, which she calls neuralgic. At one time the pain would be most severe in the forehead, at another time in the occiput, sometimes in one eye; but it soon became so severe that she was unable to localize it. This pain came on suddenly, and she recalled that she was awakened one morning by it, and that it lasted for about four hours and then disappeared. After remaining free from it a few days, it reappeared, and soon became so unendurable that she went off her head, becoming delirious and hallucinatory. After the pain had subsided somewhat, the delirium and visual hallucinations would disappear. When the headache was most severe she vomited, and she was almost constantly nauseated, although when the pain alleviated this would disappear. The next complaint was of indistinctness of vision, and then it began to be suspected by the physician who was treating her that there was an organic lesion, and she was placed upon iodide of potassium, although it has been impossible to learn the doses or quantity that she took.

There is no history of the occurrence of convulsion, spasm, or tremor, nor has there been any disturbance of gait that could not be explained by the progressive blindness. She has been able to use the extremities as well as usual, except for general weakness, which has developed gradually since the beginning of her illness. Aside from the failing eyesight, there has been no complaint of disturbance of any of the special senses. Her husband states that she has gradually lost interest in herself and her family, and has become irritable, peevish, and childish.

The subjective symptoms were, therefore, very few, and consisted of (1) Headache of abrupt onset, of unendurable and paroxysmal severity, associated at its height with visual hallucinations and delirium; (2) Nausea and vomiting, particularly during the most intense headache; (3) Obscuration of vision; (4) Dementia.

Examination revealed a fairly well-nourished woman, whose face bore the evidences of prolonged suffering, and at the same time a vacant, fatuous expression. The head was hanging, the eyes partly closed and shielded with colored glasses. She was apparently six months pregnant. She had made a journey of about a hundred miles the day I first saw her, but despite this, she seemed in fairly good strength. Objective examination revealed absolutely no departures from the normal, save that of the ophthalmoscope.

In the left eye there is distinct choked disc with connective-tissue formation, especially toward the center. The right eye shows less swelling of the disc, but greater enlargement of the veins, and the beginning appearances of post-inflammatory atrophy.

The cranial nerves seem to functionate normally. There is no disturbance of the motor or sensory spheres. Muscle tonus as manifest in the knee and ankle jerks seems to be unchanged.

A diagnosis of subcortical tumor, ventrad to the pyramidal projections, was made, and operation, save trephining for the relief of pain, advised against.

The patient went to her home for a few days, but was later admitted under my care to the City Hospital. Three days after my first examination, she had an attack of a syncopal nature while sitting at the table taking dinner. The knife and fork which she held dropped from her hands, and she seemed as if about to lose consciousness. Then the face became pale, and she was immediately taken with a severe headache and an attack of vomiting.

Her condition while in the hospital did not materially change, except that the headaches and vomiting ceased; but she gradually got less alert psychically, although she answered questions correctly and with considerable readiness, providing they required no further effort than statement of her feelings or needs. She rarely took the initiative in conversation with other patients, nor when members of her family visited her. She seemed to thrive fairly well, and there was every indication that she would not only survive till the time for the normal birth of the child, but beyond it. Pulse, temperature and respiration were quite normal. On the evening of the 11th of June, it was noted that she became restless without apparent cause, and that the temperature was slightly elevated, although there was no evidence of inflammatory process anywhere. She continued to grow restless and weaker, and it was decided to deliver the child, which was done by rapid dilatation of the cervix by means of Barnes dilators and the performance of version. The child, a good seven months' specimen, lived seventy-two hours. The mother died within twenty-four hours without attributable direct cause. The ante-mortem temperature was 106° F.

Autopsy showed normal conditions throughout the body and brain, save for a sarcoma about the size of a hen's egg in the anterior, one-third of the right lateral ventricle growing apparently from the ependyma of the floor (Fig. 9). Both ventricles were considerably dilated, and about four ounces of fluid escaped when they were cut into. The location and extent of the tumor is very well represented by the accompanying photograph.

From consideration of the symptoms and by process of exclusion the tumor was located approximately, but there was not enough certainty about it to warrant asking the surgeon to search for it.

Although the autopsy showed that the growth was in the location to which it had been allotted, it showed also that it could not have been removed. The symptomatology of tumors of the lateral ventricles is not well established. In the first place, there is little incentive to the report of such cases, and in the second place, they are not of frequent occurrence. In this case there was not a symptom that can be looked upon as suggestive of the location of the tumor, unless the peculiar paroxysmal headaches might be thus interpreted. The visual hallucinations have not, I think, been heretofore noted with tumors in this region.

The last case of brain tumor that I shall speak of in this connection amply illustrates the difficulty that may be experienced in attempting to diagnosticate the nature and location of intracranial growths.

Osteosarcoma of Long Duration.—M. V., a married lady, fifty years old, was first seen on February 18, 1897. Her history was that the illness for which she now consulted a physician was of five years' duration. The initial symptoms were severe, darting pains in the left side of the head and left eye, and gradual loss of sight and of hearing on the left side. After these symptoms had existed for about one year, she had a convulsion. Previous to the convulsion, she had a number of attacks of loss of consciousness, lasting for several minutes, and it is not improbable that these symptoms antedated the pains in the head. After the first few convulsive attacks she seemed to become somewhat dull and forgetful, and this has continued to the present time. It was for the relief of the epileptiform manifestations, the headache and hallucinations which she seemed to have at times, that she was brought to me.

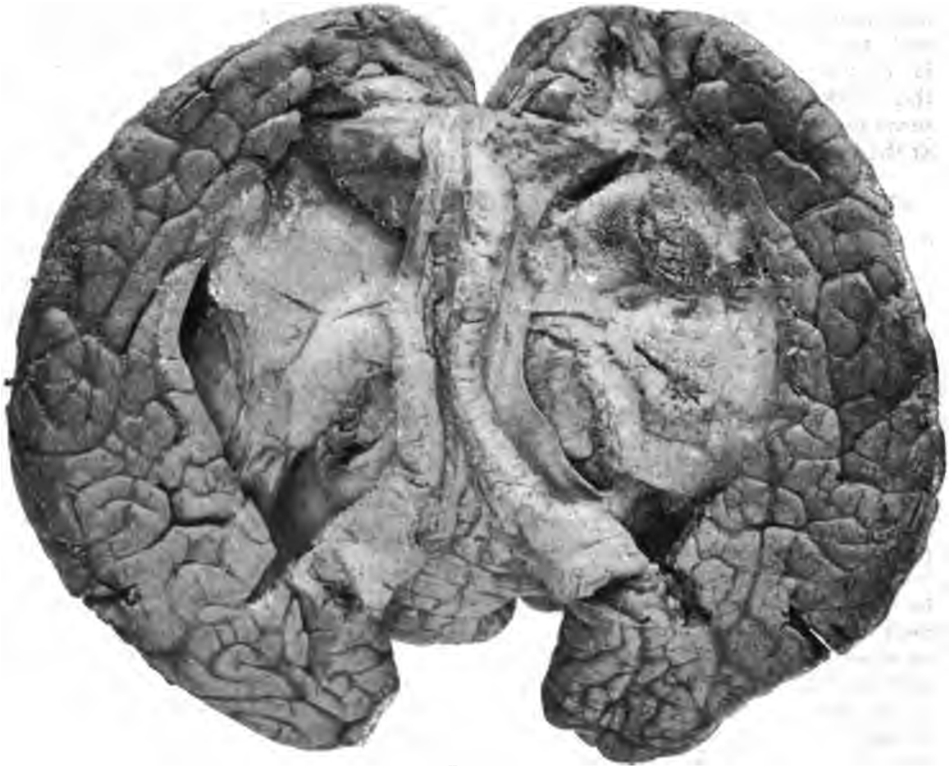

Fig. 9.

Examination at that time showed marked protrusion of the left eye, decided limitation of ocular movements to the left and upward, some drooping of the left lid; immobility of the left pupil on exposure to light; nystagmus of the left eye when looking toward the right. Ophthalmoscopic examination of the right shows normal papilla. Sensibility over the left side of the face was diminished. There was no motor paralysis and no ataxia. The patient apparently understood everything that was said, and there were no symptoms of aphasia. There was a rapid fine tremor of the hands. The knee-jerks were lively, and the plantar reflex about normal. Persistent tachycardia; the pulse ranged from 104 to 120, the left lobe of the thyroid gland enlarged. She complains that she always feels warm, and the face is often flushed. She was put upon iodide of potassium in increasing doses up to 60 grains t. i. d., but her condition continued practically unchanged. The convulsions occurred from time to time, but she was able to look after her household with a good deal of satisfaction.

On November 22, 1898, she was seen again. The report was that she had been improved in health until within the past week, when she began to complain of severe pains in the left side of the head. She still has attacks of unconsciousness, attended at times with convulsions. There is no tremor. The left exophthalmus is more marked than when she was seen before. The thyroid seems to be normal, although the pulse is 140. The patellar reflex is normal. There is no anæsthesia. The patient was not under my care, and there are no further notes of the case, save that she developed signs of Bright's disease during the winter of 1899 and died from that disease.

Autopsy, May 1, 1899.—Body emaciated. Protrusion of contents of left orbit. Skull is distinctly asymmetrical, due to lateral enlargement, principally over left parietal region. On removing the skullcap, the dura is seen to be thickened and engorged, especially on left side. The left parietal convolution is voluminous, due to œdema, and occupies more than one-half of the cranial cavity. Over the apex of right temporo-sphenoidal lobe the brain is adherent to the dura of the middle fossa. On the left side, in the region of the temporal lobe, the brain is firmly attached to the adjacent bones by a firm growth. This growth involves the inner one-half of the petrous portion of the temporal bone, the adjacent body and sinuses of the sphenoidal, and pushes forward into the posterior portion of the left orbit, and downward through the foramen Magendie as a fine chain-like mass, but apparently not involving the oblongata. The left hemisphere, which was infiltrated with serum, was so extremely soft that it was lacerated in manipulation. On removing the brain, the distended left ventricle became collapsed, through loss of the intraventricular fluid. Evidently, the growth involves the basal portion of the left temporal lobe, especially the two lower gyri. The dura was intimately adherent to the pia, especially over the motor area of the left hemisphere. The pia itself was very adherent, and slightly œdematous. The walls of the lateral ventricle were in apposition and seemingly stuck together, before the ventricular cavity was displayed by cutting into it. This ventricle seemed much smaller than the right. The fourth ventricle was laid open by cutting through the vermis of the cerebellum, and seemed normal. The base of the brain showed no abnormality, except that the longitudinal gyri were thin and narrow.

The case during life had been looked upon as one of tumor of the base, encroaching upon the side of the pons.

The particular interest of this case centers around the protracted duration of the disease, no less than seven years, and finally she did not die of it, but of chronic Bright's disease. In reality, the case was not one of brain tumor in the strict sense of the term, nor did it have the cardinal symptoms; still all intracranial growths must be reckoned with brain tumors. The causation of the epileptic attacks was not disclosed by the autopsy. The growth did not encroach upon the motor areas, and the epilepsy cannot, therefore, be looked upon as an irritation symptom. Any speculation that one might be tempted to indulge in regarding the possible dependency of the epileptic attacks upon paroxysmal œdemas of the brain similar to that found after death, particularly in the left hemisphere, would be quite useless, for the patient had ascites for a considerable time before death. It is particularly noteworthy that the patient had the subjective symptoms of Grave's disease, and the prominent physical signs of this neurosis on one side of the body.

LATENT AND MASKED MALARIAL FEVERS.*

ANALYSIS OF ONE HUNDRED AND NINETY-FIVE CASES.

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ONE of the most important duties of the medical practitioner of to-day is the diagnosis of the various forms of malarial fever. This is so from both a therapeutic and a prophylactic standpoint, for, in the light of our present knowledge of malaria, it is most important to ascertain whether or not the disease exists in certain localities, and what forms of it are present.

In all probability, malarial fevers will be found to be more prevalent in the United States during the next few years than ever before, due to the large number of infected soldiers returning from the Philippines and Cuba. Places never before malarious will undoubtedly become so, for all that is needed to spread the infection is an infected individual and the presence of mosquitos of the genus *Anopheles*. Not only will the mild tertian infections become very numerous, but the severe estivo-autumnal fevers will be introduced in new localities, as a very large percentage of our returning soldiers are infected with the estivo-autumnal parasites.

Never before in the medical history of our country has a knowledge of all phases of malariology been so important and necessary to the general practitioner as at the present time, and I cannot urge too strongly upon the profession the necessity for constant and careful investigation of all irregular and obscure fevers.

The estivo-autumnal malarial fevers are protean in their symptomology, and, unless promptly recognized and treated, are very prone to become pernicious; hence the value of a speedy diagnosis, especially when it is remembered that malarial infection is often present without giving rise to typical symptoms. In all such cases the diagnosis can be made only by a microscopical examination of the blood, which should be as much a matter of routine practice in cases of fever as the examination of the urine.

The subject of latent and masked malarial fevers is one of great importance, and one which has been but little investigated. While the literature devoted to malaria is extensive and of great value, comparatively little has been written concerning this subject. It will be admitted by all students of malarial infections that many cases occur in which the symptoms are masked by those of complicating disease processes, or in which the symptoms are atypical; and it is equally true that malarial infection may exist without producing appreciable symptoms of any kind. In the first case, we say that the malarial fever is "masked;" in the second, that it is "latent."

A masked malarial infection, then, is one in which the malarial symptoms are hidden by those of some other disease, or in which the malarial symptoms are atypical; while a latent malarial infection is one in which, while the parasites are demonstrable in the blood, no symptoms of malaria are present. Regarding these forms of malarial fever Marchiafava and Bignami* say: "All physicians are aware that there are grave, and sometimes mortal, infections, in which the rectal temperature may be little above the normal, or may even be subnormal. When the blood is examined in some of these cases, we may find many parasites. The reason for this can be found only in special conditions of the patient's system; just as there may be a lobar pneumonia without elevation of temperature, especially in aged and feeble persons, so may occur grave malarial infections without fever."

"The same phenomenon occurs when, . . . usually after long duration of the infection, the patients have acquired a certain degree of immunity. In some patients we can see that, even after spontaneous cessation of the attacks, the parasites go on, to the completion of their life-cycle with regularity, and even after fission and a fresh infection of parasites occur, the febrile attack is absent."

Regarding masked forms of malarial fever, Thayer† states as follows: "In a certain number of instances, malarial infections may cause distinct symptoms with little or no fever. These instances are not infrequent in improperly treated tertian and quartan infections, where the patient keeps about on his feet, taking perhaps an occasional single dose of quinine, enough to weaken but not to eradicate the infection. Here the process may be kept, as it were, in a permanent stage of incubation. There are, however, other instances where, for a considerable length of time, there may be more or less marked subjective symptoms with little or no fever. During the abortive paroxysm there may be slight flushing with a rise of temperature to a degree or so above normal, which may be followed by a little sweating, but usually fever is practically absent; the temperature really being subnormal during the greater part of the time.

"Sometimes in true pernicious cases the temperature may fall and remain normal or subnormal for some days before fatal issue. There are, moreover, principally in old infections, cases where the gravest and most fatal infections may occur almost entirely without fever."

In my work, entitled "The Estivo-Autumnal (Remittent) Malarial Fevers," I have discussed somewhat extensively the masked and latent forms of estivo-autumnal fever. The following quotations are abstracted from the chapter dealing with this subject: "In latent and masked estivo-autumnal fevers we include all cases in which the estivo-autumnal parasites may be demonstrated in the blood, but in which either no clinical symptoms are present, or the symptoms which are present are atypical in character."

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*With permission of the Surgeon-General of the United States Army.

*Malaria. "Twentieth Century Practice," Vol. XIX.

†Lectures on the Malarial Fevers.

"I can recall a large number of cases in soldiers who have had their blood examined as a routine measure, in which the estivo-autumnal parasites were found, although there were no symptoms of the disease present. As a rule, in such cases the number of parasites is comparatively small, but there may be much free pigment present and numerous pigmented leucocytes. In blood from the spleen in the latent cases the entire human cycle of the estivo-autumnal parasites can be followed."

"The tertian estivo-autumnal parasite is the most common form found in such cases, although the quotidian form is by no means rare. The only explanation of the fact that the development of the malarial parasite may not, for a considerable period of time, be accompanied by clinical symptoms is either that the parasites are present in too small numbers, or that the individual infected is very resistant to the action of the malarial poison."

"The length of time during which such a latent infection may exist is as yet undetermined, but it is probable that in some cases it may be for many weeks. I recall one case in which the estivo-autumnal parasites were found in the peripheral blood for six weeks before a paroxysm occurred, repeated blood examinations being made during that time. I can recall many cases in which the parasites were found for from seven to fourteen days before clinical symptoms appeared."

"The masked estivo-autumnal malarial fevers constitute the much larger class of cases, and their recognition is of the utmost importance from a practical point of view. Such cases more often present no rise of temperature, and in fact the temperature is often subnormal. Nervous symptoms, such as slight headache, vertigo, neuralgias of various parts of the body, or symptoms referable to some other disease, may be present, as diarrhœa, acute and chronic dysentery, pneumonia, typhoid fever, etc."

"It should always be borne in mind in treating diseases in localities in which the estivo-autumnal parasites are prevalent, that some of the most pernicious forms of these fevers are unaccompanied by definite paroxysms or a rise of temperature, and that the temperature is not rarely subnormal. I recall a fatal case of quotidian estivo-autumnal fever in which the temperature never rose above 99° F., and in which the few symptoms present were those of an acute hepatitis. Examination of the blood a few hours before death occurred, showed large numbers of quotidian estivo-autumnal parasites, and the findings at autopsy were typical of death from pernicious malarial fever."

In this discussion of the subject I gave a brief *résumé* of 172 cases. In this report it is my intention briefly to analyze 195 cases which have come under my observation in the routine examination of the blood of soldiers returning from the Philippine Islands during a period of fifteen months.

By order of Lieutenant-Colonel Girard, commanding officer of the United States Army General Hospital, Presidio, San Francisco, Cal., the blood of every patient admitted is submitted to the laboratory for examination. This routine examination of the blood has proved to be of the utmost value, as time and again severe malarial infections have been discovered which did not present the usual symptoms, and many lives have been saved by the prompt treatment of such cases with quinine. I have divided the cases into masked and latent forms of the disease, but it should be remembered that a hard and fast line cannot always be drawn in many of the cases which have been observed. A large number of cases showing dysenteric symptoms, in which the malarial parasites were discovered, have been almost entirely cured by the simple administration of quinine; thus showing that the intestinal condition was due to the presence of malarial infection. In other cases, dysentery and the malarial infection existed together, and while the dysenteric symptoms were not cured by the administration of quinine, marked benefit resulted to the patient by eliminating the malarial element in the case.

It has been impossible, in a few instances, from the clinical data obtainable, to make a strict division into masked and latent infections, making it necessary to approximate the number of cases of each class in this report. This is especially true of those infections occurring in conjunction with intestinal disorders.

Types of Infection.—The total number of cases observed during the period of fifteen months was 195. As regards the type of parasite found, the cases may be divided as follows:

1. Tertian infections		44
2. Quartan infections		1
3. Estivo-autumnal infections		150
Tertian estivo-autumnal infections	117	
Quotidian estivo-autumnal infections	32	
Mixed tertian and quotidian estivo-autumnal infections	1	

From the above table it will be seen that the estivo-autumnal infections are altogether the most common. This is an interesting fact because the tertian infections in the Philippines are said to be the most numerous, and as also showing that the fevers due to estivo-autumnal infection are much more apt to be masked or remain latent than those due to the tertian form. This may also explain, where routine examination of the blood has not been carried out, the relative frequency in the Philippines, as reported, of the two varieties of malaria. If so large a percentage of estivo-autumnal cases are masked by other diseases or remain latent, it is seen at once how inaccurate may be our statistics, where routine blood examination is not carried out, of the relative frequency of tertian and estivo-autumnal malaria.

All observers who have studied the subject in the Philippine Islands unite in claiming that the tertian infections are altogether the most numerous; but from the examination of the blood of those cases occurring in soldiers who have returned from the Philippines, my experience has been exactly the reverse, the estivo-autumnal infections being altogether the most numerous. But a large percentage of such cases were latent or masked by other complications, and would never have been discovered from the study of the clinical records alone. The relatively large percentage of estivo-autumnal infections which remain latent, or are masked, also proves how important it is that the blood be examined in every case returning from or residing in a malarious locality.

Character of Parasites.—The following table illustrates the various stages in the human life-cycle of the malarial parasites which were observed in the blood in these cases.

1. Tertian infections, total number		44
Hyaline stage	5	
Pigmented stage, ¼ to ¾ grown	32	
Pigmented stage, full grown and segmented	7	
2. Quartan infections, 1 case; parasite full grown.		
3. Estivo-autumnal infections, number of cases		150
Hyaline ring forms	102	
Hyaline ring forms and pigmented forms	36	
Hyaline ring forms and crescents	8	
Crescents	4	

From the above table it will be seen that the pigmented forms of the tertian parasite were generally present in these infections, and there was no difficulty whatever in recognizing the parasite. This was also true of the one case of quartan infection observed.

In the estivo-autumnal forms, however, it will be seen that the hyaline "ring forms" were altogether the most common, and as these are the most difficult forms of the malarial parasite to recognize, it will be obvious how very often such cases would be overlooked by one not accustomed to the examination of malarial blood. While there is no difficulty whatever in recognizing the hyaline forms of the estivo-autumnal parasites, when one has had considerable practice, they are generally overlooked during this stage by inexperienced observers.

The small number of cases in which crescentic forms were observed only increases my belief that the crescentic forms are not nearly as common in the blood in man as many of the writers upon malaria would lead us to believe. Certainly, these are the very type of patients in which one would expect to find crescents, but only a very small percentage show their presence. In hundreds of cases of estivo-autumnal fever which have persisted for months, I have failed to observe the regular occurrence of crescents, which many writers speak of.

Number of Parasites.—As regards the number of parasites present in the blood in the masked and latent cases, it may be said that, as a rule, they were few in number. As we have at this time no accurate means of estimating the number of malarial parasites in a specimen of blood, it is impossible to make an accurate classification. It has been my method as regards the number of parasites present in any specimen of blood, to speak of them as "few" or "numerous." In this loose classification I find that the following table represents the number of parasites present.

INFECTION.	TOTAL NO. OF CASES.	NO. OF PARASITES. FEW.	NUMEROUS.
Tertian	44	32	12
Quartan	1	1	..
Estivo-atumnal	150	130	20

The above table is very unsatisfactory in a number of ways, but it is probably approximately correct. The number of parasites in a specimen of blood would, of course, vary apparently upon the length of time spent upon the examination, as the longer the time spent the greater the number of parasites discovered. In the above examinations approximately the same time was spent upon each specimen.

Period of Latency.—It is impossible to state accurately the length of time during which the malarial parasites may be present in an individual's blood without producing symptoms, on account of losing sight of the cases before such determination can be made. It may be broadly stated, however, that in some cases the malarial parasites may be present for almost an indefinite length of time without producing the characteristic symptoms of malarial fever. In the few cases in which I have been able to make examinations of the blood at frequent intervals, covering a considerable period of time, I have found that this incubation period, as it may be called, may extend from a few days to several weeks. In one case of estivo-autumnal fever, examinations were made of the blood every third or fourth day for a period of six weeks, and almost every examination showed a few hyaline "ring forms" of the parasite. During this period, however, there were never any symptoms which in the least suggested the presence of a malarial infection. At the end of six weeks I lost sight of the patient, but it is probable that the infection existed for a much longer time without producing symptoms. As a rule, the patients in whom the blood showed the presence of the malarial parasites included in this report developed symptoms within a week after the observation, and some of them in a much shorter time, although several went for two weeks without symptoms.

It is easily conceivable how a weak malarial infection—that is, one in which there are but few malarial parasites present—might exist for a long time without the production of symptoms, due to the small amount of malarial poison present in the body. From a study of the above table it will be seen that by far the largest percentage of my cases are to be placed in this category. The parasites, as a rule, did not number more than eight or ten in a specimen of blood observed for half an hour.

In cases, however, where the parasites were numerous, it was much more difficult to account for the absence of clinical symptoms. There is no experimental data at hand to explain these cases. The most that we can say is that the individual infected is probably immune, to a certain degree, to the malarial poison.

CLINICAL DIAGNOSIS OF CASES.

The following table gives the clinical diagnosis made before the blood of the patients was submitted for examination:

	NO. CASES.	LATENT.	MASKED.
Chronic dysentery	55	0	55
Chronic diarrhœa	19	19	0
Pulmonary tuberculosis	14	0	14
Fractures and wounds	9	9	0
Chronic gastritis	5	5	0
Amœbic dysentery	4	0	4
Acute bronchitis and pharyngitis	3	0	3
Hernia	3	3	0
Chronic indigestion	2	0	2
Anæmia	2	0	2
Secondary syphilis	2	2	0
Otitis media	2	2	0
Acute melancholia	2	2	0
Insanity	2	2	0
Rheumatism	2	0	2
Paralysis	2	2	0
Abscess of the liver	1	0	1
Arthritis	1	0	1
Conval. from appendicitis op.	1	1	0
Arthritis deformans	1	1	0
Furunculosis	1	0	1
Retinitis	1	1	0
Varicocele	1	1	0
Tachycardia	1	1	0
Cellulitis	1	0	1
Measles	1	0	1
Pneumonia	1	0	1
Chancroid	1	0	1
Acute constipation	1	0	1
Hemorrhoids	1	1	0
Adenitis, cervical	1	1	0
Diagnosis, undetermined	52	52	0

From a consideration of this table it will be seen that by far the greatest percentage of cases of masked and latent malaria occurred in patients suffering from diseases of the alimentary tract, especially dysentery and diarrhœa. Next in frequency comes the diagnosis of pulmonary tuberculosis.

In classifying these cases into latent and masked infections, as I have before noted, it is sometimes almost impossible absolutely to determine which variety of infection really existed. Some of the cases, from a study of the clinical charts, show a preponderance of symptoms in favor of the diagnosis made, and in these cases it is easy to class the malarial infection as "masked." In the study of many other clinical histories, the entire absence of any symptoms which could be attributed to malaria make it easy to decide that the malarial element was "latent;" but there occur a considerable number of cases in which the symptoms were so confusing that the distinction could not be made.

Classified as nearly as possible in this manner, the 195 cases were divided as follows:

Masked infections	90
Latent infections	105

Chronic dysentery: Fifty-five cases in which the diagnosis of chronic dysentery was made showed the presence of malarial parasites in the blood, the type of parasite being the estivo-autumnal in forty-five cases, and the benign tertian in ten cases. In all cases in which the diagnosis of "chronic dysentery" was made, it was found by a study of the clinical charts that the dysentery existed and evidently masked the malarial complications. All the cases were having numerous bowel movements, and all showed slight rises in temperature at irregular intervals. These rises in temperature are characteristic of dysentery, and a study of the temperature charts proves that the existence of the malarial infection could not have been determined by the temperature curve. There probably occurred among the dysentery cases a small number in which the malarial infection was latent, but in the great majority of cases there were symptoms present which, taken alone, would have suggested malaria; but taken with those which are present in dysentery, completely obscured the malarial condition. I have, therefore, classed all the cases of malaria occurring in chronic dysentery as masked infections.

The occurrence of "masked malaria" in cases of dysentery originating in the Tropics is a matter of great importance, as the malarial element in so large a proportion of the cases is not recognized, and undoubtedly helps in producing the marked debility of the patient, which is invariably present in dysentery cases. In a large number of cases showing the malarial parasite, treatment by quinine caused a marked improvement in the number of bowel movements, and in several cases it must be confessed that the dysenteric symptoms were directly due to the malarial infection, as they quickly succumbed to quinine. Almost all of the dysenteric cases gave histories of previous malarial infection in the Philippines, the primary infections being diagnosed and treated. The treatment, however, was not continued, and there resulted a chronic malarial infection, presenting few typical symptoms, but which aided in the depletion of the patient's strength and vitality. The treatment of these cases with quinine invariably resulted in benefit.

Chronic diarrhœa: In nineteen cases diagnosed as chronic diarrhœa malarial parasites were demonstrated, and in all these cases the infection was latent. Symptoms of diarrhœa were present in all, but there was no rise of temperature, and no symptoms which could be interpreted as being malarial in character. Treatment by quinine in these cases quickly caused the disappearance of the parasites from the blood, and, as a rule, resulted in the general betterment of the patient's condition; so that, while the cases have to be classed as latent, on account of the absence of symptoms, the improvement in the patient indicates that the malarial infection had some influence in the progress of the diarrhœa.

Pulmonary tuberculosis: Fourteen cases diagnosed as pulmonary tuberculosis showed the presence of malarial parasites, ten cases being due to infection with the estivo-autumnal parasites, and four with the benign tertian. From a study of the clinical histories and temperature charts in these cases, the infection in every case was masked by symptoms which suggested pulmonary disease. Perhaps in no class of cases is the diagnosis of pulmonary tuberculosis made so often as in cases of malaria showing quotidian elevations of temperature. Such cases are often accompanied by a cough, great emaciation, profuse perspiration, and present the picture of pulmonary tuberculosis. This is especially true of cases originating in the Tropics, the emaciation in these cases being more extreme and the pulmonary symptoms more apparent than in cases originating in the temperate zone. In all of the cases diagnosed as pulmonary tuberculosis the parasites were present in considerable numbers, and treatment by quinine showed in a few days that the infection was purely malarial. The examination of the sputum in these cases for the tubercle bacillus always resulted negatively.

Fractures and Wounds: In all cases diagnosed as fractures and wounds the conditions diagnosed were present, the malarial infection being latent.

Chronic gastritis: Five cases diagnosed as chronic gastritis showed the presence of malarial parasites in the blood, and in all these cases the malarial infection was latent, as shown by the fact that treatment with quinine did not relieve the condition diagnosed. In all the cases chronic gastritis was present, and in all of them a history of previous malarial infection was obtained.

Amœbic dysentery: The four cases diagnosed as amœbic dysentery were severe forms of that disease, numerous amœba being present in the fæces. The malarial infections, so far as any symptoms shown by the clinical histories, were masked. The occurrence simultaneously of the malarial parasite and the amœba, both protozoan organisms, is of interest. Treatment by quinine of these cases resulted in benefit. But, as cases of amœbic dysentery are also benefited by quinine, it is impossible to say how much actual benefit was derived from the elimination of the malarial element. It is a fact, however, that all of these cases improved much faster after the treatment for malarial infection than they had previously.

Acute bronchitis and pharyngitis: In the three cases diagnosed "acute bronchitis and pharyngitis," the malarial infection was masked. All three cases were infected with the estivo-autumnal parasites, and the symptoms present were those of bronchitis and pharyngitis. Treatment with quinine in these cases eliminated the malarial element and also the bronchitis, but did not improve the pharyngitis; so that it is safe to say that the bronchitis present was due to the malarial infection, the pharyngitis occurring as a complication.

Abscess of the liver: The case diagnosed as "abscess of the liver" presented, from a study of the clinical history and the temperature charts, all the symptoms which are said to be classical in this disease. The man gave a history of having suffered from amœbic dysentery in the Philippines, but on arrival at the hospital presented no evidence of dysentery. Examination of the blood showed numerous estivo-autumnal parasites of the tertian variety, and treatment with quinine resulted in the disappearance of all the symptoms.

Other diseases: In the two cases diagnosed as "indigestion" the infection was "masked;" in the two diagnosed as "anæmia" the infection was also masked by profound anæmia, which was at first supposed to be pernicious; in the case diagnosed "arthritis" the infection was masked by this disease. This was also true of the cases diagnosed furunculosis, rheumatism, cellulitis, measles, pneumonia, chancroid, and acute constipation. In the cases diagnosed as hernia, secondary syphilis, otitis media, acute melancholia, insanity, arthritis deformans, retinitis, varicocele, tachycardia, paralysis, hemorrhoids, and cervical adenitis the malarial infection was latent, there being absolutely no symptoms pointing to such infection.

Undetermined diagnosis: In the fifty-two cases in which no diagnosis was made previous to an examination of the blood, the malarial infection was "latent." In most of these cases quinine was immediately given, so that it has been impossible to ascertain how long the infection would have persisted without producing some symptoms. In none of the cases was there any suspicion of malaria, as a careful investigation of the clinical histories and temperature charts demonstrates.

Most of the cases were soldiers who had returned from the Philippines, having suffered there from long-continued dysentery or diarrhœa, and were returned to this country because of their debilitated condition. Active symptoms of the diseases from which they had suffered in the Philippines were not present in any of these cases, the chief symptoms complained of being general weakness, which prevented them from doing the duties of a soldier. I have taken considerable care to inquire into the medical history of these cases, in order to find out, if possible, whether or not the infections were masked by existing symptoms or were actually latent, and in every case, from the history obtainable and the present condition of the patient, the infection would have to be classed as latent. Most of the cases gave a history of having suffered from malarial attacks either in Cuba or in the Philippines, but considered themselves as rid of malarial infection.

Source of Infection.—In the 195 cases of masked and latent malaria the source of infection has been traced in 180. Of the 180 cases, 120 suffered from their first attack of malaria in the Philippine Islands, while sixty gave a history of having had their first attack in Cuba.

Of the sixty Cuban infections, it was found upon inquiry that these infections occurred during the American invasion at Santiago, and had persisted irregularly up to the present time.

In the case of the Philippine infections, the time during which the patients had suffered from malaria varied from six months to two years.

The history of all the cases showed exacerbations of the malaria at irregular intervals following the primary attack, but all of them gave a history of not having had an attack for at least one month before arrival at this hospital.

During the fifteen months in which I have kept records of masked and latent malarial cases there have been a few instances, especially in the cases which were latent, in which no previous history of malaria could be obtained. Most of these cases had been in camp at the Presidio, California, for some weeks. They had never suffered from malaria either in Cuba or in the Philippines, so that I have been compelled to consider San Francisco as the locality in which these patients became infected. Up to within a comparatively recent period, San Francisco has not been considered as a malarial region, and it has been denied by competent investigators that the estivo-autumnal type of malaria ever originated in San Francisco or the country immediately surrounding it. From my observations in the cases just spoken of, I am satisfied that cases of estivo-autumnal fever do occur, and have probably been imported by infected individuals returning from the Philippine Islands. As stated in the opening paragraphs of this report, all that is necessary to establish a malarial infection in any locality is an infected individual and mosquitos of the genus *Anopheles*. I have repeatedly found mosquitos of this genus in the military reservation at San Francisco, and it can easily be seen how, with the large number of infected soldiers returning from the Philippines, malaria may become endemic in this locality. The following case of estivo-autumnal fever is of interest in this connection:

The patient, a young girl, was referred to me for a blood examination by the physician attending her. She had been suffering for some time from slight fever, accompanied by chilly sensations at irregular intervals, and by marked anæmia. She had never suffered from malaria previously, and had not been out of San Francisco within a period of two years. The attending physician suspected malaria, and the blood examination showed numerous "ring forms" and pigmented forms of the tertian estivo-autumnal parasite. Upon careful inquiry as to the source of her infection, the following facts were elicited:

Patient lived in a locality situated between two Chinese vegetable gardens. The water used for irrigation is obtained from sunken wells, which are open and filled with stagnant water. The mother of the girl stated that the people living in this locality were greatly troubled by mosquitos; and upon inquiry of people living in the vicinity, I was told that mosquitos were plentiful and very annoying. I also learned that numerous cases of malaria had occurred in this locality. This case proves conclusively that estivo-autumnal malaria may originate in this city, and also shows how important it is to trace out the source of infection in malarial cases. By the careful use of kerosene in the wells, which are evidently the source of the mosquitos, it is not too much to believe that malarial fever may be entirely eradicated in the locality spoken of.

Post-mortem Findings in Latent and Masked Malaria.—Of the 195 cases of latent and masked malaria, five proved fatal from the diseases which complicated them. Three cases of masked malaria died from chronic dysentery, as well as two cases in which the infection was latent. All of the cases showed estivo-autumnal parasites in the blood.

In a future communication I shall give in detail the gross and microscopical pathology of these cases, at the present time only touching upon the conditions found.

In the cases of masked malaria, the liver, spleen, and brain showed marked pigmentation, and upon microscopical examination showed all the conditions of malarial infection. The capillaries of the brain contained numerous estivo-autumnal parasites, much pigment, and numerous pigmented leucocytes. This was also true of the capillaries of the liver. Sections of the spleen showed large numbers of hyaline and young pigmented forms of the estivo-autumnal parasites, a few crescents, many pigmented leucocytes and an immense amount of free pigment.

In the two cases in which the malarial infection was latent, the chief pathological changes were found in the spleen and liver. Both organs were much pigmented, the spleen being considerably enlarged. Sections of the liver showed considerable free pigment within the capillaries, but no malarial parasites. Sections of the spleen showed an immense amount of pigment, numerous pigmented leucocytes, and comparatively few hyaline and pigmented parasites. No crescents were observed in the sections of the spleen. The condition of the sections of the spleen, as compared with those in which the malarial infection was masked, seemed to be one simply of degree, the masked infections showing a much greater pigmentation and many more parasites than the latent infections.

These cases, especially those which were latent, are of great interest, as the pathological conditions found prove that the evolution of the malarial parasite may go on within the spleen and other internal organs without the production of definite clinical symptoms.

Conclusion.—From the brief analysis which I have given of these cases of latent and masked malarial fever, it will be seen at once how important an examination of the blood is in all cases of disease originating in the Tropics, or in localities which are known to be malarious. It is an undoubted fact that a malarial infection complicating any disease process invariably injures the patient's chances of recovery, and its elimination, as proven by numerous cases observed at this hospital, greatly facilitates recovery. Not only is this so, but cases have been observed in which the discovery of the malarial infection undoubtedly saved the patient's life. The discovery of the cases of estivo-autumnal malaria is especially important, as it is this form of the disease that may become at any time pernicious, and may cause death within a few hours.

I cannot urge too strongly upon the profession the immense importance of a knowledge of malaria sufficient for an accurate microscopical examination of the blood. If by such examination only one life is saved, it will more than compensate for the expense and labor involved in becoming familiar with the appearance of the various forms of malarial parasites in the blood and the proper use of the microscope.

AUTOINTOXICATION AND DISEASE FROM A PRACTITIONER'S STANDPOINT.*

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AUTOINTOXICATION of neurotic origin is not considered at the present time to be usual, if we are to be strictly guided by the tenor of the medical press. That of gastrointestinal origin is alluded to quite frequently and dwelt upon at times, and very properly, as being of great pathological importance in many directions.

No one probably more than Professor Bouchard of Paris has thrown light upon the various obscure problems involved in this subject. Even now, despite the researches of numerous careful investigators, the matter is acknowledged to be a many-sided one, and many questions regarding it are still *sub judice*. One thing is pretty surely affirmed, however, and it is that depression of the general nervous system—a marked undertone—is essential to the development of many and various diseases. Does the nervous system play a primary rôle in causation? About this there is no absolute answer. At times it does unquestionably; again, it is evident that the response from the nervous system is only what we should expect where the entire organism and all its functions are implicated to a slight or considerable degree. The usual view, with respect of autointoxication is, that the toxins present are either developed in the economy or come from the outside. Among the latter causes of disease, syphilis and alcohol, notably, rank easily first. Among the former we find acute miliary tuberculosis at times, and where it is obviously occasioned directly by pus absorbed from degenerated glands, or a similar focus situated elsewhere. Very frequently, the autointoxication comes from the gastrointestinal tract, including the mouth, as witness certain cases of pernicious anæmia, and produces well-known forms of nervous derangement, organic or functional, viz., general paralysis, epilepsy, melancholia, neurasthenia, etc.

The specialist in nervous diseases and the general practitioner have different standpoints, each being correct in his interpretation, according to the case in hand.

For example, the former recognizes different causes of neurasthenia, but to-day is disposed to emphasize rather too much, as I believe, intestinal autointoxication, and medicate in part, at least, with drugs in such form as to be only soluble in the intestine and not at all in the stomach. This to me is a contracted view, and in so far is erroneous. I do not find, nor do I believe in, the presence of changes in a limited portion of the digestive tract, as separated from the rest. Drugs must, above all, be in solution to be useful, and they must affect the stomach favorably, and not solely the intestine.

I have tried successively the numerous intestinal antiseptics uncombined, and in various mixtures, and I have concluded that we have none equal to beechwood creosote in small doses, combined with essence of pepsin and properly diluted with water, or alcohol and water. Of course, the specialists use other means than mere antiseptic medication to restore their patients. The liberal in-put of water, massage, rest, good diet, hydrotherapy, electricity, systemic exercises, are all mentioned, and sometimes insisted upon. On the other hand, the general practitioner believes too much stress is laid upon gastro-intestinal fermentations as directly and primarily causative.

Here is only an element, not an entirety. The real thing is "wear and tear" of modern life, and especially in men and women near or past middle-life. Anæmia, menstrual irregularities, late hours, faulty education, particularly in young girls near puberty, are mainly responsible for many physical breakdowns of the sort I am studying. With the boys at the same age, overwork at school or college, dissipations, improper food, etc., work out their own wretched physical infirmities.

The chemist tells us that in many such cases he finds an excess of indican in the urine, or other by-products, in the intestine, of faulty proteid malassimilation. To this indicanuria, or indol, in a less advanced form too much importance may easily be attached. Unless it be quite constantly present and in excess, it has no great prognostic significance, and its precise poisonous quality is not accurately known. Gout, rheumatism, diabetes, no doubt, result in great part from faulty metabolism, and when they are established, it is not long before the nervous system becomes affected functionally or organically. A lowered tone of the nervous system renders the economy an easier prey to microbic infection, which, if the body were in a healthy state, would not take hold and produce diseases of different sorts.

The great sympathetic nerve is oftentimes finally affected, and is the near cause probably of many dynamic disturbances; *i. e.*, flushings of face, passing erythemas, etc. We recognize this notably with women at the menopause. At this period, we have also cases of gastrointestinal disturbance with physical signs of dilatation, or even a pronounced gastroptosis and enteroptosis.

A vicious circle is now formed, and on the one hand we have the gastrointestinal tract as a cause of intoxication of the nervous system, and on the other hand we find a depressed state of the nerves, which also tends to produce autointoxication, especially if, as it frequently does, it localizes its action in the stomach or intestines. From any point of view, the latter condition, if admitted, makes the economy more receptive to morbid effects of microbic infection, and brings on rapidly a pressing state of pathological, omnipresent imminence for both stomach and bowels, and indeed all organs.

How should one treat such cases? First, and above all, use proper saline purgatives to wash out intestines. Then make a judicious and well-ordered appeal to the proper intestinal antiseptics that are in solution, and will not effect stomachal revolt. These antiseptics seem to neutralize or destroy, at least for a while, all injurious by-products of defective digestion. What these products are precisely it is most difficult, at least practically and clinically, to state positively. In the same way, it is equally difficult to say which are the really poisonous products. Too many instances of sudden and fatal poisonings at church festivals and wedding feasts prove this, where later no pathological lesions of definite value could be found, and where unknown "ptomains" were the sole explanation afforded by the most careful inquiry and research on the part of our best skilled observers. Finally, the general nervous system must be toned up with iron, arsenic, strychnine, iodide of potassium, especially if syphilis is present, or arterial tension is exaggerated. In this manner the progress of degeneration of the nervous system may be arrested occasionally, and that already produced may be favorably influenced, as numerous instances demonstrate. The disappearance of passing symptoms in tabes dorsalis, *i. e.*, the squint, the fulminant and girdle pains, the Argyll Robertson pupil, gives evidence of it indisputably. In rheumatism, I have seen one notable case of ocular paralysis, wrongly referred to syphilis, and seemingly permanent for many months, thus cured. It is also shown, as I believe, that the careful, wise clinician should always think seriously of, and examine carefully for, gastrointoxication in nervous diseases, even though local pain and other apparent symptoms of impaired digestion are not readily discovered. This statement is particularly emphatic with respect to cases in which alcohol and syphilis and metallic poisons as causes cannot be found.

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*Read before the New York Clinical Society.

I would add that while autointoxication from the stomach and intestines as a source of disease presents numerous difficult and obscure clinical data, it is nevertheless far more satisfactory and certainly truer in etiology of morbid changes than to repose in the idle assumption, as formerly, of cold, fright, exposure, over-fatigue, as efficient and direct causes of nervous affections.

It has been claimed by some writers lately (Chapin, *Postgraduate Magazine*, September, 1901, editorial, *Medical News*, September 29, 1901) that, despite frequent laudation by numerous physicians, so-called antisepsis of the intestinal tract through treatment is of questionable value. This is said to be true of adults and children. It is also stated that many antiseptic drugs upset stomachal and intestinal digestion, and are direct irritants of the mucous membrane lining these organs. Again, it is stated that whatever inhibitory action may be exercised by them over the development and power for harm of certain bacteria, this inhibition is exercised even more upon the healthful action of the viscera affected, and this is greatly to be deplored. After all, they say we can only hope to attain really useful results through restoration of normal nutrition, and other means, therefore, should be employed in preference to drugs which interfere with this desired object. I am disposed to recognize the force of this argument about several drugs which I have tried and found wanting.

There are three, fortunately, which my personal experience would support with unqualified praise in numerous cases. The first, already mentioned, is creosote, properly combined and in minute, repeated doses; the second is wood charcoal, and the third, the subnitrate, and perhaps other salts of bismuth.

In certain instances, especially those where lowered nerve tone of different origin is primarily causative, I obtain frequently better curative effects from the use of the mineral acids than I do from any so-called antiseptic drugs. I have found dilute phosphoric acid particularly useful, and believe it may be properly combined with one of the simple vegetable bitters as quassia, calumba, or gentian.

Besides checking intestinal fermentation and decomposition directly, in many instances phosphoric acid is a tonic and a useful one to the nervous system, and without apparently detrimental effects upon the kidneys, although continued in moderate doses for a long while.

In patients who are languid, depressed, introspective, almost melancholic at times, I have seen a moderate temporary course of static electricity to be highly beneficial. Where, as I sometimes find, manifestations of rheumatism, due to autointoxication, hang around a patient and defy seemingly rational drug treatment, faradism applied through water, as we have it given in the electrical bath, is curative in great degree. Those who have a torpid, engorged liver. due to alcohol or over-eating, are the patients who derive most benefit, and without being invidious, I would call attention to not a few of our stockbrokers *et id omne genus*.

I do not believe that any amount of flushing the intestine is very valuable, unless a suitable purgative be employed in the beginning of treatment of toxæmia of intestinal origin; and when the bowels have been thoroughly evacuated, I rely more upon the drugs just mentioned than I do upon repeated flushing of the colon. Occasionally, without doubt, and particularly in those instances where the large intestine is the great and immediate source of trouble, the use of Kemp's tubes, or the ordinary funnel and long-rubber tube, as for stomachal lavage, may be signally valuable. But these are the exceptional cases at best, and we should not be misled to make use of irrigation of the bowel and abandon the other means upon which, as a rule, the well being of the patient, in greater measure, depends. Of course, I do not wish to decry intestinal irrigation; but I do wish to give it a proper place in therapeusis, and not, as now, exaggerate its importance through undue praise, because of its being somewhat of a novelty. This opinion, I know, is at variance with that of a distinguished foreign observer (Boas), who holds that intestinal lavage is only second in great importance to purgation. For several writers to-day favor the use of antiseptic drugs, by lavage of the bowel, rather than through the mouth, and they go so far as to affirm that no results of any permanent value are obtainable by the administration of antiseptic drugs after this manner.

To my mind, as I have stated, this is a far too radical statement, and while I recognize the importance of opposing in a measure the perhaps too positive statements of Bouchard and Beaumetz, I would not abandon what is true clinically: and that is, that many fermentative intestinal disorders are helped obviously by taking drugs through the mouth. None of these methods, however—purgation, the use of intestinal antiseptics through the mouth, lavage of the large bowel with sterilized water, or deci-normal salt solution sterilized, electricity—are complete in their good effects unless frequent judicious massage is employed. No doubt, muscular power is thus evolved, and in consequence increased motility of stomach and bowels is obtained. While the use of purgative remedies should only be occasional, if we are to anticipate the most favorable effects, proper massage may be employed once or even twice daily for long periods of time with great success, as I have repeatedly observed.

The question which now arises is in regard to foodstuffs, their proper most judicious selection, and the evil effects which may result from their fermentation or decomposition. Finally, the questions, What are the injurious products which are absorbed, and when are among the most difficult problems for solution. I have learned to hold in reasonable doubt many of the affirmations of a latter day which would interdict absolutely certain foods on account of supposed chemical reactions, and have returned in many instances to the wiser though empirical control, which specialized observation of each individual digestive capability affords. I am confident, also, that this capability of digesting certain foods without reasonable explanation, so far as clinical observation goes, shows that the digestive power changes from time to time for certain articles of diet without assignable cause. What is true of food is also true of drink, and I have known of more than one patient who discovered, to his cost, at a certain time, that such a water, wine, or spirit had become positively injurious, where previously he had drunk of it with impunity.

The subject of autointoxication and nervous depression, with its frequent mechanical sequelæ, as shown in stomach, bowels, and other abdominal viscera, is not merely of medical interest. There is a surgical side and a very important one. If gastroptosis, enteroptosis, dilated stomach, displaced liver, kidneys, uterus, are only the result, and in numerous instances they are, of previous malnutrition, bad habits, unhealthful surroundings, hereditary taints; and if, after careful inquiry and consideration, such conditions cannot be corrected, or at least there is no reasonable hope of this correction, why operate upon such cases? I doubt not that many hospital operations—not to speak of those in private practice—are successful so far as the operations are concerned, but when we come to look into the later condition of such patients, the question arises, are they permanently benefited? In my limited experience, I should say, no. I should be willing to affirm, with what data I possess, that the knife is of more than doubtful value. The way, of course, to settle this question, like many others, is to follow up such cases closely after operation for many months, or even years, and thus to find out and determine accurately what measure of temporary or permanent benefit has resulted. I am told by one distinguished surgeon that the after-date of many surgical operations is sadly deficient with us, and we are obliged to recur to foreign statistics, especially the German, to furnish us with a basis of honest solid conviction. Why this is, I am not altogether prepared to affirm. I suspect, however, it is mainly due (1) To the fact that its importance has not been sufficiently recognized; (2) Because it is very difficult to follow up patients closely after they leave the hospital, and obtain from them full and reliable personal data; (3) The number of private cases of a particular operation by any one surgeon are usually too few to permit of more than a kind of individual impression, rather than settled belief, as regards an ultimate conclusion.*

This interesting and important topic might be greatly enlarged upon. Its elaboration I prefer to leave in your hands. At best, I have been and can be only suggestive. For my little effort I crave your indulgence.

*Fortunately, since writing this paper, a distinguished American physician (Dr. R. H. Fitz of Boston) has supplied, in part, the deficiency referred to (*Medical News*, page 1009, December 28, 1901). In my judgment, every practitioner would do well to read this valuable and timely contribution.

Dr. Leonidas H. Laidley has been appointed Medical Director of the Louisiana Purchase Exposition, or World's Fair, to be held in St. Louis in 1903. Dr. Laidley is a graduate of the Jefferson Medical College of 1868, and the Bellevue Hospital Medical College of 1872, and has practised in St. Louis for the past thirty years.

DIABETES MELLITUS—ETIOLOGY AND PATHOGENESIS.*

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The presence of sugar in the urine does not necessarily indicate diabetes mellitus. Sugar may appear in the urine, usually in small quantity and temporarily, from many transitory causes. In fact, certain authorities claim that in urine concentrated by evaporation, faint reactions of sugar may be obtained from perfectly healthy individuals. But for practical everyday work, we may assume that healthy urine is free from sugar, and when the ordinary copper tests persistently and repeatedly show the presence of sugar, we must assume that diabetes mellitus exists. Robert Saundby[1] has seen only sixty-nine specimens of non-diabetic urine which reduced copper, and in eleven cases the reduction was not due to sugar. Any change, even from blue to green, demands further investigation of the case, especially by filtering the urine repeatedly through animal charcoal, which removes all reducing substances except sugar and accentuates the sugar reaction. Alimentary or physiological glycosuria exists in certain individuals after the ingestion of an unusual quantity of sugar. At times, lactosuria occurs in pregnant and nursing females because milk sugar is formed in the breasts in excess, and reabsorbed into the circulation. In these cases of alimentary glycosuria, it is important to consider whether the condition is a precursor of diabetes mellitus. J. Strauss[2] would answer this question in the negative, but it is a matter for careful individual decision.

Toxic glycosuria may be set up by the ingestion of many substances other than sugar itself. Alcohol causes glycosuria in many cases, not only by inducing disorder of the liver and of the nervous system, but by the effect of the alcohol itself. The combination of chronic gastritis, chronic alcoholism, and chronic hepatitis furnishes by far the largest number of cases of non-diabetic glycosuria. Remedial agents which are stated to produce sugar in the urine are ether by inhalation, amyl nitrite, mercury, hydrocyanic acid,[3] sulphuric acid, alcohol, strychnine, glycerin, nitrobenzol, and others.

Pathological and traumatic glycosurias are met with in injuries, derangements, or diseases of the nervous system. Portal thrombosis, acute yellow atrophy, and perhaps phosphorus poisoning will set up glycosuria. Depression of sugar assimilation occurs in hepatic fibrosis, in certain obese individuals, at times in digestive derangements, rarely in diseases of heart and lungs, and sometimes in the aged. When this function of sugar assimilation is depressed, the sugar taken as food appears temporarily in the urine. Many of the infectious diseases are attended with, or followed by, glycosuria. Diabetes insipidus, interstitial nephritis, gout, and early syphilis may have temporary glycosuria as an epiphenomenon.

The majority of these cases of transient glycosuria present no other symptom than the presence of sugar in the urine, and must be carefully distinguished from true diabetes mellitus. The one is merely a perversion of function, readily yielding to treatment, and not accompanied by severe symptoms. The other is a disease, the severer forms of which are incurable, and the symptoms thereof distressing. Cases vary so much that an exact definition of the disease is difficult. F. W. Pavy[4] would differentiate cases of diabetes into two classes, alimentary and compos-

*Read before the New York State Medical Association, New York County, January 20, 1902.

ite. In alimentary diabetes, the essential condition consists in a faulty power of assimilation within the system of the carbohydrates taken with the food, giving the abnormal presence of dextrose in the urine, but not the color reaction with ferric chloride. In composite diabetes, we have not only defective carbohydrate assimilation, but also abnormal tissue disintegration with the production of sugar in association with other abnormal degradation products. These products are represented in the urine by betaoxybutyric acid, diacetic acid, and acetone, indicated by the appearance of a wine-red color on addition of ferric chloride. Under the morbid influence of composite diabetes, the tissues melt down, emaciation develops, and life is often terminated by coma, the result of a true autointoxication. Alimentary may pass into composite diabetes, especially in early life, in neurotic individuals, as a result of hereditary tendencies, and when the individual is under great mental strain.

True diabetes mellitus is a frequent disease in this city, and its frequency would seem to be increasing under the factors of our strenuous life. Among children, school competition; with professional men, keener striving for supremacy in intellectual advancement; with business men, the accumulation of fortunes which would have been considered unattainable by previous generations; with working people, the difficulty of keeping pace with inventive machinery and foreign cheap labor and capitalistic combinations. All these causes are hurrying us on in a mad whirl to premature decay of tissue. Of 202 deaths from diabetes in New York City (Manhattan and The Bronx only) in 1899, fifty-four occurred in Jews and fifty-one in people of Irish nativity or parentage.[5] These figures are striking and suggestive, but my personal experience does not bear out the idea of the compiler, that the cases result from "breeding in and in," but rather that they result from the struggling earnestness of both peoples. Heredity, however, does play an important part in the causation of diabetes, especially in the cases developing in childhood.

Males are affected more frequently than females, in the porportion of 3 to 1, except in the case of children, where, curiously enough, girls are more frequently affected than boys, and the children of the richer class oftener than those of the poor.

Among occupations, those which involve continued and excessive mental application and nervous strain furnish the largest contingent of cases. Muscular activity, without worry, is both preventive and curative of diabetes. Dietary indiscretions, especially when gout or obesity coexists, will produce transient glycosuria and, if persisted in, may lean to permanent diabetes, probably by exhausting the liver by overwork. The excessive use of tobacco may produce the same result[6].

Grief, fright, joy, anger, or anxiety, when intense or protracted, also exert a marked influence.

The relation of lesions of the nervous system to diabetes was first noted by Claude Bernard, and since his time, cases have been reported by many observers, covering a wide range of associated organic and functional nervous diseases, and embracing a voluminous literature. Some authors have gone so far as to claim that all cases of diabetes originate in affections of the nervous system.

The association of insanity with diabetes is so marked as to be more than a mere coincidence. E. C. Spitzka presented a paper before the New York Academy of Medicine on January 20, 1898, showing parental diabetes as an etiological factor in forty-six cases of insanity.[7]

The relations of gout with glycosuria are so intimate that they may be considered as convertible conditions, the symptoms of one often distinctly alternating with those of the other. But gouty glycosuria is more or less persistent, and it should always be borne in mind that it is liable to pass into the graver condition of true diabetes mellitus.

Diabetes occurs more frequently in the obese. It is thought that the obesity masks the diabetes, and that before the obese individual shows sugar in his urine, it has already existed in excess in his blood, and has been converted into fat. In the majority of cases this "lipogenous diabetes," or "diabetogenous obesity," yields to treatment; but in some both the fat and the diabetes persist, while in others the grave form of diabetes, the "composite" diabetes of Pavy,[4] develops, and actual emaciation sets in.

In 1877, Lancereaux called attention to the causative relation between certain cases of diabetes mellitus and lesions of the pancreas. These cases were marked by rapid progress, with loss of strength, great thirst, polyphagia, violent epigastric pain, wasting and loss of sexual desire, with, at first, diurnal, and afterward, also, nocturnal polyuria. Anatomically, atrophy of the pancreas and partial atrophy of the pancreatic duct, with phthisis developing at the apices of both lungs, were found. Death occurred with a low axillary temperature. Hansemann[8, 9] studied the cases in Berlin from this standpoint, and concluded that complete destruction of the pancreas in man may be assumed to cause diabetes mellitus; that destruction of the pancreas does not produce any special form of diabetes, and that pancreatic diabetes has no relation to the sex or age of the individual. On the other hand, extensive lesions of the pancreas have been observed without diabetes, and diabetes occurs without lesion of the pancreas. It has been ascertained, by experiments on animals, that it is not the loss of the pancreatic juice proper upon which depends the production of pancreatic diabetes, because this secretion may be diverted from the intestine through a pancreatic fistula without causing diabetes. It is thought that certain cells in the pancreas secrete a supposititious "something" which is absorbed into the circulation, and which has a glycolytic, or sugar-splitting, property in the blood.[10] The removal of this glycolytic ferment from the blood deprives the tissues of the power to convert glucose into glycogen, or to store it up as fat. This constitutes the pancreas theory of the pathogenesis of diabetes.

Acute diseases, to which diabetes has been considered to be a sequel, are malaria, influenza, measles, and others. The direct causative relation here is open to question. Syphilis has been brought forward as a frequent cause. Diabetes has also been observed in connection with a great variety of other unclassified conditions, but a causal relation in these has not been established.

Notwithstanding the vast amount of work which has been done, the pathogenesis of diabetes mellitus is still unknown. Many theories have been advanced, and each theory has been well supported. The principal theories relate to a perverted glycogenic function in the liver, to perverted metabolism in the tissues generally, to alterations in the pancreas, and to trophic disturbances. The liver theories are two in number. The first supposes that the liver cells are unable to convert the digestive sugars brought to them by the portal vein into glycogen, and that, in consequence, sugar accumulates in the blood. The other theory supposes that the liver cells cannot hold the glycogen after it is formed, but allow it to be transformed too rapidly into sugar, which accumulates in the blood.

The perverted metabolism theory supposes an inability on the part of the muscles, glands, and other glycogen savings-banks to appropriate the sugar which is brought to them in the blood.

The pancreas theory has been already alluded to. Since all the processes of metabolism, constructive and destructive, depend upon nerve action, and since experimental, as well as accidental, lesions of the nervous system have been attended with glycosuria, it would seem that some cases of diabetes, at least, may be caused by trophic nervous disturbances. But the evidence, though voluminous, is conflicting and not easy to sift. In fact, it is improbable that all cases of diabetes mellitus depend upon a single cause; and in default of a demonstrable pathogenesis, we must fall back upon a comprehensive definition, and say that diabetes mellitus is a disease of nutrition, sometimes acute, generally chronic, characterized by the persistent presence of grape sugar (dextrose) in the urine, by polyuria, and by a progressive loss of flesh and strength. To this we can only add that sugar appears in the urine because it is present to excess in the blood.

The question of the transmission of diabetes from one person to another living in intimate association with the diabetic was raised by R. Schmitz[11] in 1890; but a critical review of 4,389 diabetic patients showed its occurrence in only forty-seven married couples, or 1.07 per cent., a number so small that it seems probable that the occurrence is only accidental.[10]

Although the existence of diabetes is favorable to the development of various microorganisms, none has yet been shown to bear a causal relationship. Phloridzin, a glucoside obtained from the bark of the root of apple and cherry trees, so changes the renal epithelium as to destroy its normal power of keeping back sugar, and to cause it to seize greedily upon the sugar held in solution in the blood.

Phloridzin poisoning, therefore, determines a form of glycosuria which is dependent upon disease of the kidneys. It is possible that there are other poisons, gaining access to the human organism in some manner unknown to us, which may produce similar changes in the kidneys.[12]

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No. 42 EAST TWENTY-NINTH STREET.

Insomnia in Everyday Practice.—David Inglis holds that no treatment of insomnia is likely to be successful which does not recognize the fact that all of our nervous processes are adjusted to periods of alternating activity and repose. Sleep by night presupposes activity by day. It sometimes seems severe to make a man already depressed work like a hired man, but if by doing so he can fall asleep on the spot like a hired man, the result is satisfactory. If work cannot be insisted on, strychnine in the morning, in positively stimulating doses, with a sedative at night, may be resorted to. Gout often produces insomnia by the toxic effects of the poison on the protoplasm of the brain elements. In some cases of beginning insomnia, the administration of a soporific to secure prompt sleep for several nights in succession, aided by the wise use of suggestion, will often break up the trouble. For several nights thereafter any inert but bulky powder may be given as a placebo. Increasing the assimilative power of foodstuffs will often overcome insomnia, even in fat women, who, in spite of their appearance, are often poorly nourished. Fatty foods are the most effectual. Chloral secures sleep more promptly than any other drug, but is dangerous to use. Trional and sulphonal are the safest, and it is well to give the former in small doses at intervals during the day, with a double dose at bedtime. In the insomnia of old age a mixture of paregoric and aromatic spirits of ammonia is often very efficacious.—*The Physician and Surgeon.*

Carbolic Acid; Its Use and Abuse.—George W. Sargent finds phenol a satisfactory agent for the treatment of indolent ulcer after unhealthy and false tissues have been removed, used in a 95-per-cent. solution until the surface turns white. Ninety-five-per-cent. alcohol is then applied till the normal color of a clean granulating surface appears. It is serviceable in mammary, tuberculous, and other abscesses, in erysipelas, ivy-poisoning, the lymphangitis that occurs with infected wounds, and the inflammation in caked breast. The danger of poisoning should always be borne in mind. Death has resulted from absorption through the skin. Strong acid on fingers or toes may result in gangrene. If followed by alcohol, there is probably no danger. In poisoning cases, several patients apparently moribund have recovered after the use of alcohol. Whether alcohol acts as an antagonist or as a solvent is not certainly known. In poisoned cases, wash the stomach out with alcohol, then give whiskey hypodermically with the idea of neutralizing the acid in the blood. Other heart stimulants may be required. Alcohol is the most perfect, the most certain, and the most handy antidote to carbolic acid that we possess.—*The Therapeutic Gazette.*

The Relative Importance of Disease of the Heart Muscle and the Heart Valves.—Louis Faugères Bishop calls attention to the fact that there is no condition which requires more careful diagnosis than disease of the heart muscle, for it is easy to mistake functional disorder for the symptoms of serious disease. Moreover, the loud murmur may be of little importance compared to the commencing disease of the heart muscle, detected by the slight alteration of rhythm and small variations of force of the heart beat. Dilatation is capable of producing murmurs as marked as endocarditis; when we add to these the so-called hemic murmurs and the anonymous murmurs heard under the clavicle and various other places, it becomes evident that to diagnose a cardiac murmur as due to deformity of valve segments requires careful examination and prolonged observation. Signs of failure of the heart muscle are more grave than the development or existence of leakage of the valves.—*Pediatrics.*

Traumatic Tetanus.—Guido Baccelli holds that antitoxic serum is more of an immunizing agent than it is a curative one. His preference in tetanus is for the carbolic-acid treatment. This acid is analgesic, reduces temperature, and diminishes spinal reflexes, and all three of these actions are called for in tetanus. A patient referred to by the author received in all 106 hypodermic injections (one every three hours), which, beginning with small doses, finally reached 4 centigrams a dose—in all 3 grm. The patient should be warned of the injection, otherwise the slight pricking may bring on a spasm. Phenacetin combined with camphor can be added to the treatment. —*Gazetta Medica di Roma.*

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BARBER SHOP HYGIENE.

WE must extend our congratulations to the New York Board of Health for taking up seriously the question of how to make the work of the tonsorial artist less dangerous to the health of the community. The subject is by no means a new one, and readers of the MEDICAL RECORD will recall how long ago the plea for a clean shave and a safe hair cut appeared in its pages, and how the "menace of the barber shop" has from time to time been pointed out, and suggestions made for decreasing the various dangers. Some years ago we advanced the opinion that, while our city was very slow in the matter, and decidedly behind many others in instituting reforms in this direction, when any steps were taken here they would in all likelihood be the more radical and efficacious because we would have the experience ot and the mistakes and difficulties encountered by others to guide us in laying out a plan of action.

This quasi-prediction, it is to be hoped, will prove correct.

In the advance guard of the Board's crusade we find a banner inscribed: "Don't use a sponge on the face; don't use a powder-puff; don't use an alum stick; don't use a towel more than once."

These suggestions to the barber it is proposed to post in every shop. They are good so far as they go, and make an entering wedge; but the greatest care becomes necessary in the proper treatment of the brushes, combs, razors, towels, and the operators' hands. It has been pointed out in these pages that subjects of farus, ringworm, and other dangerously contagious diseases receive not alone the usual and ordinary ministrations of the barber, but that in some shops, especially in the down-town, crowded districts, such cases are actually treated by epilation and other measures over long periods of time. The great danger from such a practice need not be dwelt upon.

Impetigo contagiosa is perhaps the commonest disease transferred from one person to another by way of the barber's chair. The great majority of adult males presenting this affection probably contract it in this way.

The matter is simple enough when we consider the extreme contagiousness of the disease; its association with pediculosis capitis, especially in children who often go for a hair cut at the time the scalp begins to itch and break out. The man who is "next" gets the full effect of the germs as, with unwashed hands, the lather is rubbed into his face; for even in the best shops it is rarely one sees the barber wash his hands between customers, and though manicuring may be done on the premises, it is seldom practised by the barber on himself for the customer's good. While there is probably little danger from the blade itself, still the razor, along with all else, should be kept clean. The greatest danger from lues lies in the use of epilating forceps and tweezers in extracting ingrowing hairs, and in rubbing pimples and cuts with the alum stick, which holds upon its surface blood, pus, and germs from a predecessor.

Another great disseminator of germs is the clipper. After use, it is usually wiped and laid away in a drawer, and considered clean, according to the barber's interpretation of the term cleanliness.

The Board has a task before it in the education of the barber, but if, as it is hoped, the public will aid as teachers, much may be accomplished. There are many educated, refined, and cleanly barbers to whom our criticisms do not apply, and these would gladly aid in instituting such general reform measures as they already carry out in their own establishments. The realization, however, would probably be slower than if urged from the outside. Still, the united coöperation of the guild would be highly desirable. They could make a rule among themselves that children with sore heads (which would include farus and ringworm) should be excluded from the shop; that subjects of active syphilis should be advised to learn to shave themselves, or that extraordinary precautions be taken in all suspected cases. They could further agree that it is detrimental to the best interests of their calling that any member should attempt to encroach upon the more learned calling of medicine by treating such scalp diseases as are caused by germs, and most likely to spread disease in their legitimate *clientele*.

Another very important agreement among themselves would be that when a member of the craft is himself sick with a disease in a contagious stage or form, he should absent himself from work. The entire armamentarium should unquestionably be maintained in a safe state of cleanliness, and to this end brushes, clippers, combs, etc., should be boiled or sterilized in some other way. A method which does not injure the instruments can be carried out by placing them for four hours in a closed receptacle, in which forty-five grains of paraform are evaporated by heat for each cubic meter of space.

Many cities have found it practical to maintain barber shops fairly free from danger to the community, and it is sincerely to be hoped that New York is at last in a fair way to follow in their lead.

THE CONTROL OF HEMORRHAGE IN SURGERY OF THE HEAD AND NECK.

THE prevention of hemorrhage has always been one of the most important considerations in the surgery of the neck, mouth, and head, and many plans have been suggested by which this may be accomplished more or less completely. In a recent publication, "Problems Relating to Surgical Operations, 1901," Crile of Cleveland has, after a series of experiments upon animals, devised a method which seems to have acted exceedingly well in controlling the blood supply of the parts during extensive operative work in the region under consideration. A number of cases are reported after a description of the experiments which led to the adoption of the procedure. By a specially devised clamp the flow through both carotids is temporarily shut off, so that the operation may be done in a practically bloodless field, and with proper precautions there have been noted no serious cerebral disturbances. It was found in a number of instances, in which animals were examined post mortem after the carotids had been occluded for periods in some instances as long as forty-eight hours, that there were no signs of embolism anywhere in the brain, and that the cerebral circulation had been satisfactorily re-established after the removal of the clamps.

In the cases in which closure of the carotids has been practised in the human subject, the tightening of the clamps has been followed by immediate blanching of the head and neck, but the dangers of too sudden a fall in cerebral blood pressure have been obviated by keeping the patient in the Trendelenburg position. This is an important matter, since tying both carotids simultaneously has frequently been followed by symptoms of serious cerebral disturbances. The cases reported by Crile, however, certainly show that, with the carotids clamped, there is enough collateral circulation to maintain the functions of the important nerve centers at the base of the brain, especially when advantage is taken of a favorable position of the patient's body, and when atropine is given before the operation to counteract any possible inhibitory vagus action on the heart. Many observations have been recorded which show without doubt that if the blood supply through the common carotids is shut off permanently, cerebral softening of greater or less extent will ensue; but this need apparently not be feared any more, when the closure is for one or two hours, than is gangrene, when the Esmarch bandage is applied to a limb to keep it bloodless during an operation. A number of very extensive operations are reported, in which the control of bleeding has been very perfect, and it seems that we may consider the method as of great value when carried out with proper precautions. When the time comes for the removal of the clamps, the screw should be loosened slowly so as to allow a gradual resumption of flow through the clamped vessels. The form of the clamp is important, and that suggested by Crile seems to possess all the requirements for the safe control of the vessels.

THE NATURE OF HERPES ZOSTER.

Various theories have been propounded as to the nature and origin of herpes zoster, but according to Van Harlingen (*American Journal of the Medical Sciences*, January, 1902, p. 141), the simplest and most plausible theory of its production considers it as due to a propagated neuritis. By the designation herpes zoster is to be understood a specific infectious, and possibly contagious, exanthem, characterized in its invasion by lassitude, general malaise, chills, elevation of temperature and more or less digestive derangement. In the sequence of these symptoms neuralgic pains develop in the distribution of certain nerves or metameric areas together with enlargement of lymphatic glands. After the lapse of several days the characteristic exanthem makes its appearance and passes through a fixed cycle of development, acme, and decrudescence. The general symptoms, particularly the neuralgic pains, may continue during this period, or they may diminish in severity, usually, however, disappearing with the advent of the eruption. In some instances, particularly in elderly persons, the neuralgia may constitute a persistent feature. Rarely, visceral complications are present, such as paralysis of motor or sensory nerves, and pleural, peritoneal, articular and visceral inflammations. The posterior (sensory) ganglia of the cord and the Gasserian ganglion are the chief seats of the morbid process. From these, inflammation and degeneration may extend along the nerve trunks and fibers. No other lesions have been discovered after death, although it is probable that further investigation will result in tracing the disease in the various membranes and viscera when its presence has been clinically noted. The numerous examinations of the cutaneous lesions and such blood examinations as have been made have not thrown any light upon the nature of the disease. Zosteroid eruptions are not infrequently observed in cases of poisoning by coal-gas, after the ingestion of arsenic, following injuries of nerves, as a result of mental shock or profound emotional disturbances, in association with hysteria and probably also under other conditions. These should, however, be distinguished from true herpes zoster as described in the foregoing.

THE PREVENTION OF OPERATIVE WOUND INFECTION.

It happens not rarely that in spite of the utmost care on the part of the surgeon with regard to cleanliness of instruments and of hands, as well as in the preparation of the field of operation, and in the successive steps of the operation itself, he is chagrined by the development of infection and suppuration in the wound. Such a result, investigation has shown, is to be explained by the practical impossibility of rendering sterile the skin of both patient and operator. The infecting agents are lodged not alone upon the surface, but also in the cutaneous ducts and glandular structures, so that they cannot be entirely removed by any of the methods in common employ. As a matter of fact, the functional activity of the sudoriferous and sebaceous glands must constantly result in the extrusion of bacteria upon the surface of the skin. In order to overcome this difficulty so far as possible, Mr. Ernest Maylard (*Annals of Surgery*, January, 1902, p. 1) has adopted two procedures—the one applicable to the operator, the other to the patient. The first consists, following the usual ablution, in immersing the hands for from five to ten minutes in water as hot as can be borne. By this means, dilatation of the capillary vessels is brought about, with increased secretory activity on the part of the sudoriferous and sebaceous glands. The soddened superficial epithelium, together with secretions, is finally removed by first rubbing one with the other in the water, and then using ordinary soap, and finally rinsing the hands in warm carbolic lotion (1-40), and also repeating this throughout the course of the operation. The second procedure consists, after cleansing in the usual way with soap and water and alcohol and turpentine, or ether if necessary, in anointing the skin freely and widely with 20-per-cent. of mercury oleate in hydrated wool fat, rubbing this in for about ten minutes, and covering the surface with a piece of lint besmeared with the same preparation, the latter being left in place for twelve hours, when the inunction is repeated, and the application is continued for twelve hours more. The lint is removed when the patient is placed upon the operating table, and the superfluous ointment is rubbed off with a piece of sterile gauze. Although chemical examination failed to disclose the presence of mercury in small bits of tissue removed from the wound-edge at operation, bacteriologic investigation showed that the preparation employed possessed bactericidal properties, and that the skin subjected to its action contained fewer bacteria than skin treated by other methods of sterilization. Finally, and of greatest importance, is the fact, that the clinical results of the method fully sustained the theoretic expectations of its usefulness. The simplicity of the procedure, together with its safety and its promise, would seem to commend it to the favorable consideration of surgeons.

Medical Schools to Be Put on a German Basis.

The Germans are credited with leading the world in education, although a patriotic Scotchman would doubtless claim that honor for his own country.

The system of education in Germany is paternal, that is to say, that the schools, including the medical schools, are supported by the government. The professors at the universities receive their salaries from the State, and in addition get a percentage according to the number of their students. This, to some extent, explains Germany's reputation in the medical world.

Such a scheme in its entirety would be impossible in the United States, but one part of it might be adopted with advantage.

Professor Victor Vaughan, dean of the Medical College of Michigan University, is chairman of a committee composed of representatives from the leading schools of the United States to place these schools on what is termed the German basis. That is, to make it possible for a system of credits to be standardized in all these schools, so that a student in any one of them may transfer to any other without loss of standing.

This portion of the German system, if introduced into the United States, would be favorable to a thorough medical education. It would enable students to take courses under the best teachers in the country, and would also act as a stimulus to the professors themselves.

The colleges represented on the committee are as follows: University of Michigan Medical School, Harvard, Pennsylvania, Johns Hopkins, New York College of Physicians and Surgeons, Western Reserve.

Geographical Distribution of Anopheles and Malarial Fever in Upper Palestine.

Mr. John Cropper contributes a paper on this subject to the *Journal of Hygiene* for January.

It appears that malarial fever is most prevalent in Upper Palestine from June to November, reaching its maximum in October. The disease is almost unknown in the elevated villages, but rife in the low-lying and marshy lands.

Mr. Cropper and party used a tent for protection during the day, sleeping always at night in the open, with no other protection than that afforded by mosquito-netting. Water was drunk freely when there seemed to be no danger of surface contamination and with no ill results. None of the party took quinine, and all escaped malarial infection.

The anopheles identified were A. annularis; subspecies, pseudopictus Grassi, so common in Italy; A. Maculipennis, Meigen, and superpictus Grassi.

The frequency of infection among children was observed, agreeing with the observations of Christopher and Stevens in Africa.

In the Khudecrah district, 2,000,000 eucalyptus trees had been planted; but in the opinion of Mr. Cropper, these trees have not done the slightest good, and perhaps only harm.

Natives suffer much less from malaria than the emigrant Jews, and hardly at all from blackwater fever.

The colony of Tantura is now deserted on account of severe malaria and blackwater fever.

With regard to the use of quinine, Mr. Cropper says: "If ever this drug had a good trial among a far from savage people t is in Upper Palestine; to persons ill of blackwater fever, 20 grams in a single day and 129 grams per day for a week have been given, with subsequent recovery.

The following conclusions were reached:

1. That malaria is rife in every part of Upper Palestine, where anopheles represents the majority of the mosquitos present in the native dwellings.
2. Malaria occurs mainly but not entirely among children, and these show definite signs of infection in enlarged spleens and fever.
3. Malaria occurs sporadically, or not at all, in places where an unsuccessful search was made for anopheles.
4. Blackwater fever only occurs in the most malarious districts and chiefly among Europeans.
5. Estivo-autumnal fevers, greatly predominate, though quartan, a few tertian, and mixed infection also occur.

Dissemination of Anopheles by Wind and Ships.

Whether the malaria-bearing mosquito is carried considerable distances by air currents is as yet "non proven." The evidence in support of this view is insufficient to convince.

Dr. G. F. Nuttall and Mr. Arthur Shipley have been contributing to the *Journal of Hygiene* valuable studies of the anopheles mosquito.

In the first number of that journal the modes of dissemination of this species was touched upon, and in the current number the subject is continued.

Howard says that he is incredulous regarding the supposed long flights of mosquitos, since he has had occasion, in many cases, to observe that mosquitos breed close to localities where their breeding places had not been suspected.

Fermi and Lumbao, referring to culicidæ in Sassari, state that the females do not travel far, because they obtain sufficient food from sucking the blood of man and animals.

In Public Health Reports of U. S. Marine Hospital Service, August 9, 1901, two communications are published by members of the service. Dr. P. C. Kalloch writes from the Gulf Quarantine Station "that the captain of the ship *America*, arriving in quarantine July 24, stated that mosquitos came aboard the vessel on the previous night, at a distance of at least ten miles from land, the nearest point being Chandaleur Island. The opinion prevails in this locality that mosquitos are blown by southwest winds from the Louisiana marshes to this island, a distance of ten to twenty miles, and the experience of this summer seems to accord with the opinion. Mosquitos were very few in number until middle of July, when, after several days of southwest winds, the number was vastly increased. At that time there was no other local condition to explain the sudden increase." The second communication is one by Dr. H. C. Cumming, regarding the presence of mosquitos on board the Spanish bark *Maria Blanquer*, which arrived at the South Atlantic Quarantine Station from Rio Janeiro. The master was positive that there were no mosquitos on board until the twenty-second day, when some were noticed in the water tanks when opened. The water had come from Rio Janeiro. The mosquitos became so numerous on the journey as to constitute a veritable plague. The United States quarantine officer reports: "When the forecastle was opened after fumigation, mosquitos could be scooped up by the hand."

Dr. Nuttall and Mr. Shipley remark that no migratory flights had yet been observed in connection with anopheles.

Sir Henry Thompson on Diet.

Sir Henry Thompson, in his day the best known genito-urinary surgeon in Great Britain, has just published a book on diet. Sir Henry has long held decided views on this matter, as well as being the champion of cremation.

At the age of fifty-two, thirty years ago, he became a total abstainer on account of suffering from dyspepsia and rheumatism, and received great benefit from the pursuance of teetotalism. Five years ago he, as an experiment, drank two or three glasses of claret a day, but, as the dyspeptic symptoms and pains in the joints returned, he has abstained from alcohol ever since.

Sir Henry Thompson declares that after abandoning alcohol entirely the joints lost their stiffness, and ultimately became as supple and mobile as they were in youth, and continue so to this day. More than half our bodily ills, he believes, are due to improper feeding, and holds that the older one gets the less nourishment one needs.

In his opinion, the head of many a family is veritably killed by the mistaken kindness of his wife in stuffing him with delicacies he cannot digest on the plea of keeping up his strength.

The martyr to his wife's solicitude is persuaded to swallow all kinds of patent foods, so nutritious that his gastric juices are unable to do their duty.

The English surgeon is not an absolute vegetarian, but thinks that three-fourths of our food should be vegetable. Such a diet, he contends, renders the brain clearer and more active, inspires wit, and tends to preserve an equable and placid temperament. The person who thus eats wisely but not too well does not make himself obnoxious by snoring in his armchair, as is so often the case with those who fill themselves to repletion with meals and highly flavored foods. Indigestion is unknown to a man who is strictly temperate in diet, and he is in every way best fitted to fight well the battle of life.

Vaccination and Smallpox in London.

The Statistics Committee of the London Metropolitan Asylums Board issued their report a short time ago, which must be regarded as a great triumph for vaccination.

The report says that during the first part of the year there were but few cases of smallpox in London. At the end of August, however, the disease appeared in epidemic form in the large parishes of Marylebone and St. Pancras, whence it spread to every one of the thirty-one parishes comprising the Metropolitan Asylums district. The grand total of cases that occurred in 1901, and have already terminated in complete recovery or death, was 1,017. Of these, 247 cases ended fatally, giving a percentage of 24.28 per cent.

These figures are then divided into the vaccinated, doubtful, and unvaccinated classes, and show a remarkable vindication of the good effects of vaccination.

The subdivisions are as follows: Vaccinated cases, 760; deaths, 108; percentage, 14.21. Doubtful cases, 63; deaths, 41; percentage, 65.08. Unvaccinated cases, 194; deaths, 98; percentage, 50.52.

The vaccinated cases undergo a further subdivision into "over twenty years of age" and "under twenty years of age" tables.

It is gathered from these that the mortality among children and young people under twenty was only 1.87 per cent., that among the elders being 17.52 per cent.; of those between thirty-five and forty years of age, who had been vaccinated when young, the mortality rate was found to be 28.95 per cent.

These latter figures are a strong argument in favor of revaccination.

The report states that "there is diminution in the protective power afforded by primary vaccination after the age of twenty years," and remarks in conclusion, that the facts set forth in it confirm the report of the special committee appointed after the outbreak of 1870–72, which strongly advocated revaccination. It is also pointed out that cases, the recovery from which is not yet complete, have not been included in the tables. Their inclusion will ultimately reduce the percentage of fatal terminations.

All statistics bearing upon vaccination and smallpox should be published, as they provide an extremely valuable object lesson to the doubters. Figures are difficult things to deny, and although the anti-vaccinationists have ofttimes proved themselves past masters in juggling with them, and converting them to serve their own purpose, yet sensible persons cannot fail to be influenced by the striking testimony which statistics have given in favor of the benefits of vaccination.

The opponents of vaccination have exhibited misguided but very active zeal in spreading their propaganda; the disciples of Jenner must display no less strenuousness in controverting such biased and prejudiced views.

Smallpox in Spain.

Smallpox is still extremely prevalent in many parts of the world, and especially in those places in which the laws regulating vaccination and revaccination are not stringent, and are not strictly enforced.

Germany provides a splendid object lesson on the matter; there, as in no other country, vaccination and revaccination at stated periods is efficiently carried out, the consequence being that smallpox has been almost completely vanquished.

Spain has no enviable reputation as regards her health laws, and an American is apt to associate with Spaniards slipshod and careless methods of preventing disease.

However, if the municipal authorities of all Spanish towns issued as drastic proclamations for the suppression of smallpox as has the alcade of Valencia, several American cities might with advantage take example from them.

According to United States Marine Hospital Service Public Health Reports, January 24, the city ruler of Valencia has given notice that the following regulations must be complied with:

1. Vaccination and revaccination of all the inhabitants not already vaccinated declared compulsory.
2. To facilitate compliance with this order, without expense or trouble to the inhabitants, all the sanitary posts and relief stations of the city shall be permanently open.
3. All municipal doctors shall make known to the families of the sick poor whom they visit that they

can only assist and supply medicine gratuitously on condition that they get vaccinated within twenty-four hours.

4. All schoolmasters, both of public and private schools, shall require certificates of vaccination from their pupils, and hold the same to be shown to municipal doctors charged with sanitary inspection of schools.

5. Laborers employed by the municipality will not receive wages unless they present medical certificates of vaccination.

6. Directors and owners of factories and workmen of all classes shall exact from all their employees certificates of vaccination under penalty of fine if they admit any one without such certificate.

7. The directors of penitentiaries, hospitals, almshouses, homes for the invalids, asylums, sanatoriums, or similar establishments shall proceed immediately, if they have not done so already, to vaccinate or revaccinate all those under their care, and refuse admittance to visitors not furnished with vaccination certificates.

8. In the shelter sheds and casualty wards for paupers no admission or assistance will be given to the unvaccinated, unless they submit to vaccination on the spot.

9. The charity tickets distributed on feast days by sub-mayors will not be honored unless accompanied by certificates of vaccination.

10. All applications for stalls and booths in public markets must be accompanied by such certificates, or no notice will be taken of them.

11. No name shall be inscribed on the parish poor list of any unvaccinated person.

12. Sub-mayors shall visit and inspect all houses in their respective districts, beginning with those in which cases of smallpox exist, and shall insist upon the immediate vaccination of all those who have not already complied with the order, threatening with summons and fine for disobedience to constituted authorities and endangering public health if they refuse to get vaccinated within twenty-four hours.

13. Proprietors of hotels and lodging houses shall refuse to admit any one without proof of recent vaccination.

The infraction of any of the foregoing articles will be punished with a fine of fifty pesetas.

The preceding regulations appear to cover the entire ground, and to allow no loophole of escape from vaccination. These have been quoted at length to show that so far as enforcing vaccination, Valencia in benighted Spain requires no lesson from any town in lands considered highly enlightened.

AN UNSUCCESSFUL EXPERIMENT.

A dispatch from Appleton, Wis., under date of January 29, tells of the incineration by an infuriated mob of the house of a medical crank who took upon himself the responsibility of proving a new theory.

Under ordinary circumstances mob-violence is to be deplored, and attack upon the property or person of a physician is to be deprecated. In this instance, however, it would seem almost too bad that the "Doctor," unless he can otherwise prove himself insane, was not at home at the time the brand was applied.

If the report be true, this gentleman held pronounced and advanced anti-vaccination views, and to prove that he was right smeared smallpox virus over his hands and started out on a week's trip from town to town to show that the disease is not contagious.

The people now attribute a severe epidemic to his peregrinations with unwashed hands.

News of the Week.

College of Physicians of Philadelphia.—At a stated meeting, held February 5, Dr. David L. Edsall read a paper entitled "A Remarkable Case of Coma, Apparently due to Acid Intoxication sui generis." Dr. F. X. Dercum exhibited "A Case of Adiposis Dolorosa in the Male." Drs. S. Weir Mitchell and Simon Flexner read a paper entitled "A Recent Research on Snake Poisons." Drs. Chas. K. Mills and W. J. Hearn, together with Dr. G. E. Pfahler, read a paper entitled "Brain-Tumor Localized by Clinical Study and Demonstrated by the Röntgen Rays; Partial Removal by Operation; Death with Autopsy." The ocular conditions present in the case were discussed by Dr. G. E. de Schweinitz.

University of Pennsylvania.—Dr. George E. de Schweinitz has been elected professor of ophthalmology in succession to the late Dr. Wm. Fisher Norris.

Typhoid Fever Still Increasing in Philadelphia.—Despite the expenditure of large sums of money for the construction of filtering plants and the provision of subsiding basins, the work progresses but slowly. Contracts are awarded to favored contractors, notwithstanding that their bids are not always the lowest, and often are the highest, so that it has become necessary to ask for more money in addition to that which has already been appropriated, and which at the time was said to be ample. Meanwhile taxpayers are sickening and dying in increased number from typhoid fever, while high officials and leading politicians are becoming opulent through division of the blood money. According to the report of the Health Officer, 254 cases of typhoid fever were reported to the Bureau of Health for the week ended February 8, and thirteen deaths from the same cause.

To municipal inefficiency must be charged also the persistent increase in the number of cases of smallpox, of which 100 were reported for the week ended February 8, together with twenty deaths from this cause. The number of cases of diphtheria and of scarlet fever is smaller, being 68 and 50, respectively, with fourteen deaths from the one and five deaths from the other.

Other conspicuous causes of death were pneumonia, 115; pulmonary tuberculosis, 72; nephritis, 49; heart disease, 34.

To Prevent the Spread of Smallpox.—The Philadelphia Board of Health has decided to supply milk dealers, who serve milk to houses in which smallpox exists, with quart and pint tin cans, distinguished by a yellow ring. The quarantine officer at each house will receive the can from the milkman, and empty its contents into a pitcher belonging to the quarantined family.

Professor Virchow, who had a painful fall some weeks ago, is reported to be improving slowly, being now able to pass several hours each day in an armchair. In the latest number of *Virchow's Archiv* is an address by the editor expressing to all his friends throughout the world his thanks, which it would be impossible to extend individually, for their congratulations and good wishes in celebrating his eightieth birthday, on October 13, 1901. On that occasion he received eight hundred telegrams, and many more letters and gifts, from all parts of the world. He gives a list of all these messages from individuals, societies, cities, and governments, and dwells upon the pleasure they gave him and the gratitude he feels. He had at first deprecated any such celebration, but had to yield to the insistence of his friends, and, of course, has now no regrets for having done so. The chorus of jubilation was too spontaneous and too great to afford anything but the most heartfelt and grateful pleasure to the one so honored.

The East Orange, N. J., Smallpox Hospital.—Vice-Chancellor Emery on Saturday last refused to grant an injunction to restrain the East Orange authorities from maintaining a smallpox hospital in South Clinton street in that place. Father McManus and others asked for the injunction two weeks ago. The authorities secured affidavits from many physicians, who expressed the opinion that the presence of the hospital was not dangerous to the neighborhood.

Health of the Army in the Philippines.—Surgeon-General Sternberg has received a report from Lieut.-Col. B. F. Pope, Chief Surgeon of the Division of the Philippines, in regard to the health of troops during the month ended December 15. It shows a decrease in the percentage of sickness, which Col. Pope says may be considered especially favorable in view of the long continuance of the rainy season and the active military operations in Samar and Batangas. The total number of deaths is seventy-seven, the same number as the previous month. Eleven soldiers died from wounds received in action and sixteen were drowned. There were 2,437 cases of sickness. The strength of the command being 39,040, the percentage of sickness to the command was 6.21. There was a decrease in the number of cases of typhoid and malarial fever, an increase of intestinal and gastric diseases. Bubonic plague has reappeared in the city of Manila and the Board of Health is conducting an active campaign against rats, with a view to preventing a spread of the plague. So far no such cases have appeared in the army.

The Needs of Bellevue and the Subsidiary Hospitals.—The New York County Visiting Committee for Bellevue Hospital and other public institutions declares in its annual report, just issued by its President, Dr. George G. Wheelock, that larger quarters are needed in the Harlem and Fordham Reception Hospitals and in the City Lodging House. Bellevue, the committee reports, needs repainting throughout, with new floors, new plumbing, a system of electric lighting and elevators, though an entirely new building would be better. The Harlem Hospital needs a new site and building. In the present hospital the bathing facilities are wholly inadequate. Fordham Hospital occupies leased property, and the buildings do not belong to the city. Building operations in the neighborhood have made it very uncomfortable for the patients, and there is no ward for children, of whom many are received as patients. Nor has the hospital any crematory, the used dressings being burned in a vacant lot. Another feature of the hospital's service which the committee criticises is the long distance over which patients are transported. Some of them have to be carried seven miles, and in emergency cases this has at times resulted in death. The committee therefore recommends the erection of a small emergency hospital in the eastern part of The Bronx. It is also recommended that female nurses be employed in preference to men, with orderlies to assist them in the heavy work of caring for the patients.

A Senseless Attack on Cats and Dogs.—The authorities of Plymouth, Pa., have declared war on all the dogs and cats of the town, and a number of official killers have been appointed whose trust it is to shoot every dog and cat found on the streets. The animals are being killed because it is believed they are responsible for the spread of smallpox, of which there are several cases in the township. Here is an opportunity for the antivivisectionists, or some other anties, to make, for once, a sane protest in opposing the foolishness of these town authorities, who seem never to have heard of vaccination as a protection against smallpox.

Cancer Cultures.—It is stated in a London daily paper that Dr. Ross of the Indian Medical Service has succeeded in cultivating the germs of cancer, and has produced a malignant neoplasm by inoculating a guinea-pig with the culture.

A Site for the Woman's Hospital has been purchased on 110th street, near Amsterdam avenue, the present hospital grounds in 49th street having been sold to the New York Central Railroad. It is proposed to erect a six-story building from plans selected in an architectural competition held some years ago.

Smallpox.—Reports received by the Marine Hospital Service for the week ending February 8 show that there are now 12,122 cases of smallpox in the United States, as compared with 4,359 at the same period in 1901. The number of deaths from smallpox for the week was 290, as compared with fifty-five for the same week of last year. In this city every effort is being made by the authorities to protect the citizens by vaccination, and the following free vaccination stations, in addition to those at the Department Headquarters, at Sixth avenue and Fifty-fifth street, and the old headquarters in Brooklyn, have been opened: 68 Elm street, Manhattan; 1237 Franklin avenue, Borough of The Bronx; 38 and 40 Clinton street, Brooklyn; corner of York avenue and Richmond Terrace, New Brighton, Borough of Richmond, and 372 and 374 Fulton street, Jamaica, Borough of Queens. It has been decided to remove all smallpox patients in Brooklyn in future to the Contagious Disease Hospital in Kingston avenue instead of the hospital on North Brother Island, so as not to expose them to the long trip up the river. The force at the Kingston avenue hospital will probably be increased. The Board of Trustees of Bellevue and allied hospitals have issued an order to the effect that all patients received at Bellevue and the allied hospitals should be vaccinated on their reception to the institutions, except where the condition of the patients is such as to render the operation inexpedient.

Parting Xiphopagous Twins.—The cable announces that an operation was performed by Dr. Doyen, on Sunday last, in Paris, dividing the Hindu twins, Rodica and Doodica, two young girls who were united in a manner similar to the Siamese twins. The children were suffering from tuberculosis, and it was thought their chance would be better if each could fight her own malady. It was found that the connection between the two was most intimate, and several large vessels passing from one body to the other had to be ligated. The different steps of the operation were cinematographed.

The Responsibility for Unhealthy Schoolrooms.—A girl recently sued, through her guardian, the Benton Harbor, Mich., School Board for $10,000 damages because of an illness alleged to have resulted from sitting in an unhealthy schoolroom. The Court decided, however, that schools are not liable in private action for injuries sustained through the negligence of school officials.

Dr. James E. Mead Commended.—Surgeon General Sternberg has recommended that Contract Surgeon James E. Mead have a commission as Captain and Assistant Surgeon of Volunteers on account of gallant conduct and professional zeal in the Philippines. This action is taken on the recommendation of First Lieutenant Louis Van Schaick, Fourth Infantry, indorsed by Gen. Chaffee and Lieut.-Col.

B. F. Pope, Chief Surgeon of the Division of the Philippines.

Tetanus Following Vaccination.—Dr. Joseph McFarland, Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia, writes that he is engaged in a critical analysis of cases of tetanus following vaccination, in the hope of determining their etiology, and desires to secure all the data possible, and will therefore be greatly obliged to any who may have had or know of cases of tetanus following vaccination if they will communicate with him concerning them.

The End of an Unnecessary Isolation.—Dr. Louis Knapp, who, five months ago, took leave of the world and shut himself up with a Chinese leper in St. Louis, is reported to have tired of his isolation and his studies of the disease, and to have resigned h's charge and returned to his family. There is no apparent reason other than the timidity of the officials, why he cannot continue his investigations into the Chinaman's disease without depriving himself of the society of his family and friends.

Obituary Notes.—Dr. M. L. Herr died at Lancaster, Pa., on February 8, of paralysis, at the age of sixty-three years. He was appointed a medical cadet while a student at Jefferson Medical College during the Civil War, and assigned to the army as an assistant surgeon. He remained in the army until 1867, when he completed his medical studies in Nashville University. He organized the Lancaster Pathological Society, was its first president, and was president of the Lancaster County Medical Society at the time of his death. He was a frequent delegate to the meetings of the State Medical Society, and he was in 1890 delegate of the American Medical Association to the International Medical Congress held at Berlin, and in 1894 to the Congress held at Rome. It was largely through his influence that the Lancaster Board of Health was organized, and he was president of that body for some time. He was chief surgeon to local hospitals, and lecturer on anatomy and physiology at Franklin and Marshall College.

Dr. Samuel S. Engle died at Ephrata, Pa., on February 3, at the age of sixty-nine years. He was ordained a minister in the Lutheran Church in 1869, but he subsequently entered upon the study of medicine, receiving his degree in 1875.

Dr. Adam Trau died at Philadelphia, on February 7, of paralysis, at the age of sixty-two years. He was a native of Germany and a graduate of the University of Heidelberg, subsequently receiving his medical degree from the University of Pennsylvania. He served in the Army during the Civil War, and was also a surgeon in the United States Navy. He was chief consulting physician to the German Hospital, with which institution he had been connected for twenty-five years, and of whose medical board he was for many years president, and, at the time of his death, president emeritus.

Dr. William Murray Weidman of Reading, Pa., died suddenly of heart disease on February 8, at the age of sixty-five years. He was a graduate of the medical department of the University of Pennsylvania in the class of 1860. He served in the army medical department through the Civil War. He was an ex-President of the Pennsylvania State Medical Society, of the Medical Society of the County of Berks, and of the Reading Medical Association, and was consulting physician to the State Asylum for the Chronic Insane at South Mountain and St. Luke's Hospital, South Bethlehem.

Dr. Edwin Wollaston Pyle of Jersey City died on February 7 of pneumonia. He was born at Unionville, Pa., in 1849, and was graduated from the medical department of the University of Pennsylvania in 1873. He began practice in Jersey Citv that same year, devoting special attention to diseases of the ear, nose, and throat. A widow and four children, the eldest also a physician, survive him.

Dr. Bowman H. Shivers died at Haddonfield, N. J., on February 1, at the age of sixty-five years, as a result of pneumonia and nephritis. He was graduated from the medical department of the University of Pennsylvania in 1858.

Obituary.

PAUL FORTUNATUS MUNDÉ, M.D., LL.D.

NEW YORK.

Dr. Paul F. Mundé died at his home in this city on February 7 of disease of the heart. He had been seriously ill for about two months. Dr. Mundé was born in Dresden, Saxony, on September 7, 1846, and when three years old was brought to this country by his parents, his father being a political refugee. He was educated at the Boston Latin School, and then began the study of medicine at Harvard. During the Civil War he served for a time as a medical cadet in the army, and at the close of the war resumed his studies, being graduated from the Harvard Medical School in 1866.

The same year of his graduation Dr. Mundé went to Europe, and entered the Bavarian army as volunteer assistant surgeon in the Austro-Prussian, or "Seven-Weeks' War," and received the cross of civil merit at its close. He then went to Wurzburg and took up the special study of obstetrics, being for three years clinical assistant to Professor Scanzoni in the Lying-in-Hospital, and for two years tutor to the School of Midwives. He completed his obstetrical studies in Vienna, where he obtained the degree of Master of Obstetrics in 1871. Prior to that time, however, the Franco-German War broke out, and he again entered the Bavarian army, being attached as battalion surgeon to the Second Corps. At the siege of Paris a shell from the French artillery set a German field hospital afire. Dr. Mundé, who was a man of great physical strength, rushed to the hospital and carried out a number of the wounded. For this the Emperor decorated him with the Iron Cross. At the close of the war he took his discharge, receiving the service medal, and also the medal for non-combatants. After completing his studies in Vienna, Dr. Mundé visited the schools and hospitals of Heidelberg, Berlin, Paris, London, and Edinburgh, and returned in 1872 to this country, beginning his practice in this city. For several years he was Professor of gynæcology at Dartmouth College, which gave him the degree of LL.D. Later he held the same chair at the New York Polyclinic.

Dr. Mundé was editor of the *American Journal of Obstetrics* from 1874 to 1892, was president of the New York Obstetrical Society from 1886 to 1888, and president of the American Gynæcological Society in 1897 and 1898. He was an honorary fellow of the Edinburgh Obstetrical Society, and honorary president of the International Congress of Obstetricians and Gynæcologists in 1897 and 1899.

He was for a time assistant surgeon to the Woman's Hospital, and since 1881 was gynæcologist to Mt. Sinai Hospital. He was also consulting gynæcologist to the Mothers' and Babies' Hospital and the Skin and Cancer Hospital, and consulting obstetrician to the City Maternity Hospital. In addition to numerous articles contributed to the *American Journal of Obstetrics*, he was the author of the article on "Obstetrics" in Johnson's Cyclopedia, and published two works on "Obstetric Palpation" and "Minor Surgical Gynæcology."

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

PARLIAMENTARY—SMALLPOX NOTES—OBSTRUCTIVE JAUNDICE—UNIVERSITY OF LONDON AND UNIVERSITY COLLEGE HOSPITAL FUNDS, GUY'S, ST. THOMAS'—MR. PLIMMER—DR. CAYLEY—MEMORIAL TO DR. MYERS—P. M. O. FOR INDIA.

LONDON, January 24, 1902.

THE Midwives bill is with us again, having obtained a good place in the ballot. It is down for February 26, and unless the government should be obliged to take that day, the second reading will be proposed and discussed. The opponents of the bill will do well to marshal their forces without delay.

General Laurie has secured February 12 for his bill to extend the Medical acts. Sir J. B. Tuke's bill to amend the Scottish Inebriate's act is put down for March 12. The ballot has not been particularly favorable to the advocates of measures specially interesting to the profession, and there is much talk of getting in some by other means, but there is no likelihood of that being done.

There was a rather serious debate on the housing question, with a futile attempt to shelve it by the promise of a committee.

The Local Government Board has appointed a committee on the nursing of the sick in workhouses. Many of the smaller ones find a difficulty in obtaining efficient nurses. One reason is that they are often overworked and yet underpaid. In some cases the dietary is complained of, and in others the sleeping accommodations. Not seldom these are both inadequate. These and other alleged grievances will doubtless be investigated by the committee, which can hardly fail to find room for improvement.

Only seventeen cases of smallpox were notified yesterday, but there were thirty-five the day before, and thus the epidemic goes on with the usual variations in the daily records. Some other towns have been infected by visitors or tramps. Against the latter the government board has warned the local health officials.

The criminal recklessness of some persons would be humorous were it not so dangerous. Thus a man being told by a doctor at Brighton that he had symptoms resembling smallpox, instead of seeking further advice, took the train to another town, where, fortunately, his appearance excited the fears of his landlady, who sent for her medical man. He found her lodger had the disease, and had him conveyed to the isolation hospital.

There is an outbreak at Liverpool which has been traced to some cattlemen from your side. Eighteen cases are in hospital, but it is believed the outbreak is well in hand.

Some city people are insuring against smallpox at Lloyd's. Policies are issued for twelve months for £50 upwards. The present premium is ⅜ per cent. for those recently vaccinated; ¾ per cent. for others.

Last night there was quite a little breeze in the House of Commons about the government lymph being restricted to public vaccinators. The president of the local government board said 480,000 tubes had been issued for the metropolitan district officials, but he could not supply private practitioners. In reply to questions, Mr. Long has admitted that the government were aware of the increase of smallpox near Purfleet. He thought the Asylums Board were doing everything in their power for the reception and care of patients, and looking at the large number of cases, he did not at present propose to interfere with their discretion. He was not aware that further legislation was necessary on account of the epidemic.

The authorities of the government departments seem to have been awakened by the meeting of Parliament to the existence of the epidemic, and have requested their employes to be revaccinated. Even the war office has been stirred to action.

The Medico-Chirurgical has before it a resolution in favor of the government lymph being supplied to all practitioners, and until that can be done, testing imported lymph and inspecting the processes of production employed in this country. The resolution will be considered at the adjourned discussion on vaccination next week.

Last week I gave you an outline of a discussion at the Clinical Society on Mr. Mayo Robson's paper on "Intestinal Obstruction." This he followed up three days later with a paper at the Medical Society on "Obstructive Jaundice Resulting from an Experience of over 200 Operations." He takes a more hopeful view from a surgical standpoint than formerly. Of course the chief point is the cause. Medical treatment must be employed in cases dependent on gummata involving the ducts and in chronic duct catarrh. In malignant disease surgery can do little good, unless in very exceptional cases admitting complete removal. In gallstones, simple stricture of the common duct, inflammatory adhesions causing pressure on or stenosis of a duct, and in hydatids of the liver pressing on or discharging into the ducts, he advises operation. In doubtful cases an exploratory operation can be resorted to provided the state of the patient does not render the risk too great. In primary cancer of the liver or pancreas, Mr. Robson admitted the futility of surgery. Yet he held that in young patients with cancer of the head of the pancreas, the question should be considered, as malignant disease of the pancreas is not common before middle age. With regard to gall-stones and the other obstructive causes he had named as suitable for operation there should be no delay. Out of 212 such cases he had had 183 recoveries. The two chief dangers were hemorrhage and shock. Next to them came exhaustion and sepsis. Against hemorrhage he gave large doses of calcium chloride, thirty grains three times a day for two or three days before operating, and dram doses in saline solution per rectum afterward. Against shock strychnine in large saline enema half an hour before the operation. Still more important was expeditious operating; the most complicated cases could be completed in an hour.

Mr. Morgan also spoke of the importance of rapidity in abdominal operations, but Mr. J. Hutchinson, Jr., demurred to this, and said slower operations in the lower abdomen had been most successful, instancing resection of intestines by suture and gynæcological operations.

Mr. Barker was in favor of celerity, and urged the necessity of keeping patients warm and eliminating delay by careful preparation beforehand. He also alluded to cases which had recovered, after exploration, though they appeared malignant.

Mr. Eve supported exploratory operation in doubtful cases, and Mr. Spencer thought the duration of the disease a point in diagnosis, as rapid couuse suggested the head of the pancreas as the seat.

Mr. Robson in his reply, said that in his experience of twenty-four cases of cancer of the head of the pancreas, operation was of no benefit, and the mortality was 50 per cent. Rapidity was less important in the lower abdomen, as there was much less shock in those cases.

On Wednesday, at the meeting of the Senate of the University of London, it was announced that the Drapers Company would be responsible for the debt of University College to the tune of £30,000 provided the college be incorporated in the university by September, 1903. An anonymous donor is also prepared on the same condition, to devote £1,000 a year to the college—a sum redeemable by his executors at £30,000. A committee was appointed to confer with a committee of the college. The latter body seems to be imitating the coy maiden, for there is a talk of appealing to the public for funds to enable it to negotiate with the university on a better footing. I doubt if the public will respond, and would advise the maiden to accept the dowry without demur.

The treasurer of St. Thomas' Hospital has issued an appeal for funds on account of increased expenditure in recent years without any increase to its permanent income. Nearly £10,000 is needed to balance the account.

A "renovation and building fund" for Guy's Hospital was started at the Mansion House on the 15th inst. The Lord Mayor appealed to the citizens to make good the deficiency of about £25,000 a year. It is estimated that £180,000 will be required for the new works, of which sum between £60,000 and £70,000 has been promised.

Mr. H. G. Plimmer of St. Mary's Hospital has been requested to act on the committee for investigating cancer appointed by the German government. There is some talk here of the Royal Colleges undertaking researches on this disease, but to do so they would need an adequate endowment, and where is the donor?

Dr. Cayley, senior physician to the Middlesex Hospital, has retired after a service in various positions of thirty-five years. On the 9th inst. he was entertained at dinner by former house physicians, and presented with a loving cup amidst enthusiastic expressions of esteem.

In memory of Dr. Walter Myers, whose death you will remember occurred from yellow fever while investigating that disease for the Liverpool School of Tropical, his father has endowed a traveling studentship in the University of Birmingham.

Colonel Sir T. J. Gallwey is to go to India as P.M.O. in succession to Surgeon-General Taylor, who has become director-general.

Progress of Medical Science.

The Boston Medical and Surgical Journal, February 6, 1902.

A Plan for the Municipal Control of Tuberculosis in Boston.—Agnes C. Vietor suggests that an unpaid municipal tuberculosis committee of men and woman be appointed with sub-committees on air and light in tenements and other buildings; on cooking and savory serving of food on a large enough scale to give the poorest a chance to be well nourished; on employment; on dust and noise; on nursing and disinfection, and so on. A model sanatorium should be erected in each section of the city, as a practical example of the method of living which cures. To these sanatoria selected patients should be sent for short periods, to learn the lesson by actual experience; returning to their homes, they will themselves be teachers to ever new and widening groups. In such organized work alone lies any hope of eradicating the scourge of tuberculosis, since the extermination of the bacillus outside of the body is impossible, its strong entrenchment being in the bodies of people in a condition of lowered vitality; and the great sources of such lowered vitality being (*a*) insufficient food, (*b*) insufficient air and light, (*c*) overwork, (*d*) worry. Therefore the fundamental factor in the existence and increase of tuberculosis is the health of the mass of the people. The only definite decrease in tuberculosis yet recorded is in (*a*) cures effected in patients who adopt some modification of open-air life, with superfeeding and freedom from overwork and worry; (*b*) improvement in New England statistics, the only changed factor of general extent being the use of the bicycle and recreations increasing open-air life; and (*c*) the decreasing statistics of tuberculosis in German villages where tuberculosis sanatoria are established, the villagers consciously and unconsciously imitating the example of the sanatoria patients in their mode of living.

Journal of the American Medical Association, Feb. 8, 1892.

Primary Sarcoma of the Œsophagus and Stomach.—W. T. Howard, Jr., has found eleven cases of this rare affection, and adds an additional case. His patient was a man aged fifty-one years, suffering from vomiting and dysphagia, who died of exhaustion a few weeks after coming under observation. The autopsy findings were as follows: The œsophagus was of normal size and appearance from its beginning to within 12 cm. of its cardiac end. At this point its wall was much thickened, and its mucous surface was the seat of irregular ulcers, covered with grayish necrotic material. The surface was irregular, but there were no polypoid masses projecting into the lumen. On section the wall was rather thicker than usual, firm and dense in consistency, and pale in color. The cardiac orifice of the stomach was narrowed, but admitted the little finger with ease. The stomach was of ordinary size, and appeared normal throughout, except for the thickening of the cardiac orifice above described, and for the presence near the latter of a nodular tumor, 7 cm. in its greatest diameter. On section this mass was seen to be beneath the mucosa. It was dense and firm, and on section was glistening in appearance. Some of the lymph glands near the stomach were enlarged. There were no other metastases.

The Problems of Heredity.—J. G. Kiernan states that the mother is the great factor in heredity. Paternal heredity is a prophecy of what may not be a destiny. A healthy mother may offset the paternal defects of a generation. There can be no doubt that maternal shock exerts an influence on the fœtus. The question, however, as to the fact of this influence, method of action, and results must be determined by an analysis of the period of pregnancy at which the shock is experienced. Unfavorable surroundings act similarly. Hence the significance of the fact that 92 children born in Paris during the siege of 1870-71, 64 had slight mental or physical anomalies; the remaining 28 were all weakly; 21 were weak-minded, and 8 were subjects of moral imbecility. In Berlin the financial crisis of 1875-80 was followed by an increase in the number of idiots born. The nutrition of the mother may thereby be so disturbed as to result in a partial toxæmia, which tends to disturb development of the fœtus *in utero*. Thus a nexus of cause and effect can be traced. Early involvement of the germ is shown in the fact that somatic malformations in the hereditary psychoses often affect the body elsewhere than the nervous axis. The stigmata of heredity—defective development of the urogenital system, deformities in the face, skull, irregular growth of the teeth, misshapen ears and limbs—owe their grave significance to this fact. Like deformities of the brain, these anomalies are also more marked and constant with the lower forms of the hereditarily based systematized perversions of the mind than the higher.

Autotoxæmia as a Factor in the Neuroses.—G. F. Butler points out the relation between autotoxæmia and certain conditions, such as scorbutic disorders, fatigue fever, etc., and then studies some of the neurotic states caused by the same toxic factors. There arises a prolonged neuropathy with suspicional and anxious tendencies. This condition mimics all the chronic neuroses, and is often mistaken for them. So, also, we may have a condition simulating acute confusional insanity or melancholia, and occasionally emotional exaltation, creating a suspicion of paretic dementia. In many cases charged to mental shock autointoxication is the dominant cause. A similar explanation will account for certain cases of transitory frenzy, with wild, brief, unremembered violence. Examples of the foregoing or similar states are seen manifesting themselves through aural, nasal, laryngeal, and pharyngeal states. The predisposing cause, however, in the latter class may remain to set up recurrence of autotoxæmia and its consequences if untreated. The pure type of autotoxæmia underlying many of the so-called reflex states was formerly known as fecal anæmia. The obvious deduction from all the foregoing is constantly to bear in mind the fact of possible autointoxication in cases which baffle us, so far as concerns the determination of the exciting cause. The therapy of this class of cases will naturally depend on the type. A change of surroundings, regulation of diet, use of mineral waters, exercise, massage, and hydrotherapy are all useful. The bowels must be carefully looked after. In old people salines must be used cautiously. Electricity is a valuable adjuvant. The author calls special attention to the pseudo-angina frequently accompanying autointoxication, stating that it has received less attention than it deserves. Sometimes, albeit very rarely, death has occurred from this. This condition is due to the primarily increased inhibition of the heart, succeeded by increased power of the excitomotory ganglia of the heart with resultant irregular action. From this often results the emotional exaltation, depression, and suspicional states found in autointoxication of brain and heart. It is readily comprehensible how these irregularities tend to increase each other. Independently of the condition just described, cardiac irregularities occur in autointoxication from arterial tension, due to the character of the blood. Inevitable renal and hepatic disturbances occur, whence the temporary albuminuria and glycosuria.

New York Medical Journal, February 8, 1902.

What Shall We Do with the Consumptive?—A. Fanoni recommends the following measures for the abatement of tuberculosis: (1) Marriages of consumptives should be avoided; (2) Children of consumptives should be so brought up as to strengthen their systems against the invasion of the tubercle bacillus; (3) The public should be educated to realize the fact that consumption is curable in its initial stages, *i. e.* when mixed infection has not yet taken place; (4) An early diagnosis is the secret of cure. Let us drop the word "cold" as a term for a little cough and a subnormal temperature, and the word "malaria" for cough accompanied by chills, and let us examine the patient carefully in each case. When questioning the patient it must be borne in mind that the consumptive, fearing to hear the word "consumption," often tries to disguise his symptoms, and that it is in such cases that the skilful physician proves his ability; (5) Every case of pulmonary tuberculosis should be reported to the local health authorities so soon as the diagnosis is made; (6) Every consumptive should be isolated [illegible] cured, or until the disease terminates fatally.

Closure of the Abdominal Incision, with Remarks upon the Cause and Prevention of Ventral Hernia.—I. S. Stone suggests the following principles as those that should guide us in wound closure, asepsis being, of course, premised: (1) Remove all excess of peritoneal flap. Also remove all loose pieces of muscle or fat, as these bits of tissue may become necrotic; (2) Bring peritoneum, muscle, fascia, etc., together to meet similar tissues of the opposite side, without space between layers for collection of serum or blood, and yet without strangulation. The sutures to be placed in such manner as to make pressure as much upon the fascia, or tissues in the center of the circle made by the suture, as at the peritoneal or skin surfaces. The interrupted sutures will answer these requirements in nearly every respect; the exception being its non-absorbability, and also its inability to bring like surfaces together accurately. This method may be used with entire satisfaction when supplemented by additional buried sutures, preferably of some absorbable material, in the fascia. Finally, Stone believes that layer sutures, as generally used, make unnecessary pressure upon the entire wound surface, and prevent proper blood supply, while they are not more effective in preventing dead spaces than the interrupted suture.

Medical News, February 8, 1902.

Cirrhosis of the Liver as Seen in Children.—W. C. Hollopeter believes that cirrhosis of the liver in infants and adolescents is not so infrequent as clinicians suppose, and that cirrhosis in children can generally be relegated either to syphilitic or alcoholic types, with a very small percentage as sequelæ of the acute infectious diseases As a rule, the premonitory symptoms are disguised by a long train of gastrointestinal irritation that renders an early diagnosis uncertain. Interstitial hepatitis in infants is most probably syphilitic, and is inherited. It is nearly always possible to discover the stigmata of this disease in the little patient. In older children, the disease may be found with no apparent change in the other tissues. General tuberculosis is sometimes accompanied by fibrosis of the liver. Two cases are on record of young children with interstitial hepatitis, who were large coffee drinkers. It is impossible to discriminate clinically the symptoms of the two forms of hepatitis, the atrophic, and hypertrophic, in the earlier stages.

Percussion of the Lower Border of the Liver.—Albert Abrams declares that a good rule to follow is never to declare the liver to be enlarged unless it is palpable; but a dislocated liver may be palpated, although it may not be enlarged; again, rigidity of the abdominal walls may obscure the results of palpation. A simple method of mapping out the lower border of the liver is the following: The patient inclines his body backward as far as possible, the body being supported by means of the hands resting on the hips. Percussion, which must be light, will determine the lower hepatic border with minimum difficulty. If strong percussion is used in mapping out the lower border, the air contained in the neighboring viscera will be set in vibration, and the desired result—elicitation of a dull sound—will be defeated. One point in the consideration of this subject must not be forgotten, viz., the necessity of clearing the bowels by free purgation before the examination. In conclusion, two facts are emphasized: (1) The patient must be cautioned to take no inspiration before contracting the abdominal walls, for by doing so the liver will be dislocated downward; (2) In practising percussion, the finger must be firmly imbedded in the abdominal wall, otherwise the blow will not be directly transmitted to the liver.

American Medicine, February 8, 1902.

Nature of Typhoid Fever.—Eugene Wasdin states that there must be a colonial development of the organism other than in the intestinal canal, as shown by the constant presence of the bacillus in the blood before its presence in the intestinal contents, its presence in the stools only at the end of the first week, in small numbers, its rapid increase to the maximum by the end of the second week, and the presence of the diazo-reaction at this time most frequently. The non-presence of the organism in the blood current until after the advent of toxic symptoms, together with the constant presence of more or less marked signs of colonial development in the lungs, and the expectoration of members of such colony, show that this disease is essentially one of the respiratory tract primarily, the well-known symptoms of the second and third weeks being mainly secondary. If these observations are correct, treatment should be directed more energetically against the primary colony, although the importance of the treatment of the secondary intestinal colony is great. The application of benzyl-acetyl peroxid to the treatment of this disease has been attended with happy results. It has been used both for the primary and the secondary infection, as well as by means of hypodermoclysis to combat terminal expressions. As the mortality in typhoid fever depends mainly upon lung and intestinal fatalities, successful treatment of these conditions will bear happy fruit. Disinfection must also be carefully attended to.

The Aspect of Disease as Seen in Arctic Alaska.—Ernest W. Kelsey declares that Alaska, physically speaking, is either an iceberg or a swamp. Sometimes disease is so obscured by the changed conditions of life that the diagnosis is made difficult or even impossible. Among the diseases peculiar to this country are cerebrospinal meningitis, scurvy, typhoid fever, neuralgia, nervous diseases, and the results following exposure to extreme cold. In cerebrospinal meningitis, delirium is almost always a constant factor, and often carries off the patient. The petechial rash that develops is usually puerpuric in type. The mortality is high. The scourge of the white man in Alaska is scurvy. These two diseases just mentioned rarely attack the natives. In typhoid fever there is a tendency to an absence of rash, a not very high fever, and the association of scurvy and salivation. This condition is often confusing to the physician. The cerebral form is prevalent, and is often mistaken for cerebrospinal meningitis. Rheumatism seems to be neuralgic in type. It is rarely attended with much increase of temperature, often with none at all, but is frequently associated with a neuritis. The heart is rarely, if ever, attacked. Only one case of pneumonia came under the observation of the writer. The nervous diseases are of two types—those structural in form, due to physical conditions external to the patient, and those psychic in character. The disorders of sense organs are few, and are limited mainly to snow-blindness and the results of the various dermal changes. There is great suffering from gastrointestinal complaints. The diseases most common to the natives are chronic bronchitis, pulmonary tuberculosis, pneumonia (in the rainy season), smallpox, scrofulosis, syphilis, measles, grippe, and mumps.

Philadelphia Medical Journal, February 8, 1902.

Use of the Röntgen Rays in the Diagnosis of Lesions of the Brain.—Charles K. Mills and G. E. Pfahler conclude from their investigations in this subject: 1. That fibrosarcomata, and probably other tumors, can be photographed in the living subject, and their location and extent shown. 2. That various tumors can be photographed in their most common locations. 3. That other abnormalities and deficiencies in brain tissue itself can be photographed, which will probably be of value in the diagnosis of cysts, softening, and hemorrhages. 4. That over-exposure of the third series and the under-exposure of the fourth show that good results will only follow the most careful technique and keen judgment as to the special conditions in each case. 5. That the shadows obtained in normal parts of the brains studied indicate that great care is necessary in the interpretation of any shadow obtained in the living subject.

A Case of Cerebral Bulbar Palsy, with a Study of the Localization of the Tongue and Lip Centers.—Charles L. Dana draws the following conclusions: In the human brain the lip and tongue centers are closely connected and more or less identical. One group of centers for the tongue is in relation with the articulatory movements of the lips, and another with the movements of mastication, opening and shutting the mouth, and deglutition. The area for the excitation of movements of the tongue is a wide one, being associated probably in its lower parts with the articulatory movements, and in the upper parts with the masticatory movements. The centers lie at the base of the pre- and post-central convolutions. The paralysis of the tongue and, to some extent, of the lips, occurs from a one-sided cortical lesion, and may perhaps be explained by the fact that in many individuals the brain becomes accustomed to use only one center in controlling the movements of these parts. When this center is destroyed there is for a time a paralysis of the movements. When the center upon the other side becomes awakened to its capacity, it takes up the movements, and the paralysis disappears. This theory may explain, also, the very frequent occurrence of difficulty in deglutition, and often in articulation, in many cases of hemiplegia due to ordinary cerebral hemorrhages. That a permanent bulbar palsy can be caused by a cortical lesion of one hemisphere is doubtful, and, if it occurs, must be considered rather as an anomaly.

A Case of Cerebellar Tumor.—James Hendrie Lloyd and T. Perceval Gerson report this case. The patient was a man twenty-one years old. He was admitted to the hospital in a semistuporous condition. There was no history of traumatism. The patient had contracted gonorrhœa, but there was no history of syphilis. There had been intense headache for some months. The patient was utterly oblivious to sound. His speech showed cerebral incoordination. There were no scars on the head. There were several spells of vomiting, one of which was distinctly projectile in character. Towards the end the respirations assumed the Cheyne-Stokes type, the pulse became very rapid, and the temperature rose from the normal or subnormal range to 103.8°. Autopsy revealed a very large tumor lying upon the vermiform process of the cerebellum just below the tentorium. This tumor was easily shelled out of its bed. It had only the slightest connection with the brain substance. It was encapsulated, and had sprung entirely from the membranes. It had flattened and entirely destroyed the appearance of the quadrigeminal bodies, and the vermis of the cerebellum. The aqueduct of Sylvius was pervious. The tumor was very vascular. On section it presented the appearance of a sarcoma. There was no infiltration of sarcomatous tissue in the neighborhood. The ventricles were much distended. There were large Pacchionian bodies along the course of the longitudinal fissure, deeply imbedded in the vault of the cranium.

The Lancet, February 1, 1902.

Notes Concerning a Native Remedy for Blackwater Fever.—The remedy mentioned by D. R. O'Sullivan-Beare is a decoction made from the roots of a Cassia which grows in equatorial East Africa from the sea level up to an altitude of 800 feet. The particular species seems not to have been described before, and has been named, in honor of the author, C. beareana. The plant is figured in the article. To prepare it, the natives chop a portion of the root into pieces, each about one inch in length, and of those pieces they boil about one dozen in a gallon of water for half an hour or so. The result is a red-colored fluid, of which the patient suffering from blackwater fever is given to drink, either hot or cold, as often as he feels thirsty. Apparently it is non-poisonous in its action, and may be consumed in unlimited quantity. In cases where the patient does not suffer from marked thirst, the decoction is administered in doses of about a teacupful every couple of hours. The natives employ the same remedy, and they claim for it specific virtues also in the treatment of that simple form of hæmaturia—*i. e.* unaccompanied by febrile symptoms—which is so prevalent amongst the negroes of East Africa. The only portion of the tree, other than the roots, employed medicinally by the natives is the bark, which they powder and apply, as a dressing, to ulcers, apparently with good results.

Ultra-Violet Light from a Rapid Oscillation High-Tension Arc in the Treatment of Skin Diseases.—Hugh Walsam describes and figures the apparatus he has used. He has applied the remedy to cases of lupus vulgaris and l. erythematosus. The former do better than the latter. The time of exposure has been from ten to fifteen minutes. Special stress is laid on compression. Cases in which this can be efficiently applied (as, for example, lupus on the end of the nose) improve much quicker than cases in which the compression is more difficult. At the present time it is somewhat hard to tell whether a given case of lupus will do better with the *x*-rays or the ultra-violet rays. Many observers appear to regard the treatment by *x*-rays and by light as something quite different. When we consider, however, in how many ways ultra-violet and the *x*-rays are alike, the distinction between the two almost vanishes: Both act chemically, both produce fluorescence in bodies, both discharge the gold-leaf electroscope. The action on the skin is, however, somewhat different, although they are both capable of producing dermatitis and pigmentation. In the case of the light treatment, dermatitis supervenes after some hours, whereas with *x*-rays it may require even weeks to produce it. Again, the dermatitis produced by the ultra-violet rays soon resolves, but it is well known that the *x*-ray form may take weeks, or even months, to heal. It is true that *x*-rays have more penetration, but in passing through a body, they generate secondary rays, which have a great analogy to ultra-violet rays. It is probable that secondary rays are Röntgen rays very slightly penetrative, and possibly intermediate between the rays from a soft tube and extreme ultra-violet rays. There is, according to current belief, a great difference in their action on bacteria, the *x*-rays being said to stimulate their growth, while the violet and ultra-violet rays are known to kill. In fact, we may say that the only absolutely sure ground on which we may build is that the ultra-violet rays will kill bacteria outside the body. Other observers are treating cases of lupus with the static breeze and the Tesla condensing electrode. The Tesla electrodes have been used with success in the department, and it appears to me in all these various methods of treatment that the only one point they possess in common is the ultra-violet ray. It has been found that all materials used as compressors or heat arresters obstruct many of the bactericidal rays. Ice, however, has so many advantages, both from a theoretical and practical point of view, that it has been adopted in nearly all cases. These advantages are so important that it may be well to enumerate them: (1) It is hard enough to cause efficient pressure; (2) It adds to this effect by increasing the anæmia by cold; (3) By its transparency it allows the individual lupus nodules to be clearly seen; and (4) It is transparent to the violet and ultra-violet rays of the spectrum and opaque to the red and infra-red.

A Case of Recurrent Sarcoma with Apparently Spontaneous Cure and Gradual Shrinking of the Tumor.—The case is reported by A. L. Watson, whose patient was a strong, healthy woman of thirty-six years, who came under observation simply because a swelling on the back was annoying her, and she wished to have it removed. This tumor was large and pendulous, being attached to the left side of the back by a base nine inches wide and rather less than four inches in vertical measurement; the apex hung down for almost four inches below the lower margin of its attachment to the back, while the upper margin was just below the inferior scapular angle. It was soft, but not fluctuant, slightly nodulated, and had the appearance of a lipoma undergoing degeneration; the skin covering the dependent portion was of a dark reddish color. The tumor was regarded as simple, partly because of its character, and partly because its history went back to the patient's childhood, though it had grown considerably in recent years. It was removed without difficulty. After the operation, hemorrhage was so free that the dressings had to be frequently changed in the first few hours; thereafter they were left for four days untouched. On the fourth day it was observed that the dressings had become tight, and on exposing the back the tumor was found to be almost as large as before operation. In the expectation that this might be due to accumulation of blood-clot beneath the flaps, a portion of the wound was opened up, but no blood could be expressed, even when a director was introduced and worked about inside the wound. It was therefore concluded that the swelling was due to a rapid re-formation of the tumor. The original specimen had been accidentally lost, but at the time of re-formation a piece was removed and pronounced by two microscopists, working independently, to be a mixed round- and spindle-cell sarcoma. A week later the margins of the operative wound began to ulcerate, but when a second operation was about to take place, it was seen that the tumor had attained such a size and was so diffuse in its margins that further radical interference was considered out of the question; the ulcerated edges were therefore cut away, and the wound was again stitched up. During the remaining days of her residence in the infirmary the patient looked and felt very ill and weak. A bad prognosis was given and she was dismissed. To the surprise of all, however, she greatly improved, and the growth diminished in size. One year later, the patient was seen, and the following facts noted: The general health was excellent. The tumor was much less prominent, and hung like a loose sac, as if almost all its contents had been evacuated. There was slight lividity at the margins, but no pain, except an occasional stinging like neuralgia in damp weather. The tumor covered about the same area as at the time of dismissal, but consisted of little more than loose skin. The scar of the operation wound was perfectly sound and firm. No pain was caused by free manipulation, and the clothes were worn without discomfort.

British Medical Journal, February 1, 1902.

Case of Abscess in the Neck, with Signs of Vagus Irritation.—J. Basil Page reports this case. His patient was a boy aged thirteen years. He went in swimming one day for several hours, and the next day had a sore throat, and was sick and feverish. The tonsils were enlarged, but there was no ulceration and no membrane. A swelling developed on the left side of the neck, which rapidly increased, and fluctuation was present. Incision was not permitted. Six days after the first symptoms of illness, something burst in his throat, and he brought up a large quantity of blood and matter through his nose and mouth. The next day he began to vomit, and later had a little diarrhœa, and became extremely collapsed. Ordinary remedies were of no avail. He was very restless, his face was livid, but his breathing was quite easy. The heart was beating at the rate of thirty a minute; its action was regular; there was no murmur. Two days later he died. The writer believes that this may have been a case of irritation of the vagus.

Oophorectomy in the Treatment of Cancer of the Breast.—H. Atwood Beaver raises the query whether in this treatment of cancer of the breast the administration of thyroid extract has not a large share in causing the good results. He reports a case of a woman aged fifty-one years, who was suffering from uterine cancer. The case was so far advanced that the only indication was to relieve pain. A month longer of life seemed more than could be expected. Thyroid extract was begun. The dose at first being five grains daily, but this was quickly increased to twenty grains. The results were wonderful. In about two months the patient was up and free from pain. The various growths were much reduced in size, and the patient was rapidly gaining weight. Some months later she was quite well, and was following an active life. There was nothing abnormal to be felt in the pelvis. Although not arguing from a single case, still the writer thinks that thyroid extract should always be used in this class of cases before more heroic measures are adopted.

Recurrent Carcinoma Treated by the Röntgen Rays.—G. B. Ferguson reports a case of recurrent scirrhous growth, of the size of a hen's egg, on the manubrium of the sternum. The growth was immovable, apparently growing from the bone. There was below it a hardened ulcerated surface two inches square. The left arm was much swollen, and there were extensive deposits in the axilla. The patient had been operated on three years before for scirrhus mammæ. The use of the Röntgen rays was advised. This treatment was kept up for twenty days, twenty minutes at a time. The patient was then obliged to go away for a time. After being gone a month, she returned in excellent health and spirits. The sternal growth had disappeared, the ulceration had healed, and what pain there was was confined to the arm, the swelling of which had greatly diminished. A two-inch spark coil was used, and the distance of the tube from the body was from eight to ten inches. The patient was much "rays burnt" in the face, and lost her eyebrows, but these are comparatively trifling matters. In the same institution a case of intractable rodent ulcer was treated by the same method and healed.

The Indiscriminate Use of Atropine in Eye Diseases.—H. Carter Mactier warns all medical men to use atropine with the greatest care, and in all patients over thirty years old—the predisposition to glaucoma increasing with age—to use it only in case of necessity, and then only if the patient can be kept under constant observation. He gives the differential points between acute glaucoma and iritis. In the former the pupil is larger than usual, and does not react to light. In iritis it is smaller than usual and also fixed. Ophthalmoscopic examination of acute glaucoma shows the media to be hazy, and there will be a grayish-green reflex. In iritis there are small exudations in the media, and the pupil's irregularity is due to these binding the iris to the lens. In acute glaucoma the tension will be found increased. In iritis it is normal. In acute glaucoma the loss of vision is out of all proportion to the turbidity of the media, and is greatest on the nasal side. In iritis it is often not diminished except by photophobia. In glaucoma the cornea is generally almost insensitive to touch, while in iritis it is hypersensitive. The presence of vomiting with an inflamed eye is almost diagnostic of glaucoma, though it may occur in iritis. Confirmatory symptoms should always be sought in such cases.

Berliner klinische Wochenschrift, January 20, 1902.

Psoriasis and Glycosuria.—Walther Pick considers the relation of glycosuria to psoriasis. In order to determine whether or no psoriasis is associated with or dependent upon a reduction of the power of the body to assimilate sugar, he selected fifty psoriasis patients and fifty with other skin diseases, and observed their relation to alimentary glycosuria. Of the psoriasis patients only two reacted positively to the test, while of those with other cutaneous affections three under these conditions showed glucose in the urine. He believes, therefore, that a reduction in the power of sugar assimilation is not characteristic of psoriasis, and that when glycosuria occurs in this disease it is merely an accidental complication.

Transmission of Syphilis from Parent to Offspring.—W. Friedländer reports the study of the infection of an entire family with syphilis, and brings out several interesting points in this connection. The father became inoculated with the disease while his wife was in the fifth month of pregnancy. He immediately began mercurial treatment. The child was born free from syphilis, and the wife did not contract the disease at this time. Shortly following this the father discontinued treatment, the symptoms of the disease having disappeared. In about a year syphilitic manifestations returned and he again began the use of mercury. Following this the wife again became pregnant, and in due time was delivered of a healthy child. She likewise showed no signs of syphilis. The father now again discontinued treatment, which was never resumed. One year thereafter the wife developed syphilis, and the two children subsequently came down with the disease. Friedländer ascribes the development of the disease in the children to direct contact with an infected father and mother. These cases illustrate how a syphilitic father, under the influence of mercury, can procreate healthy children and not infect his wife, so long as he continues the use of the drug.

Münchener medicinische Wochenschrift, January 21, 1902.

Treatment of Severe Anæmia of Gastrointestinal Origin.—F. Perutz draws attention to this form of anæmia and reports a case, the favorable termination of which illustrates the advantages to be derived from systematic irrigation of the stomach and intestines, together with appropriate alimentation. The diagnosis of the conditions rests upon the examination of the blood and stomach contents. The acidity of the latter is much below normal, and want of proper functional activity of this organ is plainly evident. Every morning the stomach should be washed out with a normal saline solution, and at night an enema of one quart of chamomile infusion should be administered. In this manner two objects are obtained: (1) The removal of obnoxious products of decomposition, and (2) Stimulation of the diseased stomach and intestinal mucous membrane. In severe cases the diet should at first consist of milk (plain or peptonized) and oatmeal gruel, with an egg beaten up in it. Later, white meat and bread may be added. As the case progresses favorably, fats should be gradually added, and dark meat or the various meat extracts given. In order to stimulate the appetite, delicacies may from time to time be sparingly partaken of. By following this plan of treatment it is possible ultimately to permanently cure these cases. At the beginning, however, relapses are very liable to occur, and treatment has to be resumed after having been discontinued. Perseverance is, however, regularly followed by an absolute recovery.

"Emulsion-Albuminuria" in Eclampsia and Uræmia.—Heinrich Cramer reports three cases in which this peculiar and hitherto undescribed urine condition was present. The first two were eclampsia, in which the urine was drawn by catheter during coma shortly before death. Previous to this time the urine in both cases had been heavily charged with albumin, so that it became solid upon boiling. The urine taken during coma showed a milky white color, and when boiled did not become solid, but simply deposited an abundant sediment. Microscopical examination showed that the milky color was imparted by the presence of numerous small globules. Cursory chemical examination showed that these were probably albuminous in nature. The third case was one of uræmia, in which the urine was also taken shortly before death. It was entirely similar in character to that observed in the cases of eclampsia mentioned. An extended chemical examination definitely proved that the globules making up the emulsion were of an albuminous composition. Cramer thinks that this "emulsion-albuminuria" is not of infrequent occurrence, although no other cases have been reported. In all of his cases this condition was only present during coma. It is unusual to examine urine in this stage of the disease. As all of his cases proceeded to a fatal termination, the author is inclined to think that "emulsion-albuminuria" necessarily means a fatal prognosis. Whether this is so or not can only be determined by continued observation. This is much to be desired.

Relation between Diabetes Insipidus and Diabetes Mellitus.—Ph. Kuhn thinks that diabetes insipidus and mellitus are closely related conditions, and are not to be considered as entirely independent diseases, as is the custom in many quarters. Numerous cases of diabetes millitus have been recorded in which the sugar permanently disappeared from the urine, while the polyuria remained, thus transforming them into diabetes insipidus. On the other hand, the transformation of diabetes insipidus into mellitus is only very rarely observed. Only three cases of this character have hitherto been recorded. Kuhn now adds another to this list. The patient, a woman fifty-eight years of age, presented a carcinoma of the breast, for which a successful excision was performed. Following the operation, the urine increased markedly in quantity, and became of low specific gravity (1.002 to 1.003). No sugar was present. These characteristics of the urine continued, and the diagnosis of diabetes insipidus was made. The general health progressively deteriorated, and after about nine months the patient became confined to bed. Eight days before death sugar appeared in the urine, and remained present until the fatal termination. Thus a transformation from diabetes insipidus to mellitus took place. At autopsy, amongst other lesions, the pancreas was found to be atrophied, and small metastic growths were found in the right suprarenal capsule. The uterus was entirely wanting, and it is supposed that the same had been previously removed on account of carcinoma. This fact, however, had been concealed by the patient. After considering several hypotheses to account for the diabetic condition and the transformation from the "insipid" to the "mellitus" form, the author concludes that the most reasonable supposition is that the same was dependent upon the carcinomatous growths.

French Journals.

Hypertrophy of the Tonsils.—Ed. Laval thinks that it would seem logical to treat in the same chapter of pathology hypertrophy of the tonsils and adenoid vegetations. These affections often occur in the same subject. Hypertrophied tonsils fall into two groups, clinically, viz., those which are greatly hypertrophied, and those which are enlarged to only a moderate degree. The very large tonsils may be either hard or soft. When the tonsils reach the size of a large hazel-nut they are generally hard. The only treatment of any avail in these cases is ablation. It should always be remembered that no operation is to be undertaken till the inflammation has disappeared. After the operation, only soft food should be taken for a week, as the wound must not be irritated. Although, as a rule, very large tonsils are firm, white, and sclerotic, now and then they are soft, congested, and red. In such cases the only treatment suitable is cauterization. In cases of moderate hypertrophy, treatment ought to begin with curettage. If this is not curative, cauterization ought to be tried. General treatment should always be resorted to, consisting in the administration of cod-liver oil, in exercise, and in open-air life.—*Bulletin Général de Thérapeutique*, January 15, 1902.

The Journal of Tropical Medicine, January 15, 1902.

The Best Method of Administering Quinine as a Preventive of Malarial Fever.—Edward Henry Read concludes from his experience that the best way of giving quinine as a prophylactic is the following: (1) For male adults in good health, tabloids in 15 gr. doses every fifth day; for those in poor health, the solution used in the same way, or 15 gr. powder in a tablespoonful of porridge or milk; (2) For female adults, 8 gr. should be given instead of 15; pregnant women may take 2½ gr. daily, in either of the above ways, from the beginning of pregnancy; (3) Children of either sex under one year, ½ gr. of the powder every third day in a spoonful of milk, followed by a spoonful of jam or honey; those from one to five years, 1 gr. every third day; from five to ten years, 2 gr. every third day; from ten to fifteen years, 3 gr.; above fifteen years, the ordinary adult dose, taken in the same way.

The Duration of the Latency of Malaria.—A. Sims believes, from observations and counts made at the Seamen's Hospital, that about 400 fully-grown parasites to the c.mm., or the presence of about two billion adult parasites in the body, is the lowest level of parasites to be borne without clinical symptoms. The duration of initial latency depends upon the number of transstellated sporozoites. Malignant tertian has the shortest latency, next tertian, and quartan the longest. As to latency after a first fever, the explanation of the period (always lengthening) between the attacks of fever is as follows: Each attack confers a temporary immunity; this is lost after the increasing periods mentioned, and the person regains immunity after the parasites have been killed down. There is no absolute limit to latency while a person is subject to reinfection, but there is a strong tendency for the infection to wear out. The interval is variable. Quinine taken in fever, or prophylactically, will help to keep the parasites at a low level, and therefore comparatively harmless. Plehn maintains that by giving half a gram every five days he has increased the apyrexial periods, or latency, to about twelve to fourteen months on an average, increased the possible length of service of officials, and lessened the frequency, intensity, and fatality of the febrile attacks.

Revue de Médecine, January 10, 1902.

Researches into the Nature of Tuberculosis and Its Bacillus.—I. Ferran holds that he has discovered a new bacillus, which he calls phthisiogenetu, because of its action, or spermigenetic, because it produces spermine, which he considers to be the true agent in the diffusion of tuberculosis. It can be cultivated without the use of a culture oven, and in any of the nourishing media used, which would account for the extreme diffusibility of tuberculosis. The author holds that tuberculosis is invariably preceded by parenchymatous or interstitial phlegmasia, and that, indeed, no tubercles ever form without this phlegmasia. Injections of dead cultures of the new bacillus confer immunity against the phlegmasia, and hence against tuberculosis. To obtain a truly antituberculous serum, animals must be hyperimmunized with tuberculous pus, all living bacilli in the pus having been destroyed. The serum thus obtained is positively tuberculous antitoxin.

Contribution to the Study of Nervous Troubles Due to Indigestion.—It is not of the habitual disorders following chronic dyspepsia that Ch. Féré writes, but of the episodical troubles occurring in different forms of indigestion. The eight cases which he reports are, briefly, the following: Syncope following indigestion; paralysis agitans and syncope; incoercible vomiting, anorexia, pain in various parts of the body; pain at the seat of an old fracture, occurring during indigestion; acroparæsthesia and motor impotence; acute delirium; infantile convulsions, slight asymmetry, contracture of the left leg cured by vomiting; general paralysis in a syphilitic patient, with local sweating, epileptic attacks, prostration and death following specific treatment. The author gives details of all the cases, and cites reports of other authors. Disorders occurring late and of a lasting nature may be attributed to an intoxication, but early and acute troubles, terminated brusquely by an evacuation of the bowels, are probably of reflex origin.

Scleroderma Without Arteritis.—D. Goldschmidt describes a case which was a typical one of diffuse scleroderma. Macro- and microscopic examination of the sympathetic and of many cutaneous nerves showed them to be perfectly normal. There was also an absence of vascular lesions, so that the theories of a nervous or vascular origin of scleroderma would not seem to hold good. The thyroid gland was normal, in opposition to the view that scleroderma is due to Basedow's disease. Various writers have suggested that the affection was connected with the extraordinary proliferation of connective tissue found in these cases, and the author states that the microscopic findings in his case bore out this view. But the origin of this proliferation is shrouded in darkness. The author is inclined to think that scleroderma is due to bacterial infection. The action of a toxic agent would account for the variations found in the localization of the lesions in different cases, for this is characteristic of infectious diseases, as toxins do not always affect the same organs, but usually attack those which are in some way weakened. Several of the data in the case reported seem to point to an infection of some kind.

Febris Innominata.—J. H. Preston gives this name to a group of fever cases, fifteen in number, occurring in Tennessee, none of which had any of the clinical signs of typhoid fever, except the continued temperature, which did not follow the cyclic course of typhoid. None of these patients had diarrhœa, tympanites, or rose spots; neither did any of them have delirium or any great nervousness, and all of them recovered except one, whose fever ran fifty-two days. None had the prostration and muscular tremor, or subsultus tendinum, observed in typhoid fever. Neither was there a red or brown and dry tongue at any time present. In other cases of the same type the author has noticed in fatal instances what seemed to be a striking difference in the manner of approaching dissolution. In typhoid fever there is greater prostration, the patient seems to pass away without knowing or caring whither he goes, a peaceful termination of his long-continued state of lethargy, unless he dies from intestinal perforation and resultant peritonitis. But in nearly all deaths seen in the class of fever under consideration, there has been a clear mind up to death's door, with a watchful and anxious interest by the patient in the outcome of his case, with the frequent query, "When will I get well?" etc., and at the last there is a great restlessness that it seems impossible to quiet by any means whatever. The author says he has never been able to explain the condition, unless it be that the nervous system had succumbed to the intoxication to such a degree that it was impossible to get further elimination, because the patient does not seem to die from asthenia, but is simply overcome by something. From the paper it does not appear that the Widal test was employed.—*Memphis Medical Monthly.*

Enlargement of Bronchial Glands in Children.—D. McM. Officer calls attention to the large number of children who are affected with enlarged bronchial glands, which are so often the starting point of tuberculosis. In the diagnosis of the condition, if it be found that there is definite enlargement which persists for more than a fortnight or so, it should be assumed in the majority of cases that it is tuberculous, and the patient should be treated by open air, forced feeding, careful attention to hygiene, and guaiacol, and cod-liver oil internally. For the spasmodic jerky cough, the author uses thirty drops of creosote, with or without menthol, burnt on a hot shovel in the patient's room at night. At any time during treatment, sudden dissemination may take place, such as pulmonary infection, or even a general tuberculosis. Caseous glands have been known to rupture into a bronchus, with perhaps immediate suffocation from caseous material aspirated, or by hemorrhage into the bronchial tube. The author pleads for early recognition of a pathological process which has been largely overlooked in children, and which has an important and lasting effect on their lives.—*Intercolonial Medical Journal of Australasia.*

Society Reports.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, held January 20, 1902.

PARKER SYMS, M.D., PRESIDENT.

Primary Sarcoma of the Pancreas.—Dr. EDWARD SCHNAPER presented a specimen of primary sarcoma in the tail of the pancreas, taken from a patient who had been operated upon by Dr. M. S. Kakels. This was the third case of the kind on record. The patient was a woman, fifty-three years of age, and the operation was done with the expectation of finding a tumor of the left kidney. The tumor was found to be inoperable, and the abdomen was closed. The mesenteric lymph nodes were enlarged, but these were the only enlarged nodes in the body. The liver was enlarged, firm, and yellowish. The spleen was diminished in size, and its capsule wrinkled. The kidneys were also smaller than normal, and the cortex was irregular and mottled. There was a large, soft tumor in the tail of the pancreas, the surface of which presented firm nodules. These proved, on microscopical examination, to be lymph nodes incorporated in the growth. Sections were made from various parts of the tumor, the pancreas, the left kidney, and the spleen. The left kidney and spleen showed no involvement by the neoplasm. Although there was almost complete destruction of the pancreatic tissue, it was interesting to note that no sugar was found in the urine.

Dr. M. I. KNAPP referred to a case of tumor of the pancreas that had recently come under his observation.

Dr. M. S. KAKELS said that he had been able to find in the literature only twenty tumors of the body of the pancreas, and only four tumors involving the tail of this viscus. It was exceedingly difficult unless there was a palpable growth to make a diagnosis of tumor of the pancreas. This was well exemplified in the case under discussion, which he had diagnosticated as a sarcoma of the kidney, and had performed an exploratory laparotomy. The patient had been ill six months, and although the urine was repeatedly examined, no sugar was found in it at any time.

Diabetes Mellitus; Etiology and Pathogenesis.—Dr. C. E. NAMMACK read a paper on this subject, the opening one in a symposium on diabetes. (See page 256.)

Surgical Aspect of Diabetes.—Dr. ARPAD G. GERSTER was the author of this paper. He said that it was well known that dogs and rabbits, as compared with man, offer a remarkable immunity to infection by staphylococci; yet, when the pancreas was removed from these animals and experimental diabetes thus set up, the wounds rarely healed properly. In cultivating pyogenic bacteria, Theobald Smith of Boston found that these bacteria throve best in media containing between .2 and .5 per cent. of sugar, a percentage almost exactly that found in the blood of diabetics. The surgical importance of the so-called latent stage of diabetes could hardly be too much emphasized. The products of faulty assimilation circulating in the blood of diabetics greatly devitalized the tissues, and led to a condition akin to premature senility, thus leaving the tissues especially susceptible to the invasion of microbes. While wounds generally healed kindly in most individuals, it was well known that all sorts of wounds in a few persons showed a tendency to suppurate. It was possible that these persons were the subjects of latent diabetes, or were in a condition which would eventually lead to diabetes. Furunculosis and carbuncle were relatively very common in diabetics. When excessive sweating and furunculosis were found in diabetics, one would usually be able to detect sugar in the perspiration. Furuncles and carbuncles were most commonly observed in middle-aged persons having glycosuria—in other words, in persons who were not very ill and did not live on a restricted diet. The favorite location for carbuncle was on the dorsum. He had seen in a diabetic an enormous carbuncle extending from the occiput to the sacrum. Early free, multiple incisions were demanded in these cases of carbuncle. Diabetic gangrene followed various slight traumatisms. Under almost any mildly antiseptic application the necrosed layer would be thrown off, and cicatrization would soon take place. If, however, the primary lesion became infected, there might result a more extensive and ill-conditioned ulceration. The treatment should consist of measures directed toward improving the local circulation. The perforating ulcer of the foot seen in diabetics did not differ from that observed in other persons, except for the tendency to lymphangitis, and phlegmonous inflammation. For obvious reasons, gangrene of a whole extremity was seven times more frequent in the lower than in the upper extremities. In the non-infectious form of gangrene the determining factor was to be found in the existing arteriosclerosis. An early sign of impending gangrene of the limb was the occurrence of numbness or a peculiar painful sensation, coming on after remaining quiet for a short time, and disappearing again on moving about. This evanescent limping in a diabetic almost invariably pointed to the approach of gangrene. Gangrene of the extremities was about four times more frequent in men than in women. Nearly one-half of these patients succumbed, death often resulting directly from the occurrence of diabetic coma. In non-infectious cases of necrosis of the toes and of the leg, when there was no fever, the limitation of the gangrene was to be sought for by an elevated posture and the maintenance of a dry state as long as possible. When the period of demarkation was well established, no operation should be undertaken without stringent necessity. Often a large part of a toe, or even a whole toe, would be cast off. The degree of arteriosclerosis present must guide the surgeon as to the point for amputation, when this operation was indicated. In infectious cases another factor must be considered, *i. e.*, the necessity of avoiding contact, infection proceeding from the festering and gangrenous area. In such cases the surgeon was often forced to perform a high amputation.

Dangers of Operations on Diabetics.—The first danger in operating upon diabetics was from the anæsthetic. The next was the supervention of diabetic coma. The surgeon should scrupulously avoid infection, and be careful not to starve the patient by waiting until the afternoon before doing the operation. The operation should be performed in the morning after the usual physiological fasting of the night. Before and after the anæsthesia, the patient should be given two drachms of bicarbonate of soda and ten grains of the bicarbonate of potassium. It had been proposed to operate on diabetics under local or infiltration anæsthesia, but Fritz Grossman had observed a special tendency to diabetic coma after cataract operations done under cocaine anæsthesia. In amputations on diabetics the best results would be obtained from the use of short flaps and an open wound.

Prognosis.—The speaker said that the experience of all surgeons, his own included, indicated that more than one-half of the patients dying in diabetic coma had only moderate quantities of sugar in the urine. The main factor in the prognosis was, therefore, not the quantity of sugar in the urine, but the degree of acidity of the blood. The records of the Mount Sinai Hospital for the last ten years showed thirteen cases of major amputation in cases of advanced diabetes. Five of these died in coma within three or four days after the operation, and three others died some months later of coma, but apparently there was here no connection between the coma and the operation.

Diabetic Affections of the Eye.—Dr. S. BUSBY ALLEN took up this subject. He said that one of the earlier symptoms of diabetes involving the eye was a loss of power of the ocular muscles. The muscles innervated by the third nerve were the ones most often affected. These paralyses were generally partial, and sometimes disappeared, only to return after a time. They bore no constant relation to the severity of the disease. Paresis of the accommodation usually occurred early, and was partial. If occurring in a person under thirty-five years of age, and progressing rapidly, it should lead to the suspicion of glycosuria. There was no marked difference in the appearance of a diabetic cataract and an ordinary senile cataract. Of course, cataract occurring in very young persons, ripening within a few weeks and appearing simultaneously in both eyes, would be almost certainly diagnosed as diabetic; but in those of middle age the progress was slower, and the diagnosis could hardly be made without examination of the urine. Diabetes was the only toxic disease which produced cataract, but no hypothesis had yet been advanced which would satisfactorily explain this fact. The retinitis of Bright's disease resembled very closely the retinitis of diabetics, and the two were often associated. In diabetic retinitis the papilla was not usually affected, but there was an optic retinitis due to glycosuria. It was an early complication, and was one of the causes of diabetic amblyopia, a grave symptom, often a precursor of diabetic coma. A complete loss of vision was very rare, but there would be a central scotoma, particularly for red and green. This amblyopia resembled in all respects that produced by the excessive use of tobacco or alcohol. In operating for cataract in diabetics, the operation should be done at a time when there was a lull in the disease. A simple ulcer of the cornea in diabetes, as in nephritis, might lead to the speedy loss of the eye.

Prognosis and Treatment of Diabetes.—Dr. ABRAHAM MAYER discussed this part of the subject. He said that the prognosis of diabetes depended upon the degree of disturbance of metabolism. When the disease began in a severe form with the abundant formation of acetone, the prognosis was bad. When there was a good tolerance for carbohydrates, the prognosis was better. The more advanced the age of the patient at the commencement of the disease, the more favorable was the prognosis. Such complications as tuberculosis and gangrene were decidedly unfavorable. So also when arteriosclerosis complicated the disease. More favorable was the traumatic or syphilitic origin of the disease. Briefly stated, the following were the favorable symptoms: (1) Advanced age at the commencement of the disease; (2) Long duration of the disease without serious complications or much wasting; (3) Traumatic or syphilitic origin; (4) Freedom from the disease in other members of the family; (5) The occurrence of the disease in connection with obesity, the uric-acid diathesis and gout; (6) The existence of a mild form of glycosuria with fair tolerance for carbohydrates; (7) Rapid excretion of sugar with increasing tolerance for carbohydrates; (8) Favorable conditions of life, allowing of thorough dietetic and hygienic regimen, and (9) The occurrence of the disease about the time of the menopause. The unfavorable symptoms were: (1) Development early in life; (2) Early loss of flesh and strength; (3) Severe gastrointestinal symptoms; (4) The occurrence of diabetic gangrene; (5) The occurrence of the disease in other members of the family; (6) Phthisis as a complication, especially with a cessation of the glycosuria; (7) Large excretion of acetone and increase of ammonia; (8) Unfavorable conditions of life, and (9) Organic disease of the pancreas.

Treatment.—To-day, the speaker declared, the diet of a diabetic could be made so varied and palatable that the majority of these patients were content to remain on the proper diet. When syphilis or neurasthenia was the cause, special treatment for these conditions would be instituted. Our chief aim, however, should be to increase the power of the system to assimilate carbohydrates. No method which excluded dietetic treatment was of any avail. He was a believer in the efficacy of medicines in disease; to the dietetic management they were important adjuncts. The patient should be placed at first upon a rigid diet. It contained albumin, fats, and a very little alcohol. If the disease were in a mild form, the patient would become sugar-free in the course of a few days. In the more severe forms, it might be necessary to reduce the nitrogenous elements of the food. In the very severe form it was possible for the organism to produce sugar from its own elements. There were two axioms worth remembering, viz.: (1) When a weakened function is rested, it recuperates and regains its original normal condition, and (2) Overtaxation of a weakened function produces a permanent diseased condition. Thus, when the diabetic continued to excrete sugar for some time, the function became permanent, and his tolerance for carbohydrates was diminished. Again, if a diabetic were kept sugar-free for a considerable time by a strict diet, it would be found that tolerance for carbohydrates rapidly increased. According to his experience, diabetics, when on a restricted diet, suffered most from the exclusion of bread. He had found that some diabetics were greatly pleased by giving them walnuts in place of bread. From 100 to 150 grams of bread were equal to 90 or 100 grams of milk. The diabetic patient's mind should be kept at rest, and his surroundings made as cheerful as possible. He should be warmly clad. Sea baths should not be taken, but carbonic-acid baths would be found very invigorating. In the mild forms of the disease, a journey to some of the spas, as, for example, Carlsbad, might be advised.

Medicinal Treatment.—That opium and its alkaloids had a beneficial effect on the thirst and on the patient's general condition could not be gainsaid. It improved the assimilation of food, allayed the nervous irritability, and the annoying pruritus. Half a grain should be given at first, three times a day, half an hour after meals, and this amount should be cautiously increased, the constipating effect being overcome by the use of cascara or rhubarb. There was a great tolerance for opium in diabetes. The solution of arsenite of bromine was often efficacious.

The Bacterial Theory of Diabetes.—Dr. MAYER said that some years ago he had propounded the bacterial theory of diabetes. The idea was that bacteria from the intestinal tract might easily infect the pancreas and give rise to such changes as might lead to glycosuria. Acting on this theory, he had administered certain bactericides, notably the bichloride of mercury. It should be given directly after meals with a large draught of water. This had given him better and more lasting results in suitable cases than any other medicinal treatment.

Dr. J. C. BIERWIRTH of Brooklyn said that he had been deeply interested in diabetes for a number of years. The name diabetes mellitus conveyed to one's mind a certain clinical picture—chiefly polyuria and an increased specific gravity of the urine. According to his personal experience, however, there were many cases of glycosuria in which there was no increase in the quantity of urine, and no increase in the specific gravity of this fluid. He had just seen a case in which only fifty-seven ounces of urine were excreted daily, and the specific gravity was 1,018, yet the urine contained 3 per cent. of sugar. This was particularly important to remember, for it was the practice of very many physicians to take the specific gravity of the urine, and if it were not above 1,020, they would not think of examining for sugar. These were the cases which the surgeon should be on the alert for, because they were liable to give him an unpleasant surprise in the shape of an unexpected development of a diabetic coma. He was not so sanguine as Dr. Mayer in regard to the treatment. When a case had reached that stage at which thirst and polyuria were present, and betaoxybutyric acid was present, there was very little that the physician could do; but a great deal could be accomplished if such cases came under treatment quite early. This presupposed an early diagnosis; and in order to make this, the physician should make it a rule to ask a new patient for the urine for twenty-four hours, and examine it for sugar.

Dr. James J. Walsh said that it had been found, in a certain number of experimental cases, that destruction of the suprarenal capsule bore some relation to glycosuria, and a few cases had been reported in which there seemed to be such a connection in the human subject. He thought it probable that in the next fifteen or twenty years we might be willing to admit at least the possibility of the contagiousness of diabetes. It was traditional in Berlin that, after Gerhardt's test was positive, very few diabetics lived more than two years. A physician could hardly be expected to examine the urine of every patient; but when a young man came to him complaining of soreness of the gums, or of fatigue on slight exertion, or of loss of sexual power, the physician should lose no time in examining the urine for sugar. These were the cases which usually showed little or no increase in the quantity or specific gravity of the urine.

Dr. N. E. Brill said that a year ago E. L. Opie of the Johns Hopkins Hospital showed a direct relationship between disease of the islands of Langerhans and diabetes, and asserted that when these islands were not affected, although the rest of the pancreas might be diseased, glycosuria would not occur. Dr. E. Libman of New York, while studying the proportions of glucose most useful in culture media, had discovered that when the percentage of sugar was the same as in diabetic blood, *i. e.*, .2 to .4 per cent., the bacteria grown on such media immediately precipitated the peptones. This might indicate that bacteria abounding in the blood might precipitate the peptones and account for the frequent occurrence of thrombosis and furunculosis. The speaker said that he could not accept the rationale given by Dr. Mayer concerning the action of bactericides in diabetes, because it had not yet been substantiated by pathological research. There had never been a case reported in which suppuration of the pancreas had been followed by diabetes. Bichloride of mercury was certainly serviceable in some cases of diabetes, but so far as his experience had gone, only in the syphilitic cases of diabetes.

Dr. Alexander Lambert said that as peptone was only found in the portal vein, he thought that the theory just propounded concerning the precipitation of peptones in the blood was purely fanciful.

Dr. E. Mayer asked for experience regarding the use of potatoes as a food for diabetics.

Dr. Nammack said that he had perhaps not laid sufficient stress upon the coexistence of arteriosclerosis. The general practitioner had been too prone in the past to be satisfied with determining the quantity of sugar in the urine, ignoring utterly the dangerous acids found in the urine in diabetes. He wished to emphasize the great value of muscular exercise as an adjuvant to other methods of treatment. He was in the habit of encouraging the taking of sufficient exercise by offering an additional ounce of French roll for every mile walked in the open air. The statistics that he had quoted showed that the supposed contagiousness of diabetes existed in only 1 per cent., and when one recalled the similar conditions under which the same members of a family lived, this factor hardly seemed to be of much importance. He was of the opinion that the use of potatoes in the dietary of the diabetic was a very dangerous practice.

Dr. A. Mayer said that exercise was imperative, but it should stop short of fatigue. He had found in a large number of cases that in very nearly 8 per cent., which he had investigated, the condition of husband and wife was diabetic. He was a firm believer in the contagiousness, and even the infectiousness, of diabetes. With regard to the use of potatoes, it should be remembered that in 100 grams of potatoes, as 75 per cent. was made up of water, there was really very little carbohydrate present. In the cases of diabetes, in which there was apparently a bacterial origin, he was sure that the bichloride of mercury was of service.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, Held January 23, 1902.

A. Brothers, M.D., Chairman.

Interstitial Salpingitis and Sclerosis of the Tube.—Dr. A. H. Goelet presented a specimen of interstitial salpingitis, which had gone on to sclerosis of all of both tubes; also a specimen of cystic tumor of the left ovary. The patient had suffered for eight years from profuse leucorrhœa, dysmenorrhœa, pain in the back and in both ovarian regions. The operation was done on January 8.

Symposium on Deciduoma Malignum.—This was the special order for the evening.

Clinical Review.—Dr. Louis J. Ladinski presented the opening paper, reporting a case and presenting the patient and specimen. Marchand, he said, in 1885, was the first to point out the epithelial structure of these tumors. Before this the opinion had prevailed that they were sarcomata, presumably of uterine connective-tissue origin. There were three principal theories regarding these tumors, viz., (1) That they originate from the uterine connective tissue; (2) That they are the result of malignant changes in the decidual cells, and (3) The theory, held by the majority of German writers, that they are the result of a proliferation of the epithelial layers covering the chorionic villi, hence were epitheliomata. The histology and pathology of this disease were still far from settled. In the light of our present knowledge, the term "deciduoma malignum" seemed to be the best. The speaker said there could be no doubt that these cases had occurred much more frequently than the records showed, but had been entirely overlooked, or had been designated by other terms.

The case reported was that of a woman of nineteen, born in Austria, and married a year and a half. She had had one child in the spring of 1900. About the middle of July she began to complain of pain in the lower part of the abdomen. About the end of that month there was a hemorrhage, and an escape of clear fluid, tinged with blood. She then began to cough and expectorate bloody fluid. About this time a severe uterine hemorrhage occurred at night, and required tamponade of the uterus. Dr. Freedman, who was in attendance, removed half a pailful of hydatids. She was then sent to the hospital, and was curetted, irrigated, and packed. She was discharged on August 23, 1901. She returned on September 5, complaining of pain over the uterus, and examination showed the uterus to be enlarged, and slight bleeding present. She was given ergot and tonics, and was directed to take douches. Another curettage shortly afterward brought away very little. On the night of October 3 she was again seized with a severe uterine hemorrhage, and was sent to Dr. Ladinski's service at the Gouverneur Hospital. Examination showed the presence of bilateral ovarian cystomata, about the size of cocoanuts. The os was patulous, and there was moderate hemorrhage from the uterine cavity. The uterus was not soft as in subinvolution, but was hard like a hyperplastic uterus. On dilating the uterus, and making a digital exploration, the endometrium was found smooth except at the posterior wall near the left cornu. Here there was a small nodule, which could not be separated or lifted up from the endometrium. It was soft, friable, and spongy, and bled freely when touched. On manipulation, the finger easily broke through its surface. This examination confirmed Dr. Ladinski's provisional diagnosis of deciduoma malignum. The next day, under ether anæsthesia, he did an abdominal pan-hysterectomy, having first separated the cervix from the vagina. The patient made an uneventful recovery, and the cough had greatly improved since that time. Dr. F. M. Jeffries, the pathologist of the Polyclinic Hospital, reported that the uterine growth was of a deep red color and smooth surface, and that on vertical section through the growth and the endometrium, the former was found to have penetrated to nearly half the thickness of the uterine wall. In the uterine structures around the neoplasm was a small cell infiltration and other evidences of secondary inflammation.

Dr. Ladinski said that he had been able to collect from the literature 135 cases. Of this number, ten had been reported in this country, eight in England, and most of the remainder in Germany. Pregnancy was an absolute precursor of deciduoma malignum; it preceded the disease in all of the cases reported except in one doubtful one. In 128 cases in which the nature of the pregnancy was recorded, fifty-one followed hydatid mole pregnancies; forty-two followed abortion; twenty-eight followed labor at term; four followed premature labor, and three followed tubal pregnancies. It was probable that death of the embryo was the cause of hydatid mole, though Marchand rejected this view on the ground that if it were correct, mole pregnancies would be more frequent. From a microscopical study of eight hydatid moles, three of which were followed by deciduoma malignum, the conclusion was drawn that hydatid mole was not always a benign growth. Some recommended that if an atypical growth of epithelial cells were found there would be every reason to suspect malignancy, and hysterectomy should be done. In thirty-three cases of mole pregnancy, the average duration was four months, and malignant degeneration occurred most frequently when the mole pregnancy terminated in the fourth month—in other words, the average duration of such a pregnancy. It was evident, therefore, that the duration of a mole pregnancy bore no relation to the development of deciduoma malignum. The average age of the patients in 134 cases was thirty-two years, which differed materially from the average age of the development of ordinary malignant disease of the uterus. The largest number of cases occurred in women having two or three children, or in those having a very large number of pregnancies.

Symptomatology.—Hemorrhage was almost invariably present, and was usually the first symptom to attract attention. It appeared without apparent cause, and was very characteristic. The bleeding from a deciduoma malignum, moreover, did not respond to the usual means of treatment. The discharge was commonly bright fluid blood, though in the more advanced stages it was dark and of a foul odor. The uterus had been found enlarged in all cases, so much so that in a number of instances there was a suspicion of retained placenta. It was important to remember that the consistency of the uterus was that of chronic hyperplasia. The os was usually patulous. In the early stage of the disease there was anæmia, which was generally attributed to the loss of blood, though it was usually more intense than could be accounted for in this way. Metastases had been found in the lungs in forty-seven cases, in the vagina in forty, in the spleen in thirteen, in the kidneys in thirteen, in the ovaries in ten, in the intestines in eight, in the brain in seven, in the broad ligament in five, in the pleura in four, in the mesenteric glands in two, in the pancreas in two, in the heart, stomach, pelvic and lymphatic glands each in one case. The cough and bloody expectoration were important, and probably pointed to the occurrence of metastases in the lungs. In this disease, much more than in incipient carcinoma of the uterus, the microscopical examination should not be solely depended upon for the diagnosis. Particular attention should be paid to the clinical signs and symptoms. In every case of mole pregnancy, scrapings from the uterus should be examined microscopically at regular intervals subsequent to the removal of the mole. Owing to the patulous dilatation of the os, it was usually easy to make digital examinations of the uterus in these cases, and under these conditions the diagnosis could often be made by direct examination of the uterus before it could be determined by microscopical examination of the scrapings.

Prognosis.—Deciduoma malignum was the most fatal of all neoplasms, because of its rapid recurrence and the formation of metastases. In forty-seven cases death had resulted from metastases, and in twenty-one it had been caused by hemorrhage and exhaustion. The average duration of life after mole pregnancies was six months, after abortion five months, after labor at term, four months.

Treatment.—As soon as the diagnosis was made, the only treatment should be complete extirpation of the uterus. In every case of mole pregnancy the uterus should be emptied as soon as the diagnosis was made, and if microscopical examination pointed to malignancy, there should be no delay in resorting to hysterectomy.

Pathology.—Dr. Otto H. Schultze presented this subject by means of a series of photomicrographs projected on the screen. Photographs of normal tissue were first shown as a means of comparison with the pathological ones. The author discussed at length the various theories as to the origin of the syncytium. The theory of the maternal origin of the syncytium, he said, had been based upon observations on the placentæ of animals.

Dr. H. J. Boldt said that whereas a majority of those who had studied this subject maintained that deciduoma malignum was produced entirely by the products of conception, there were some very competent observers who had given good reasons for their belief that it originated from the maternal side. One case that he had himself observed, and which was supposed at first to be a placental polypus, showed nothing abnormal under the microscope. The hemorrhage having recurred in a short time, the uterine cavity was explored, a new growth found, and then the uterus extirpated. It was determined subsequently that this growth was a deciduoma malignum. In another case, first observed by him, and subsequently by Dr. Brothers, the hemorrhage was so profuse as to prevent microscopic examination being made at the time. The disease showed itself soon after an abortion, and the growth was looked upon as an unusual form of sarcoma. In some cases it was not at all easy to make the correct diagnosis by the microscope alone.

A Historical Case.—Dr. Brooks H. Wells referred to a case that had occurred in the practice of a well-known gynecologist of this city about a year and a half before Sanger had reported his first case to the Obstetrical Society at Leipsic. The patient, eight or nine weeks after a delivery at term, began to flow and to pass spongy masses from the vagina of a reddish-purple color. The case was thought to be one of retained placenta, and accordingly the uterus was thoroughly emptied, but this only caused a cessation of the bleeding for a few days. A week or two later, the woman was again bleeding and passing these spongy masses. The speaker said that happening to be in the laboratory when Dr. Charles Heitzmann was examining the tissue, Dr. Heitzmann remarked that it was something new to him, and that if he were asked to give it a name he would call it a "malignant deciduoma." Indeed, this was the diagnosis that he gave to the gynecologist; but the latter would not accept such a strange diagnosis, and in consequence the case had not been reported.

Dr. S. W. Bandler said that he saw no reason for pain being a prominent symptom in these cases, and as for the enlargement of the uterus and the patulousness of the os, these signs were not characteristic, but were a natural part of a condition associated with pregnancy. The large cells described by Dr. Schultze were possessed of a wonderful power of wandering, and for this reason they were often mistaken for decidual cells, though they had nothing to do with the decidua. A better name than deciduoma would be "chorioma." The syncytial cells, which grew into the capillaries, were at all times during pregnancy given off into the circulation, and were claimed by some to be the cause of the convulsions of eclampsia.

The only difference between carcinoma and the growth under discussion was that the metastases, instead of occurring through the lymphatics, took place through the blood vessels.

Dr. A. **Brothers** said that while Dr. Boldt had reported the first case of the kind in this country, he had had the honor of being the second person to make such a report. Now, that we fully understand what deciduoma malignum really was, there is little doubt that many cases will be recognized and reported. This has been the history of ectopic gestation.

Book Reviews.

A MANUAL OF MEDICINE: Diseases of the Nervous System. Edited by W. H. ALLCHIN, M.D., London. Vol. III. New York: The Macmillan Co., 1901.

THIS small volume contains a brief résumé of diseases of the nervous system by nine British contributors, as follows: Bertram Abrahams, Walter Stacy Colman, James S. Collier, Joseph A. Ormerod, Charles S. Sherrington, Purves Stewart, James Taylor, William Aldren Turner, and H. Allchin. The physiological introduction by Sherrington is exceptionally clear and concise, and the various clinical types of nervous diseases are accurately but briefly described. A novel feature, not usually found in other similar works, is the special chapter on medical ophthalmology by Taylor, in which conditions of the pupil and ocular fundus are described, with reference to their special neurological bearings. The authors have successfully accomplished a task by no means easy, in placing before their readers an acceptable treatise on nervous diseases which seems to cover the entire subject, although in a very condensed manner. The book will satisfactorily serve its purpose as a manual for ready reference, and is a welcome addition to the various larger volumes on neurology published within the last few years.

A TEXTBOOK OF OBSTETRICS. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania; Gynecologist to the Howard, the Orthopædic, and the Philadelphia Hospital, etc. Third edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co., 1901.

THE subject-matter in this work is presented in seven parts, the general arrangement being as follows: Pregnancy, The Physiology and Management of Labor and of the Puerperium, the Mechanism of Labor, The Pathology of Labor, Pathology of the Puerperium, Obstetric Operations, The New-Born Infant. The present edition has been thoroughly revised, and much new material has been added, especially in those chapters dealing with diagnosis of pregnancy, the pathology of pregnancy, the pathology of labor, and obstetric operations. A striking feature of the book are the illustrations with which it is embellished, many of which are original. The text is as condensed as is compatible with clearness; it is comprehensive, its style is attractive, and it is thoroughly modern.

THE MENTAL STATE OF HYSTERICALS, A Study of Mental Stigmata and Mental Accidents. By PIERRE JANET, Litt.D., M.D. Translated by CAROLINE ROLLIN CORSON. 528 pages. New York and London: G. P. Putnam's Sons.

THIS book, which has been for some years familiar to students of neurology and psychology, will be welcomed in its English dress. The late Mrs. Corson, who translated the book, acquitted herself well of a difficult task. The first part of the book is taken up with a discussion of the mental stigmata of hysteria, *e. g.*, the anæsthesias, the amnesias, the abulias, the motor disturbances, and the modifications of the character, while the second part treats of the mental accidents of hysteria. Under the latter caption are discussed (1) Suggestion and Subconscious Acts; (2) Fixed Ideas; (3) The Different Forms of Hysterical Attacks; Emotional Attacks, Clownism, Ecstasies, Automatism, Complete Attacks; (4) Somnambulism, and (5) Deliriums. The volume concludes with a brief chapter on hysteria from a psychological point of view. In this chapter the author discusses (1) Hysteria as a Malady by Representation; (2) The Undoubling of the Personality; (3) The Retraction of the Field of Consciousness, and (4) Hysteria a Mental Malady. Thus it will be seen that the author gives himself free scope for the discussion of this interesting neurosis. The book does not purport to be a treatise on hysteria, and therefore it cannot be compared with the works of Pitres and of Gilles de la Tourette. Although the mental state of hysteria is discussed in such treatises, none of them go into the subject with the detail and thoroughness of Janet. Nothing that can be said in a brief review will convey so adequate an idea of the author's handling of his subject as a citation of his conception of hysteria: "A mental disease belonging to the large group of the diseases due to weakness, to cerebral exhaustion; it has only rather vague physical symptoms, consisting especially in a general diminution of nutrition; it is, above all, characterized by moral symptoms, the principal one being a weakening of the faculty of psychological synthesis, an abulia, a contraction of the field of consciousness manifesting itself in a particular way; a certain number of elementary phenomena, sensations, and images cease to be perceived, and appear suppressed by the personal perception; the result is a tendency to a complete and permanent division of the personality, to the formation of several groups independent of each other; these systems of psychological factors alternate some in the wake of others or coexist; in fine, this lack of synthesis favors the formation of certain parasitic ideas which develop completely and in isolation under the shelter of the control of the personal consciousness, and which manifest themselves by the most varied disturbances, apparently only physical.

Janet's brief definition of hysteria may also be cited: "Hysteria is a form of mental disintegration characterized by a tendency toward the permanent and complete undoubling of the personality."

The volume is well printed and bound attractively.

DAS WIRBELTIERBLUT IN MIKROKRISTALLOGRAPHISCHER HINSICHT. Von Dr. med. H. N. KOBERT. Mit sechsund zwanzig in den Text gedruckten Abbildungen. Stuttgart: Verlag von Ferdinand Enke, 1901.

IN this brochure of 120 pages, the various forms of crystals which may be obtained from vertebrate blood are discussed. In addition to the well-known hæmin crystals of Teichmann, which are described at length, numerous other forms are of scientific and forensic interest, but no attempt has heretofore been made to collect the facts and bibliography of the subject in a single volume. In doing this, the author has filled a gap in the literature, and completed an important chapter in the growing subject of hæmology.

A TEXTBOOK OF DISEASES OF WOMEN. By Charles B. PENROSE, M.D., Ph.D. Formerly Professor of Gynecology in the University of Pennsylvania; Surgeon to the Gynecean Hospital, Philadelphia. With 221 illustrations. Fourth edition, revised. Philadelphia and London: W. B. Saunders & Co., 1901.

ONE feature of this work which is worthy of special commendation is the attempt in nearly all cases to present only one method of treatment for each disease. This plan prevents much confusion. Careful attention is given to the detailed description of the technique recommended in the various conditions described. The best teaching of the most modern gynecology is presented here, and, as a rule, all facts of anatomy, physiology, and pathology, which can easily be found in the special textbooks on these subjects, have been omitted. Only in those cases in which such mention is necessary to make clear the subject under discussion, or when there are certain points in the pathology that are characteristic of the diseases which are described, have these facts been emphasized. The book deals with the general causes of diseases of women, methods of examination, diseases and malformations of the genital organs, and the technique of gynecological operations.

LA FAIBLESSE IRRITABLE SEXUELLE. PAR V. RENZA, Paris. A. Maloine, Éditeur, 1902.

THIS is a psycho-physiologico-medical study of sexual weakness and neurasthenia, giving a method which the author deems infallible of conquering for one's self by ordinary means at the command of all this most distressing condition. The brochure which details the method contains 112 pages of interest.

A TEXTBOOK OF EMBRYOLOGY for Students of Medicine. By JOHN CLEMENT HEISLER, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. Second edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co., 1901.

THE modern medical student at the very beginning of his study of medicine realizes how absolutely essential a knowledge of embryology is to him. If he is deficient in this branch, he will also soon realize how few books there are which are concise enough for convenient use, and still full enough for his need. Such a book we believe the present volume to be. A knowledge of embryology is a necessary introduction to a comprehensive understanding of the subject of anatomy. The chapter dealing with the deciduæ and the placenta has been rewritten for this edition, as well as the greater part of the description of the chorion, for the recent work on these subjects by Peters and Webster has practically changed the earlier views. There is a valuable tabulated chronology of development appended to the text.

The Medicinal Plants of the Philippines. By T. H. Pardo de Tavera, Doctor en Medicina de la Facultad de Paris, etc. Translated and revised by Jerome B. Thomas, Jr., A.B., M.D., Captain and Assistant Surgeon U. S. V. Philadelphia: P. Blakiston's Son & Co., 1901.

This is a very timely and important contribution, coming as it does from one whose ability to do the work was recognized by a government commission. The author, himself a native, spent two years collecting data bearing upon the uses made by the Filipinos of their plants. Works already published have been largely consulted and drawn from. The author believes that native physicians would do well to employ many of their indigenous plants, which, he states, patients usually prefer to exotics. Instructions are given as to modes of procuring and preserving these drug-plants, which are not, as a rule, kept in the pharmacies. The translation of this work, which was originally written in 1892, has for its aim to facilitate the study of plants by medical officers stationed at small posts in the Philippines. With this end in view the plants have been more definitely described when possible, and the English name given. No attempt has been made to give a strictly modern botanical classification. As it stands, the work should prove useful and an incentive to further necessary study in a most promising field.

Phototherapy. By Professor Niels R. Finsen, Copenhagen. Translated from the German edition, and with an Appendix on The Light Treatment of Lupus. By James H. Sequeira, M.D., Lond., M.R.C.P., Dermatological Assistant and Medical Officer in charge of the Light Department at the London Hospital. London: Edward Arnold, 1901.

This is a work of considerable interest at the present time, coming direct from the pen of one who has done so much to make the light treatment what it is. It is disappointing, however, in its brevity. There are three essays, one on "The Chemical Rays of Light and Smallpox," another on "Light as a Stimulant," and a third on "The Treatment of Lupus Vulgaris by Concentrated Chemical Rays." These were written in 1894-'95 and '97, respectively. The appendix by Sequeira contains but four printed pages and some illustrations. Seventy-nine pages of large print, exclusive of many good pictures, complete the volume. The subject would stand a work several times this size, and the "Finsen" treatment is worthy of being written fully to date.

A travers la Médecine. Par Docteur H. Guimbail, Paris. A. Maloine, Éditeur, 1901.

A series of short monographs, written under date between July 1, 1900, and June 15, 1901, and including, under twenty-one headings, a variety of topics, which are treated in an easy literary style.

The Röntgen Rays in Medicine and Surgery. As an Aid in Diagnosis and as a Therapeutic Agent. Designed for the Use of Practitioners and Students. By Francis H. Williams, M.D. (Harv.), Graduate of the Massachusetts Institute of Technology, Visiting Physician at the Boston City Hospital, etc., etc. With 391 illustrations. New York: The Macmillan Company; London: Macmillan & Co., 1901.

It is so comparatively early in the history of the *x*-ray that one would scarcely expect an exhaustive, finished and complete exposé of the subject at the present day. The rapid strides making in therapy alone would render any work only preliminary, or, as the author states, a "report of progress."

From the clear and interesting manner in which the writer has gone over every department of the subject, giving from first to last personal experience based upon years of practical work, it is safe to say that the task has been undertaken by one thoroughly competent, and brought to a most successful issue.

The author's experimental work dates back to 1896, and during the whole progress of the book's construction improvements in apparatus, methods, and practical application of a personal nature have been incorporated in the pages.

The therapy of the Röntgen ray is still in an experimental stage, and though many things point to its becoming useful in several directions, still the reports here reproduced are not over-convincing. Internal forms of cancer are not discussed, but for the external varieties the ray appears to succeed as well as the Finsen light. There is some repetition in different portions of the book, especially concerning directions in the use of apparatus and like matter. The table of 635 cancer cases on page 442, as it catches the eye, is apt to mislead until the text is carefully read to show that they have nothing to do with *x*-ray treatment.

Many of the photographs of cases are poor, giving an entirely inadequate idea of the lesions.

Two hundred and ninety pages are devoted to chest examinations, freely illustrated.

A chapter on *x*-rays in dentistry deals mostly with deformities of the jaw, etc. The 658 pages are filled with interesting data of all kinds pertaining to the subject, and any one engaged or interested in *x*-ray work can scarcely afford to be without the book. The publishers' part has been attractively done.

International Clinics. A quarterly of clinical lectures and especially prepared articles. Edited by Henry W. Catlett, A.M., M.D., Philadelphia. Vol. III, Eleventh Series. Philadelphia: J. B. Lippincott Co., 1901.

Among the contributors here listed one finds such names as Abercrombie of Charing Cross, Bie of the Finsen Institute at Copenhagen, S. S. Cohen, Deaver, Edebohls, Eyre of Charing Cross, Fagan of St. Vincent's, Dublin; Jullien of the St. Louis, Paris; Landolt of Paris, Pick of Prague, Routh of London, and Withington of Boston.

These and other writers present an interesting series of articles on phototherapy, sera, spas, corningization, convulsions, heart disease, goiter, pancarditis, inebriety, nocturnal epilepsy, appendicitis, and numerous other diseases and their treatment.

The Finsen light treatment is illustrated with pictures of apparatus, with the light being applied, and portraits of patients before and after.

A very important subject is that discussed by Professor Jullien—"Gonorrhœa and Marriage." He regards gonorrhœa as one of the most serious pathological conditions that afflict the human race. Lilienthal has a fine illustration of gallstones in his excellent article on "Some Acute Affections of the Gall-bladder and Its Associated Ducts."

The papers are generally up to the high level established by this periodical.

The Standard Medical Manual. A Handbook of Practical Medicine. By Alfred S. Burdick, M.D., Editor of the *Medical Standard;* Junior Professor of Practice of Medicine, Illinois Medical College, etc., etc. Chicago: G. P. Engelhard & Company, 1901.

The author disclaims at the outstart any intention to have this work regarded as the standard. The name has been borrowed from the journal in whose management much of the material which constitutes the text has been gathered. Brief considerations upon etiology, pathology, and symptomatology are given, but especial stress is placed upon treatment. The work is "in large part a compilation," and the author's effort to present the facts in as few words as is consistent with reasonable clearness has been realized. The articles are arranged alphabetically, and minor ailments as well as severe diseases receive due recognition. An epitome of the national formulary has been reclassified according to the therapeutic theses. An appendix contains the usual tables of drugs, doses, poisons, etc.

Diagnostik der Harnkrankheiten. Von Prof. Dr. C. Posner in Berlin. Dritte Auflage. Berlin: August Hirschwald, 1902.

This third edition of Professor Posner's excellent work, presented as an introduction to the pathology of the urinary passages, comes eight years from the publication of the first.

In this interval important advances have been made in methods of diagnosis, and these are duly reflected in the present volume. There are fifty-four illustrations, and, as an appendix, there is presented a short symptomatology of the usual affections of the urinary organs.

The subject-matter is arranged in the form of ten lectures, and due attention has been paid to endoscopy, cystoscopy, and other advanced methods of exploration.

The Physiological Action of Drugs. An Introduction to Practical Pharmacology. By M. S. Pembrey, M.A., M.D., Joint Lecturer on Physiology in Guy's Hospital Medical School, and C. D. F. Phillips, M.D., LL.D., Examiner in Materia Medica and Therapeutics in the University of Aberdeen, etc. London: Edward Arnold, 1901.

This is an elementary work of one hundred pages, describing experiments in such a way as to make them available for the student, and which are limited to such as can be performed upon a brainless frog. Nearly a hundred experiments are described with a great variety of drugs of importance in medicine, and charts are freely interspersed in illustration of the effects produced by injection.

At the end is a table comparing ordinary and lethal doses in the frog and in man. The work is one based wholly upon original research, and, from its practical nature, should be of value to all interested in the action of drugs.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, Under the General Editorial Charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol I. General Medicine, Edited by FRANK BILLINGS, M.S., M.D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago, with the Collaboration of S. C. STANTON, M.D. Chicago: The Year Book Publishers, October, 1901.

THIS is the first of monthly issues of a series to comprise ten volumes on the year's progress in medicine and surgery, and though the volume itself is creditable to the abstractors, the scheme does not appeal strongly to the reviewer. A year book should be a year book, and not ten spread over the whole year. The quarterlies have been open to the objection that in wishing to refer to a subject it is pretty sure to be in the volume which has not yet come out. This objection is here intensified. Even the subject of medical progress is not complete in one volume, since one part is issued in October and the other in May.

The November issue is scheduled to review general surgery under the editorship of John B. Murphy. The list of editors contains well-known names.

DIE CHRONISCHEN NIERENENTZÜNDUNGEN IN IHRER EINWIRKUNG AUF DIE BLUTFLÜSSIGKEIT UND DEREN BEHANDLUNG. VON PRIVAT DOCENT DR. H. STRAUSS, Assistent der III. Med. Universitätsklinik zu Berlin. Berlin: August Hirschwald, 1902.

THIS is an unbound volume of 159 pages, treating on the influence of chronic inflammatory states of the kidney upon the blood, based upon a number of experimental observations on blood-serum and transudates. The treatment is also considered. Details of observations and experiments are given, with tables and data carefully worked out, and the general impression is made of a most painstaking conscientious study of the questions involved. References to preceding work upon the same lines are numerous, indicating that in prosecuting his original research the author has paid due regard to the investigations already committed to literature, which the present contribution tends to enrich.

HANDBUCH DER PHYSIKALISCHEN THERAPIE. Herausgegeben von Dr. A. GOLDSCHEIDER, a. o. Professor in Berlin, und Dr. PAUL JACOB, Privat Docent in Berlin. Teil I., Band II. Leipzig: Verlag von Georg Thieme, 1901.

NEVER before in the history of medicine has it been possible to produce such extensive writings upon the purely physical aspects of treatment scientifically considered.

Many methods, in former years scarcely sanctioned or admitted worthy of serious consideration, are now placed upon a firm basis, with results which must carry conviction.

The present large octavo of 535 pages, profusely illustrated with 175 cuts, contains a wealth of information upon massage in all its aspects, gymnastics from many points of view, Swedish movements, mechanical orthopedy, electrotherapy, and treatment by light. The list of collaborators is long, and contains names known and respected in all quarters of the medical world. The editors may congratulate themselves on producing a work of such magnitude and practical worth dealing with methods which are often neglected and left to the irregular or non-qualified practitioners.

ETUDES SUR LA TUBERCULOSE ET SON TRAITEMENT; TUBERCULOSES CHIRURGICALE, PULMONAIRE, INTESTINALE. Par Le DOCTEUR G. P. COROMILAS, Chirurgien Honoraire de L'Hôpital Péau à Paris. Paris: A. Maloine, Editeur, 1902.

THE author of this monograph has done a large amount of work in tuberculosis, especially surgical, and now presents some of his results, most of which have already been discussed in the Academy of Medicine at Paris. A large part of the present publication is given up to reports of cases of bone and joint tuberculosis, in the treatment of which no startling innovations have been carried out or suggested. The author's plan of treatment has been along the customary surgical lines, and in a number of cases he has employed various forms of injectious treatment. The reported results have been comparatively favorable. The most interesting subject touched upon is the treatment of pulmonary tuberculosis by the instillation of remedies through the trachea by means of a specially constructed syringe. A number of clinical experiences are recorded, and the method of application is illustrated by diagrams. The results are too irregular and the cases too few for us to draw any definite conclusions. As is frequently the case in foreign publications, there is too much clinical detail, but the book contains matter of considerable interest.

KLINIK DER VERDAUUNGS-KRANKHEITEN, von PROF. DR. C. A. EWALD. III. Die Krankheiten des Darms und des Bauchfells. Berlin: Verlag von A. Hirschwald, 1902.

EWALD'S new volume, comprising the diseases of the intestines and peritoneum, belongs to the most important works of recent medical literature. As is well known, Ewald is the foremost pioneer and classical writer in the field of digestive disorders. His book on diseases of the stomach was the first to propagate the new ideas, and the progress made in the management of pathologic conditions of this organ. The present work on the intestines is fully abreast with the previous book of this author on the stomach. Although describing in detail the various methods of examination of the fecal matter, microscopically, chemically, etc., Ewald does not believe in requiring the physician to do laborious and troublesome work unless there is sufficient reason for it. In most instances, Ewald remarks, inspection of the fecal matter gives as much light as the microscopic and chemic examination. "Appendicitis larvata," a special type of appendicitis first described by Ewald, is vividly detailed. No distinct attack of appendicitis is mentioned by the patient, he merely complains of abdominal pains (sometimes in the epigastric region, sometimes in the region of the navel, or in the left iliac region), either constantly or at intervals; the diagnosis of some gastric or intestinal trouble is made by the attending physician, but the applied remedies fail to respond. The examination of the appendicular region sometimes reveals an abnormally thickened appendix which clears the diagnosis, or if this is not the case, the diagnosis of "appendicitis larvata" can be made by exclusion. The operation of appendectomy accomplishes a complete cure, and thus demonstrates the former symptoms as having been due to the appendicitis. Ewald's work on the intestines is clearly and fluently written. It is not overburdened by unnecessary literature and therefore not cumbersome. It states the facts in a lucid manner. We do not doubt that every physician will delight in reading and studying Ewald's new book, and will certainly derive the greatest profit from it for himself and his patients.

RATIONAL HYDROTHERAPY. A Manual of the Physiological and Therapeutic Effects of Hydriatic Procedures, and the Technique of Their Application in the Treatment of Disease. By J. H. KELLOGG, M.D., Member of the British Gynecological Society; Superintendent of the Battle Creek (Mich.) Sanitarium, etc. 8vo, 1,193 pages. Philadelphia: The F. A. Davis Company, 1901.

THE promise indicated by the comprehensive title of this book has been amply fulfilled. The rational uses of water in disease find, in this goodly volume, thorough and painstaking exposition from every view point of the practitioner. Part I is devoted to the history and physiology of hydrotherapy. The American reader will scarcely accept the statement that "half a century ago we were much nearer the front of this line of progress than at the present time." The author's early training may be the causes of his strange confusion of hydropathy with hydrotherapy. *Hydropathy*, indeed, flourished to a considerable extent in America, and many institutions devoted to these measures were established here half a century ago. The medical profession knows too well that these "institutions" have been the curse and bane of rational hydrotherapy. Their "measures" were in the main crude, heroic, and empirical, and their quackery so estranged the profession that many years of such earnest labor as is recorded in this excellent treatise will be required to reinstate hydrotherapy.

In his history of hydrotherapy in America, the author displays a marvelous indifference to the contributions of his contemporaries in this field.

Part II, containing an exposition of the general principles and therapeutic effects of hydriatic application and general rules for their practical employment, is a mine of valuable information for the beginner, as well as for the veteran, though it is somewhat too discoursive. Part III describes the technique of hydrotherapy with excellent illustrations of each step and procedure. Many needless methods and subdivisions which have come down from the hydropath could be profitably omitted. Indeed, redundancy is the only fault of this book. By pruning among needless material (for instance, disquisitions on diet, massage, electricity, sun-bath formulæ for converting thermometer scales, etc.) and changing the large type and margins to those more customary in medical books, this ponderous volume could be reduced to less repellent size. A summary of experimental work, a copious index, and bibliography conclude this handsome book.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending February 1, 1902:

	Cases.	Deaths.
Measles	891	34
Diphtheria and croup	333	55
Scarlet fever	337	31
Smallpox	61	10
Varicella	59	..
Tuberculosis	358	156
Typhoid fever	23	5
Cerebro-spinal meningitis	..	..

Note on Enema Rashes.—Commenting on the fact that enemas are often followed by rashes, Charles Bolton states that in January, 1901, he ordered in his hospital service soft soap, to be used for making the enemas in half the medical and surgical wards of the hospital, and hard yellow soap in the remaining half of the wards. This order continued in force for six months. During this period a total of 903 enemas was given to 500 patients, of these 407 soft-soap enemas being given to 234 patients, and 496 hard-soap enemas being given to 266 patients. In the latter series seventeen rashes resulted, but in the former series there was not a single rash. Enemas of pure water were not used, as it was considered that if soft-soap enemas did not cause a rash neither would water alone. Three hundred of the patients received only one enema each, the remaining 200 having from two to six each, and a few of the more chronic patients from twelve to fourteen each. Of the seventeen rashes never more than one occurred in the same person, and when more than one enema was given the rash followed the first, second, third, or fourth, but not the later ones. In one case, after a patient had received several soft-soap enemas, the mistake of giving him a hard soap enema was made, and a rash resulted. The medical and surgical diseases from which the patients were suffering had apparently no influence on the rashes, and the same remark may be made concerning the aperient employed. This was usually given the night before the administration of the enema, and consisted either of calomel, castor oil, or house medicine. All the rashes appeared on the day following the injection, and their duration was from one to three days. They consisted in each case of fine, thickly sown papules, which either gave rise to a coarsely punctate appearance, or fused together into well-defined patches, mixed with areas of simple erythema. In one case urticarial wheals were present. In some cases the whole body was more or less uniformly covered; in others the rash was chiefly apparent on the buttocks and extensor surfaces of the limbs, or on the trunk, especially at the sides —*Clinical Journal.*

An Apology for Bacteria.—Richard Travers Smith calls attention to the beneficent microbes and the part which they play in the economy of nature. In the first place, they act as scavengers, the processes called putrefaction, decomposition, fermentation, and decay being carried on in the main by bacteria. They have a part as purveyors of suitable food to the animal kingdom. Animals cannot exist without plants; plants cannot exist unless their stock of food in air, soil, and water is continually renewed. The sources of renewal are three—dead animals, dead plants, and the waste products of living animals and plants. The transformation of these complex bodies into a form simple enough to be used as food by plants is accomplished by bacteria. Bacteria also are agents in capturing free nitrogen from the atmosphere and transferring it to the food circulation, in keeping up the amount of carbon interchanged between living animals and living plants, and in restoring sulphur to plants, which has been taken from sulphuretted hydrogen gas during putrefaction of proteids. Bacteria probably contribute to the formation of soil by furnishing acids, which soften the surfaces of hard rocks; and coal is thought by some to be the result of bacterial action on vegetable matter under peculiar physical conditions. Some evolutionists even claim that man's remotest ancestors were bacteria. —*The Dublin Journal of Medical Science.*

The Treatment of Rawed Peritoneal Surfaces in Abdominal Operations.—J. Clarence Webster emphasizes the need for careful treatment of rawed peritoneal surfaces in order to prevent the formation of adhesions and intestinal obstructions. Small patches on the parietal peritoneum, the bladder, and the back of the broad ligaments may often be covered by loosening the peritoneum round them, and bringing the edges together with catgut. Similar surfaces on a mesentery may be quickly closed by a continuous suture. Areas of omentum, which have been freed from adhesions, should not be left free; but if slight, should be covered with neighboring healthy omentum, and, if extensive, ligatured near their base and cut away. Raw surfaces on the intestine may be covered by a continuous catgut suture when small. If large, a thin flap can be cut from the omentum and stitched to the raw surface with fine catgut. The gap in the omentum is easily closed with catgut. In very bad cases it may be advisable to resect the affected portion of the bowel. Small areas on the uterus can be covered by means of a running suture. If the patches are large or numerous, transplantation of grafts of peritoneum may be tried. Frequently the author has simply cauterized such surfaces so as to form a black char, the char acting as a protection and preventing adhesions.—*Chicago Medical Recorder.*

A Case of Acquired Hydronephrosis of Twenty-five Years' Duration.—C. O. Theinhaus reports the case of a man of fifty-two years, who for twenty-six years had felt a marked swelling in his left side under the margin of the ribs, which, growing slowly but constantly, at times gave rise to attacks of severe pain and discomfort. At the time of examination pus was found in the urine, and was increased by pressure on the tumor; the patient was emaciated to an extreme degree, had a slight evening rise of temperature, and his general condition was such as to leave little hope for recovery after a prolonged operation. The sac was sutured to the muscles and drainage resorted to, Sonian's incision being used because it avoids infection of large muscle areas by the bacteria in the pus sac. The patient left the hospital six weeks after the operation, having gained about fifteen pounds, with a small urinary fistula in the lumbar region, and was advised to re-enter later for nephrectomy if necessary.—*St. Paul Medical Journal.*

Cryoscopy of Hydrocele Fluid.—Oscar Marchetti describes the results of his examination of the fluid of hydrocele by means of cryoscopy, or determination of the osmotic pressure of liquids from their freezing point. This was found to be —0.57° as a minimum to —0.80° as a maximum, and is thus lower than that of the blood, which is —0.56°. It does not appear to be at all related to the length of duration of the affection to the physical qualities of the fluid, nor to the changes in the tunica vaginatis. It therefore gives no data of importance in regard to the development of the process, and is of no value in diagnosis, but merely of interest biologically, and as confirming the already known fact that any marked difference between the freezing point of an effusion and that of the blood indicates its probable inflammatory nature. This shows that serous membranes under pathological conditions can create and maintain a lack of static equilibrium between the fluids—blood and effusions—which they separate.—*Rivista Critica di Clinica Medica.*

Contribution to the Study of Laryngo-Tracheal Fistulæ. —Paolo Lombardo Pellegrino reports a case of this rare affection. The patient had attempted suicide three months before by cutting his throat, but had merely wounded the larynx without touching the large blood vessels. The wound healed by second intention, leaving a small fistula in the median region. There were sibilant respiration, attacks of dyspnœa, and psychical depression with suicidal notions. A thorough examination resulted in a diagnosis of crico-thyroid fistula of small size, with probable cicatricial stenosis of the larynx. An operation was performed, the surface of the fistulous tract freshened with the bistoury. A flap of mucous membrane and of conoid ligament in the larynx was fixed against the fistulous opening so as to close it, and a complete cure followed.—*La Riforma Medica.*

Stricture of the Urethra in a Female, Complicated with Enuresis, Dilatation of the Bladder, Ureters, and Kidneys.—The patient of L. B. Tuckemman was a girl of five years, who had always suffered from enuresis. The breaking of preputial adhesions gave some relief. On one occasion she was suddenly attacked with pain in the loins, dysuria, blood in the urine, and distended bladder. Catheterization showed considerable resistance to passage at the proximal end of the urethra. The latter was gradually dilated, the chief resistance remaining at the neck of the bladder. The subsequent history of the case was one of continuous residual urine though the patient seemed to have good control over the bladder. A sudden increase of acute symptoms was followed by death. At post mortem the entire urinary tract was found to contain pus. The bladder was dilated with greatly thickened walls, and a small cavity containing pus existed within the bladder wall at the fundus. Both ureters were irregularly dilated throughout their whole extent, and likewise the pelvis of each kidney, the cavity encroaching on the substance of the organ itself. The child had suffered from much colic and constipation alternating with diarrhœa, and this was partly explained perhaps by an anomaly of the ascending mesocolon, which was continuous with the mesentery and allowed as free movement of the ascending colon as of the small intestine itself.—*Cleveland Medical Gazette.*

The Treatment of Pneumonia with Creosote.—H. W. Cummings commends this remedy, finding that of twenty consecutive cases (all ending in recovery) in fourteen the crisis occurred on the fifth day. He found also that after he began the use of creosote the fever did not run so high as usual, nor did it fall so suddenly at the end of the disease, as to leave the patient prostrated, accompanied by the profuse sweat, but rather that the fever declined more gradually. Only one patient showed any alarming symptoms at the crisis, and she had just recovered from a severe attack of grippe when taken with pneumonia. Thus she was quite weak at the beginning. Again, he found that the use of creosote lessened, to a great degree, the severity of the cough and pain, and his patients required but little medicine to produce rest or sleep. Not one ever vomited or suffered with nausea while the medicine was being administered. Cummings uses the carbonate of creosote, beginning with ten drops every three hours, and increasing the dose five drops daily until twenty to twenty-five-drop doses are given for an adult. When the maximum dose is reached, he gives the remedy at longer intervals, say, four to five hours. In all cases he uses strychnine as a stimulant, beginning with small doses during the second stage, and increasing the dose as the patient approaches the crisis.—*Texas Medical Journal.*

Is Astigmatism, Like Myopia, Ever Progressive?—George C. Pardee concludes from his researches in this line that astigmatism increases in a certain number of cases (not to be neglected as only sporadic). Just what causes this increase is not quite apparent. But it is not unreasonable to assume that the same cause which effected a different curvature in the different meridians of the cornea may cause a still further difference in this curvature in a membrane which, like the cornea, may be acted upon so readily by it. The increase in nearly all of the cases discussed in this paper took place at such ages as would *a priori* place the cornea under such conditions as would render it yielding to the forces that caused its astigmatism in the first place.—*Transactions of the Medical Society of California.*

Sleepy Grass.—Sleepy grass is found in New Mexico, Texas and Siberia. It is said to have strong narcotic properties, and with horses and sheep to cause sleep lasting for a considerable time.

Population of Canada.—The population of the province of Quebec is growing at the rate of 9 per cent. in every ten years; while that of Ontario is increasing only 2½ per cent. in the same time.

Parks of London.—The City of London keeps up ten parks. Epping Forest is the largest; it contains 5,552 acres. The smallest is St. Paul's Churchyard, one acre in extent.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended February 7, 1902:

		CASES.	DEATHS
SMALLPOX—UNITED STATES.			
California, Los Angeles	Jan. 18–25..	5	
San Francisco	Jan. 19–26..	14	
Illinois, Belleville	Jan. 25–Feb. 1..	1	
Chicago	Jan. 25–Feb. 1..	5	
Danbury	Jan. 25–Feb. 1..	1	
Galesburg	Jan. 25–Feb. 1..	2	
Indiana, Crawfordsville	Jan. 18–Feb. 1..	14	
Iowa, Clinton	Jan. 26–Feb. 2	6	
Kentucky, Covington	Jan. 26–Feb. 2..	6	
Louisiana, New Orleans	Jan. 25–Feb. 1..	4	1
Massachusetts, Boston	Jan. 25–Feb. 1..	47	12
Brookline	Jan. 18–25..	1	
Cambridge	Jan. 25–Feb. 1..	5	
Chicopee	Jan. 18–25..	1	
Malden	Jan. 25–Feb. 1..	1	
New Bedford	Jan. 25–Feb. 1..	5	
Somerville	Jan. 25–Feb. 1..	1	
Waltham	Jan. 25–Feb. 1..	1	
Woburn	Jan. 25–Feb. 1..		1
Michigan, Ann Arbor	Jan. 11–18..	1	
Detroit	Jan. 25–Feb. 1..	6	
Ludington	Jan. 26–Feb. 2..	1	
Minnesota, Minneapolis	Jan. 18–25..	23	
Montana, Butte	Jan. 12–26..	9	
Nebraska, Omaha	Jan. 25–Feb. 1..	51	
South Omaha	Jan. 24–31..	172	
New Jersey, Camden	Jan. 25–Feb. 1..	7	
Jersey City	Jan. 25–Feb. 1..	25	1
Newark	Jan. 24–Feb. 2..	40	3
New York, Binghamton	Jan. 25–Feb. 1..	3	
New York	Jan. 25–Feb. 1..	42	15
Ohio, Cincinnati	Jan. 24–31..	16	1
Cleveland	Jan. 25–Feb. 1..	3	
Middletown	Jan. 25–Feb. 1..	2	
Toledo	Jan. 25–Feb. 1..	3	
Pennsylvania, Auburn	Nov. 16–Jan. 25..	48	1
Mekeesport	Jan. 25–Feb. 1..	1	
Norristown	Jan. 25–Feb. 1..	1	
Philadelphia	Jan. 25–Feb. 1..	73	13
Pittsburg	Jan. 25–Feb. 1..	1	
Williamsport	Jan. 25–Feb. 1..	2	
Rhode Island, Providence	Jan. 25–Feb. 1..	1	
South Carolina, Charleston	Jan. 18–25..	2	
Greenville	Jan. 18–25..	1	
South Dakota, Sioux Falls	Jan. 24–Feb. 2..	4	
Tennessee, Memphis	Jan. 25–Feb. 1..	12	
Washington, Tacoma	Jan. 19–26..	3	
Wisconsin, Green Bay	Jan. 24–Feb. 2..	10	
Milwaukee	Jan. 25–Feb. 1..	3	
SMALLPOX—FOREIGN.			
Brazil, Para	Nov. 1–30..	14	1
Para	Dec. 1–31..	11	1
Colombia, Cartagena	Jan. 13–19..		2
Panama	Jan. 20–27..	25	
France, Paris	Jan. 11–18..		7
Great Britain, Bristol	Jan. 4–11..	1	1
Liverpool	Jan. 11–18..	3	
London	Jan. 11–18..	877	60
India, Bombay	Dec. 31–Jan. 7..		1
Karachi	Dec. 29–Jan. 5..	8	2
Madras	Dec. 14–20..		3
Italy, Naples	Jan. 11–18..	15	3
Russia, St. Petersburg	Jan. 4–11..	5	1
Uruguay, Montevideo	Nov. 8–Dec. 7..	268	26
YELLOW FEVER.			
Brazil, Para	Oct. 1–Dec. 31..		24
Dutch Guiana, Paramaribo	Jan. 9..	2 cases suspect.	
Mexico, Vera Cruz	Jan. 18–25..	1	
CHOLERA.			
India, Bombay	Dec. 31–Jan. 7..		1
Calcutta	Dec. 28–Jan. 4..		33
Madras	Dec. 14–20..		4
PLAGUE.			
China, Hongkong	Dec. 14–21..		1
India, Bombay	Dec. 31–Jan. 7..		213
Calcutta	Dec. 28–Jan. 4..		22
Karachi	Dec. 29–Jan. 5..	31	26

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Original Articles.

GONORRHŒAL INFECTION OF THE PROSTATE.*

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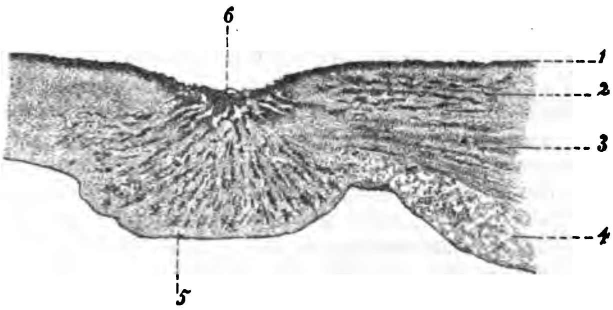
ALTHOUGH within a comparatively recent date, investigation and studies by genito-urinary surgeons have been particularly drawn toward gonorrhœal infection of the prostate, yet, due to its very frequent occurrence, inflammation of this organ has for years attracted the attention of medical men. Zeller, as early as 1700, and Littré and Warren, in 1711, were of the opinion that all gonorrhœas represented disease of this gland. Swediauer, in 1728, and Girtanner, in 1803, gave it as the cause of chronic clap, and the latter claimed that in most every case, acute or chronic, it was more or less involved; and that from that time on it constantly increased in volume and hardness, until the opening from the bladder was finally obstructed.

These ideas were later reiterated from time to time by various writers, until more recent studies have proven that prostatitis does occur as a complication of both acute and chronic gonorrhœal inflammation of the urethra, the result of a direct extension of the infection from its posterior part.

Anatomical studies show that the mucous membrane of the posterior urethra is in close connection with the prostate, and that it is but a short distance by way of the ducts to the glandular structure itself. Gonorrhœal inflammation of the posterior urethra, on account of these anatomical relations, unfortunately does not remain superficial or stationary; but the gonococci, advancing, penetrate rapidly into the prostatic glands, and sometimes into the parenchyma, as shown by Bumm, von Crippa, Finger, and others, and as the last says: "Exactly as they invade the glands of Littré and the lacunæ of Morgagni during the first days of an anterior urethritis, so in the posterior urethra they extend in all cases to the orifices in the prostatic urethra," *i. e.* the ejaculatory ducts, the prostatic utricle, and the openings of the glands lining the mucous membrane; for although these latter are not as abundant in the posterior as in the anterior urethra, where they are invariably involved in chronic inflammations of that part, yet they are present nevertheless in large numbers, as shown by Albarran, who had demonstrated two principal groups: one at the vesical neck, partly in the urethra and partly on the vesical trigone bordering on the neck (see Fig. 1 in cut), these not being constant, and one at about the middle of the prostate, at the veramontanum, opening into the urethra, or into the cavity of the prostatic utricle; and it is this latter group which, becoming infected, form a focus for extension directly into the prostate. The former, when involved, would seem to be the cause, or partly the cause, of increased desire to micturate, and play a prominent part in the etiology of hypertrophy of the middle lobe.

How far infection can take place through the vessels and lymphatics is, as yet, undetermined, though we know that a prostatitis can occur from a general infection (as in variola, shown by Guion; parotiditis by Güterbock, and pneumonia by Beck), although rare; as also through the lymphatics (as in rectal and perirectal inflammations).

Statistics as regards the frequency of posterior urethritis vary according to different observers: from one-sixth of all the cases by Leprovost to 93 per cent. by Dind. Finger states that in his experience it occurred more frequently in dispensary patients (82 per cent.) than in private practice (63 per cent.), but still less when patients were obliged to remain quiet in bed. Frank found it in about 33 per cent., and among 191 cases, dispensary and private, which I have observed within the past twelve months, it was present in seventy-six, or 39.7 per cent. This variance, as Finger mentions, is probably due to the different methods used in examination. The test known as the "Thompson two-glass test," where the patient is allowed to empty his bladder into two successive glasses, and where not only the first, but the second should contain cloudy urine, if the posterior urethra be affected, is not, in a large number of cases, sufficient, as a small amount of secretion may remain in the posterior urethra, and, not being sufficient to flow backward into the bladder, does not contaminate the whole amount passed; but remaining, would be washed out with the first gush of urine, as well as that of the anterior urethra; and not only this, but the first urine passed is sometimes not sufficient completely to wash out the anterior urethra, and part of its secretion may still be found in the second glass.



Still I think that, in the majority of cases, if most of the urine be passed in the first glass, and but the last few drachms in the second, where the bladder is at least moderately full, and that if this last should contain filaments or be cloudy, it is sufficient proof of a posterior urethritis, and will answer all practical purposes. However, at times it may be thought necessary to resort to the "irrigation test," the washing out of the anterior urethra as thoroughly as possible, before micturition, when, if threads or cloudiness are still present, the strong probability is that they came from the posterior part; or, perhaps as advised by some, to use a colored solution for this anterior washing, and to consider those threads not colored, as coming from the posterior urethra.

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*Read before the New York State Medical Society, Albany, January 28, 1902.

The question as to how soon the infection reaches the posterior urethra is an important one, and to prevent, if possible, this extension backward is our first indication in the management of acute cases, by destruction of the gonococci at as early a date as possible, and there is reason, I think, to believe that this can be done in a number of cases.

The rapidity of extension would seem to depend upon, first, the virulence of a given infection, *i. e.* the strength and number of gonococci present; and, secondly, upon the quality of the urethral mucous membrane and tissues as a medium of culture. Usually it has been thought to occur not before the end of the second week or the beginning of the third. Finger, Ghon and Schlagenhaufer were unable to find it present before the sixteenth day in specially infected cases. Heisler, in 1891, claims that among fifty cases, *i. e.* of posterior urethritis, he found it present in:

20 per cent. during the first week after infection.
34 " " second " " "
14 " " third " " "
20 " " fourth " " "

Frank reports ninety-six out of 210 cases as early as the sixth day, and Bierhoff 21 per cent. within the first week, and 38 per cent. within the first two weeks, though the latter's figures include a large number of Frank's cases. Among my seventy-six cases, twenty occurred within the first week, *i. e.* 26 per cent., and of these, five were found on the fourth and one on the third day. The test accepted was cloudiness of the second urine, meaning the last few teaspoonfuls, sometimes accompanied by frequent micturition, but more often not (phosphates and urates being excluded). Statistics as regards the occurrence of a posterior urethritis are apt, I think, to be somewhat misleading, as a number of cases will not only be found to have had previous gonorrhœas, but a small percentage will give a history of previous posterior trouble, as shown by frequent micturition or epididymitis. Among my twenty cases occurring during the first week, nine had previously had one or more claps, and of these, one had had an epididymitis, and one a so-called "inflammation of the neck of the bladder," while several had had increased desire to urinate, the present attacks evidently being a re-infection or stirring up of the old seat of trouble.

The case which occurred on the third day, *i. e.* examined fifty-six hours after the first symptoms were noticed, was a first gonorrhœa with an incubation of two and one-half days, the patient being intelligent, and with no reason for disguising the facts. He at the same time had pain and a beginning adenitis in the groin, and gonococci were found in his prostatic secretion, a prostate evidently the seat of a previous simple glandular catarrh, as shown by rectal examination.

Granting, however, that posterior urethritis develops, or is present in at least one-third of all cases, how often may we expect prostatic infection to follow or to accompany it? Sigmund, in 1858, thought that every case of clap of several weeks' duration was accompanied by a swollen prostate. Montagnon, in 1885, and Erard, in 1886, gave 70 per cent. as the number involved, and for Finger every posterior urethritis without exception is accompanied by a prostatitis; while Frank's recent statistics go toward confirming this last opinion, where in 210 cases (of posterior urethritis) 100 per cent. of the prostates were diseased, though not all with gonorrhœa, gonococci being found 179 times, other bacteria twenty times, and aseptic secretion with leucocytes in the remainder. More recently Bierhoff again strengthens this idea in his 151 cases, in fifty-one of which it was a primary attack. As in a fair percentage of my cases intracellular gonococci were not found (though all had either extracellular diplococci or other bacteria), I am not as yet prepared to state that every case of gonorrhœal infection of the posterior urethra extends to the prostate.

Although without doubt the infection can, and does, reach the gland in fresh uncomplicated cases, without active cause other than the direct extension of the gonococci, yet we know that, given an acute anterior urethritis, inflammation of the posterior part of the canal, and hence prostatic infection, is aided by a variety of active agents (such as excesses in coitus and alcohol, repeated seminal emissions, the eating or drinking of irritants, excessive exercise, and bodily exertion, as bicycle and horseback riding, straining, jumping, etc.; local irritants, as the passage of a sound or catheter, or the too forcible injections of strong solutions). The class of cases, however, where no active cause can be assigned, but where the prostate in primary gonorrhœas becomes infected at an early date, is not a small one. Upon rectal examination, either one or several softened spots, or perhaps a general softening or doughy condition, will very probably be found, indicating a pre-existing state of simple glandular and follicular catarrh.

If these softened spots in a non-gonorrhœal case are massaged, the fluid expressed will be found to contain, besides the constituents of prostatic fluid, more or less epithelia and, as a rule, pus cells, demonstrating the presence of catarrhal foci. If there has been an inflamed or congested condition of the posterior part of the canal prior to infection, I think with Bierhoff that the gonorrhœal process is very apt to extend to this part, and thence to the prostate. Likewise in the prostate itself, as we may consider that a gonorrhœal prostatitis always succeeds to a posterior urethritis, though often in a mild form, a pre-existing congestion of that organ favors extension of the process, and much more so the presence of catarrhal inflammation, usually the result of excessive venery, masturbation, or withdrawal.

The Pathological Conditions, caused by gonorrhœal infection (best described by Ghon, Schlagenhaufer, Finger, Jadassohn, and Albarran), consist in, first, the glandular catarrhal; second, the follicular, a variety of the catarrhal; third, the parenchymatous, simple or developing into abscess; fourth, the periprostatic phlegmon, and fifth, chronic prostatitis.

The first three forms are more closely concerned in the limits of this paper. They are not, as a rule, sharply defined, the one from the other, but are more or less intimately associated, one following the other, as the parenchymatous from the follicular, and the latter a complication of the glandular. These follicles or "pseudo-abscesses" of Jadassohn are either a sequence of a simple catarrh, or an infection of a pre-existing folliculitis, a diverticulum, or gland mouth, having become obstructed with mucus, pus, and epithelium, stagnation takes place within the gland of secretion which contains gonococci, and which, increasing and being prevented from escaping, if left to itself without mechanical assistance, sometimes ruptures, either, according to Finger, through the natural opening, or near to it. This author reports a case of obliteration of the ejaculatory duct, caused by the cicatrix of one of these pseudo-abscesses. Sections made from the cadaver have shown gonococci, not only within the cavities, but also in the surrounding tissue, showing a beginning parenchymatous inflammation, though this latter, according to Albarran, may occur primarily. When present, the parenchyma becomes infiltrated with leucocytes (Finger), and per rectum the gland is felt much enlarged, and may be, as shown by Velpeau and Sallemand, riddled with the pseudo-abscesses, thirty having been counted in one case post mortem.

The swelling may rapidly subside at the end of a week or ten days, or go on to abscess formation, point and empty in almost any direction; and, as we know, that into the urethra being the most frequent.

In the 114 cases given by Segond, there was recovery in seventy, death in thirty-four, and urinary fistula in ten. "Some recoveries end apparently in complete resolution, others in an induration which gradually leads to prostatic hypertrophy." (Finger). Periprostatic phlegmon is in eight cases out of ten consecutive to a prostatic lesion (Campenon), and, as a rule, non-separable from true prostatic abscess. It so generally involves the cellular tissues in the posterior and lower aspect of the organ that the term ordinarily implies inflammation of that particular part. Rectal examination is not satisfactory, a general swelling masking the true character of the trouble, which Albarran compares with periurethral septic inflammations, and in which he has demonstrated—at least in one case—the presence of an anaerobic bacillus.

Symptoms.—Gonorrhœal infection of the prostate may, in some cases, develop gradually, or be present in spite of the absence of subjective symptoms, and in spite of the clearness of the second portion or urine (Frank).

In the greater majority of cases, however, the signs and symptoms of a posterior urethritis are more or less marked, though often but slightly so, or so gradual in their onset that they may at first escape observation, with but a slight turbidity of the second urine, and accentuated, though not pressing, desire for micturition.

When well marked, when the second urine is decidedly cloudy and thready, with the desire for micturition frequent and urgent, with more or less strangury, and possibly some blood with the last urine, symptoms referable to the prostate, a sensation of weight, pain, and tension in the perinæum, with sensitiveness and pain upon digital pressure per rectum, are also apt to be present, though the prostate may or may not be enlarged, depending upon the degree of previous trouble. Other cases of a more powerful infection may commence with a chill and fever, with perhaps mechanical obstruction; a small stream, twisted or in drops, or even, perhaps, complete retention. This is associated with intense pain in the deep perineal and anal regions, exaggerated by the slightest movement, or by defecation or micturition. Rectal examination, which is painful even without touching the gland, shows the prostate much increased in size, elastic and tender. The seminal vesicles are also usually involved, and may be likewise tender and swollen. This acute condition can last for a week or longer, depending much upon the treatment, and then resolve and form the initial stage of a chronic prostatitis, or go on to suppuration, prostatic or periprostatic.

Diagnosis.—The lighter catarrhal, as well as parenchymatous, forms may, as said, escape observation, especially in the sub-acute and chronic varieties; a good rule, therefore, in all cases where the disease has reached these stages, as also in every case of acute posterior urethritis, is, first, to make a rectal exploration, and, secondly, an examination of the massaged fluid, as only in this way can we discover by the finding of pus cells and gonococci the true condition. As a rule, the gland will be found more or less changed even in the lighter forms, as there are, I think, but few prostates which have not been the seat of a previous simple catarrh, and where areas of softening, or even a generally soft surface, will not be found. If parenchymatous, there is usually uniform enlargement, though sometimes only unilateral. Especial care is necessary in examining for gonococci, that we may be sure that those found in the massaged fluid at the meatus are really from the prostate and not from the urethra; hence, before the examination is made, a thorough washing and irrigation of the meatus, anterior and posterior urethra, and bladder should be done, immediately after which the examination is made. Wiping out the posterior urethra with sterile cotton through an endoscopic tube, and collecting the expressed fluid as it exudes from the prostatic ducts, is probably a more accurate method, but in many cases not feasible, and I think scarcely necessary if we are careful to wash thoroughly.

In acute cases the gonococci are not, as a rule, difficult to find; but in long-standing cases or chronic trouble they may be, and repeated search is sometimes necessary before we are successful, especially in finding them intracellular, which is necessary for a diagnosis, unless Gramm's decolorizing stain is used, and until we have, after repeated search, been unable to demonstrate their presence, we are not, I think, justified in concluding that this part of the genito-urinary tract can be eliminated.

The ordinary methylene blue will in most instances be sufficient, but a better method, and one quite as simple, is that of first "fixing" the slide for 10-15 seconds in methyl alcohol (to which has been added a few grains of alcoholic eosin, if a double stain is preferred), which fixes the preparation without shrinkage of the leucocytes, as is the case when we "fix" by heat over the spirit lamp; and then either the ordinary methylene blue or Goldhorn's polychrome methylene blue may be used. The body of the pus cell is thus stained a pinkish hue, while the pus nuclei and gonococci are stained blue or purplish. In doubtful cases it will be necessary to resort to Gram's method of decolorizing. That gonococci may remain dormant in the prostate for years is shown by Frank's case, where five years after marriage a wife, without previous trouble, became infected, and where no urethral discharge could be found in the husband; but where, after careful massage of the prostate, gonococci were found in the massaged fluid.

When preparing a slide or cover-glass for examination, it is important to remember not to express the fluid from the meatus or urethra, as by so doing gonococci, which may be contained in the urethral glands or lacunæ, might be dislodged. Sometimes, and not infrequently, the expressed fluid flows into the bladder instead of through the cut-off muscle; in this case, if the patient be allowed to pass the few drops of urine which have again collected, and this if necessary centrifuged, there will be no difficulty in securing sufficient for an examination.

After massage the irrigation should be repeated, to avoid possible further infection, or a re-infection of the urethra in chronic cases where there is no longer any urethral discharge. The presence of many leucocytes in the massaged fluid is evidence of a prostatitis and seminal vesiculitis, even where the bacteriological examination is negative (Frank); other bacteria which may be found, such as staphylococci or colon bacilli, are evidence of either a previous catarrhal trouble, or of a so-called "secondary infection" in a subacute or chronic case, which condition may persist for years, and may be the cause of sterility.

Treatment.—As all modern treatment of urethritis, acute or chronic, anterior or posterior, together with their complications, depends upon the presence or absence of gonococci, all our efforts, primarily at least, are directed toward the extermination of this germ; therefore, the constant and daily control by microscopical examination must be regarded as a *sine qua non*, if our cases are to be handled intelligently and successfully. I would apologize for an observation of this character were it not a fact that but too few are prone to bear it in mind, and that but too many are satisfied with a once-established diagnosis of an anterior inflammation alone; if even then there are not many who still deem it either unnecessary or avoid it, but, as has recently been remarked, "it would be equally as useless and futile to attempt to control the management and treatment of gonorrhœa without the microscope as it would be in a case of pulmonary tuberculosis."

A diagnosis once made, therefore, the quicker we can cure or heal an anterior inflammation, the less the chances are for infection of the posterior urethra and the prostate; and if the extension backward can be prevented only in a certain number of cases, we can thereby at least diminish the frequency of prostatitis. Those who still place their faith in the older methods of treatment, with internal medication by means of alkalies alone in the first stage, with or without hand injections of astringents, followed by the resins and hand injections in the later stages, are becoming fewer in number. Yet, on the other hand, it must be borne in mind that many of the so-called modern abortive methods of lavage have not, as a whole, resulted in the most brilliant successes, although they have certainly guided us in the right direction. Still, on account of non-success or failures, either from faulty technique, or from not seeing the patient sufficiently early, or from disagreeable experiences in the use of too strong solutions of the different remedies in vogue, or from complications overlooked which are impossible to cure without resorting to other measures, such as prostatic infection, from which, as a focus, from time to time, upon slight provocation, a fresh urethritis is set up; or, perhaps, because the older methods, being easier of application and less troublesome, many—we might say, conservative practitioners—have either abandoned or have been loath to employ the so-called radical methods. Still, my experience has led me to believe that, with the proper use of the modern gonococcidal remedies, we will be enabled to diminish the percentage of inflammations of the posterior urethra and prostate, and the unfortunate consequences which are so apt to follow. The list of drugs which have been used as injections is almost as long as the pharmacopœia itself (at first, vegetable substances, after which the metallic salts, the principal one of which, nitrate of silver, was used first in America by Johnston and Bartlett, and subsequently in Europe by Carmichael in 1818; and it was this drug which was first employed in an abortive sense, though in very strong solutions, however).

Bichloride of mercury, though in much prominence in recent years, was used as early as Hunter's time, in strengths of 1 to 1,600, but overlooked, and only again brought forward, since the discovery of the bacterial nature of the disease, by Cameron in 1884, Van der Poel in 1886, and Brewer in 1887, in weak solutions of 1 to 20,000 to 1 to 60,000, but used by the two last experimenters in large quantities as irrigations, though into the anterior urethra only, and as an "abortive" treatment.

More recently permanganate of potassium has become very prominent, used in the same manner, at first by Reverdin in 1892, and then more thoroughly worked out and exploited by Janet in strengths of from 1 to 400 to 1 to 4,000. Janet, however, who irrigates directly into the bladder, though not at the commencement of the disease, does not claim that the drug directly destroys the gonococci; but rather causes a serous infiltration of the mucous membrane, and in this manner acting unfavorably upon it as a culture medium, causes the gonococci to die off. Subsequently, the newer silver salts, as argentamin, argonin, largin, protargol, and albargin have come into use, and have had their trial, with varying success. The results which I have obtained have been with protargol, but recent experiments with albargin have also been encouraging, although not so much so as with the former, a silver protein, containing over 8 per cent. of silver. This is not, however, as stable a preparation as might be desired—at least that which has been put upon the market in this country; and it is, therefore, desirable that fresh solutions be frequently made, *i. e.* every forty-eight hours, a practical way being to make up a few ounces of a 10-per-cent. solution at a time, best dissolved in a small amount of glycerin, before the water is added.

Care and gentleness in treatment are at all times necessary and important, and traumatism from too forcible injections is especially to be avoided. It is quite unnecessary that the meatus be tinged with any blood after the treatment is finished. Instruments or catheters should never be introduced into the urethra as long as a purulent discharge is present. The procedure which I have found to give the best results is as follows:

After the patient has been allowed to void his urine, nature's method of irrigation, the meatus is cleaned with a ¼ to ½ solution of protargol, that being the strength used in the irrigations, and then, best in the horizontal position, the anterior urethra is filled with a ½ or ¾ per cent. solution of cocaine, usually ten to fifteen grams being sufficient, which is held from three to five minutes.

In sub-acute and chronic cases the cocaine will not always be found necessary, but in acute trouble it is important to anæsthetize the mucous membrane on the face of the cut-off muscle as much as possible, to diminish the spasm of this muscle (which occurs when foreign bodies are introduced into the urethra), and thus avoid over-distention and traumatism. The protargol is then injected directly into the bladder, best by means of the large sterilizable urethral syringes holding about 150 gms., to which soft-rubber or porcelain tips can be attached. This, I think, is preferable to the irrigating apparatus, as with it we can much better manage the force necessary, the amount of pressure being under direct control of the finger or thumb. The amount used varies, as sometimes patients will complain of a full bladder with 200 grams, which sign, however, is not a good one to be guided by, as this sensation may be absent until the bladder becomes over-distended; usually from 200 to 400 grams are employed when the patient is allowed to void it.

This procedure is repeated but once in twenty-four hours, with no intermediate hand injections, by the patient himself. Alkalies or salol are used internally when scalding is present, and the usual observations are made as regards rest, diet, and keeping the alimentary canal free, as a concentrated urine is irritating. If our efforts are to be successful in, so to speak, aborting the disease, upon the second day the discharge will not only be less in quantity, but the microscope will show fewer leucocytes and fewer gonococci; and upon the third day but few gonococci, sometimes none, and fewer leucocytes, with an increase in epithelia and mucus, in a discharge which is distinctly mucoid in character, and decidedly lessened in amount. Upon the fourth day (seventy-two hours after treatment has been commenced), no gonococci should be present, and but few leucocytes, sometimes with no apparent discharge at the meatus, when it is necessary to centrifuge the threads and flakes passed in the urine for examination.

Although the discharge may now have stopped, it is still desirable to continue the irrigations for several days longer, for although much less virulent, there is apt to be a recurrence. If this recurrence is of a true gonorrhœal nature, or if the discharge has still continued, our efforts have not been successful, though the same treatment is continued until we have the so-called "aseptic" stage, with no bacteria, or the stage of "secondary infection," with other cocci and extraneous bacilli. In case of secondary infection, the irrigations are changed to bichloride of mercury from 1 to 30,000 to 1 to 15,000, diminishing the strength as the discharge disappears, and this is to be remembered especially in the subacute and chronic types; but in these latter cases we will probably have to look deeper for the cause, namely, in the prostate; though in saying this I do not mean to exclude the soft infiltrations of the urethral mucous membrane, with involvement of the glands and lacunæ, where endoscopy and dilatation with the Kollmann dilator come into play, but where the same rules for irrigation apply. Should no bacteria be found, and the secretion be "aseptic," astringents are indicated, used in the same manner as nitrate of silver from 1 to 20,000 to 1 to 10,000, or the so-called "Ultzmann Solution" (one part each of carbolic acid, alum, and zinc sulphate to 1,000 parts of water).

In order that an abortive treatment be successful, certain conditions, however, are necessary: First, the disease must be limited to the anterior urethra, and, if possible, treatment should be instituted within the first twenty-four to forty-eight hours, as every hour after the onset lessens our chances of success. Second, there should be no infection of the paraurethral glands, as these cannot be reached by the solutions.

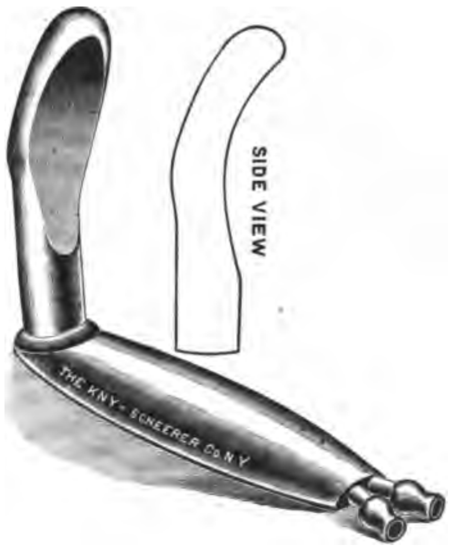
This—we might say—prophylaxis, as regards infection of the prostate, is not absolute, and does not always stop the progress of the disease sufficiently early to make the abortive principle a success, perhaps on account of too quick and deep an invasion of great virulence in non-resisting tissues; however, even though successful only in a certain number of cases, we are, I think, justified in making the attempt, and, not only this, but where the discharge has not been absolutely stopped within the time limit, the symptoms should run a much milder and shorter course, dryness not being infrequent within the first week; and when this happens, it is difficult to draw the line between such cases and those stopped at an earlier date, provided there is no posterior infection. Should the second portion of urine at any time become cloudy, should symptoms of prostatitis develop, or should this be present at the first examination, irrigations alone are not sufficient, as they do not reach the diseased gland, and other measures will be found necessary, *i. e.* massage of the prostate.

Instrumental massage is not to be recommended, as it is not only unnecessary, but dangerous, and the work can be much better and more intelligently accomplished with the finger. Gentleness should be remembered in all cases, the amount of pressure employed, varying; as a general rule, that in acute cases should always be lighter than when the trouble is chronic, and careless and unskilful work may quickly bring on other acute complications, such as epididymitis. Nevertheless, it should be complete, however gentle, until the affected part or parts have been emptied of their contents, following which the anterior, posterior urethra, and bladder are to be thoroughly irrigated with protargol, in the same manner as when treating the urethra alone.

Fever and tendency to pus formation are contraindications, and when present, all handling of the parts, excepting with the irrigations, should be avoided until either resolution has taken place, or the abscess has ruptured or been opened. In very acute cases, where the parts are hypersensitive, daily massage is inadvisable, every second or third day, according to the sensibility of the patient, being sufficient; and where we have a generally enlarged and painful prostate, indicating parenchymatous inflammation, with or without the small pseudo-abscesses, conservatism is the best policy.

As all parts of the prostate cannot be reached by the finger, especially in the anterior part and middle lobe, the use of the faradic current has been added and combined with the massage, by Hogge, Janet, Guiteras, Frank, and Freudenberg, that of Freudenberg being an arrangement by which the faradic current is passed through the finger of the operator as one pole, the hand at the same time being insulated. If the mouths of the glands and ducts have become plugged with inflammatory products and constricted by sursounding inflammation, the results of treatment will be less rapid. Rest, though always to be borne in mind as advisable, and in very acute cases as absolutely necessary, can be disregarded in the mild forms, excepting to guard against undue exertion or exercise. As to the application of heat or cold in acutely inflammatory conditions, I prefer the latter either by rectal douche, or better by the rectal cooler or psychrophore, once or twice in twenty-four hours, from ten to twenty minutes at a time.

Later, heat apparently acts better than cold, and in chronic cases, catarrhal or parenchymatous, especially those of a neurasthenic type, alternating heat and cold at the same sitting seem to act as the best stimuli to the circulation, combined with judicious massage. The instrument which I have recently employed for this purpose is a modification of that of Lewin of Berlin (shown at the last Naturforscher Versammlung in Hamburg). It can be used with the patient in a sitting posture, and can be controlled by him, the entrance and exit of the water when *in situ*, being in front of the perinæum and within easy reach.



ONE-HALF ACTUAL SIZE.

As regards the chance of epididymitis arising, either in connection with the irrigations or with the massage, one certainly gains the impression that it is of much less frequent occurrence than formerly, and even when it does occur during a course of treatment, it cannot, with any certainty or justice, be laid at the feet of the treatment itself. The frequency with which it occurs when no special method is mentioned varies from 7 per cent. (Gebert, 1893) to 29.9 per cent. (Finger), though Finger's later statistics give 12.5 per cent. In 576 cases given by Le Fort, 264, or nearly one-half, had had no treatment whatever; and of the rest, seventy-three had only had balsams and no injections.

Among Frank's 651 cases of gonorrhœa treated with protargol irrigations plus massage, where prostatitis existed, but 2.5 per cent. were affected. Among the 185 cases which I have treated with protargol irrigations into the bladder, including those where massage was likewise used when necessary, it occurred in but four after treatment was begun (*i. e.* 2.16 per cent.); but in twenty-three out of twenty-seven cases, irrespective of any form of treatment, it was present before the cases were seen. One cannot say that irrigations roughly given, or that massage roughly performed, will not lead to trouble; but when carefully and intelligently carried out, I am strongly of the opinion that epididymitis will be of much less frequent occurrence than when no local treatment whatever is employed.

The Prognosis of the lighter forms of gonorrhœal prostatitis is, as a rule, good; severe parenchymatous inflammation, however, may lead to such severe consequences that a guarded outlook is necessary.

The earlier a case is seen and treated, the less chance for extension and for involvement of the parenchyma, and the less the chance for extension to the epididymis. True parenchymatous prostatitis is apt to be of long duration, and when there is abscess formation, as is well known, the point of rupture and involvement of neighboring tissues determine the danger of the case.

AN EIGHT-YEARS' EXPERIENCE IN THE RADICAL CURE OF MOVABLE RETROVERSIONS OF THE UTERUS BY ALEXANDER'S OPERATION.*

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To bring before you such a trite subject should almost call for an apology. We are, however, all interested in this or any other method by which patients complaining of a certain common class of troubles can be relieved, and it is in this spirit that I bring this subject before you to-night.

It is a common experience to meet with patients, both single and married, who seek our assistance for relief from an almost constant backache, often associated with pain over one or both sides, and attended by some derangement of the menstrual function. A local examination frequently reveals a retroverted, heavy uterus, with no disease of the appendages. A further investigation may show that the uterus is not adherent, but can be replaced. When it is kept in position, the symptoms are relieved within a short time. If the patient is single, and the uterus refuses to remain in position, she shrinks from wearing a pessary, and from the manipulation necessary for its after-care. If she is married and has borne children, there is frequently found a relaxed condition of the vulval orifice, preventing a proper fitting and keeping in place of the instrument. These two classes of patients are those of whom I wish especially to speak in this paper.

Local treatment alone gives only temporary relief. A well-fitting pessary, if desired by the patient, does relieve. These instruments however, require a long practice, attended by patience on the part of the physician and the woman, to enable one to adjust them properly so as to give the relief sought. When the pessary is not desired, or is inapplicable, an operation of some character is to be chosen.

In my opinion, the withdrawal of a portion of the round ligament of the uterus through the external abdominal ring (what is known as Alexander's operation) is preëminently the safest and best method to restore and retain an uncomplicated retrodisplaced uterus in its forward position.

Dr. Mathews of the Pathological Laboratory of the College of Physicians and Surgeons kindly made for me a microscopic section of the ligament, proving that it is made up of muscle bundles, and is preëminently fitted to retain the uterus in the position desired.

During the eight years ending January, 1900, there have been done on the service of Dr. Cleveland at the Woman's Hospital 230 of these operations. Of this number Dr. Cleveland has performed 109; the writer, 108, and the rest has been done by various house surgeons. Of this number there have been two deaths. In one there was a retroversion, with adhesions. The abdomen was opened, adhesions severed, and Alexander's operation done. The patient died of septic peritonitis, which in no way could be charged to the character of the operation done, except in so far as opening the abdomen would render such an occurrence possible. In the other, the operation was Alexander's, accompanied by some plastic work on the vagina. The cause of death was tetanus, after a duration of a few days. It occurred in January, 1895, at the time when there were three other cases of tetanus in the hospital, and of which we lost two.

In this particular instance the death was sudden and unexpected, I having seen the patient a half-hour before and found her pulse and temperature excellent. The supposed direct cause was an embolism. The condition of the wounds was excellent.

Neither of these deaths can be attributed to Alexander's operation, hence it can be fairly said that the death rate from this operation is nothing. In the words of Alexander himself, "I would as soon expect a death from an amputation of the finger."

When properly done, the union is invariably primary, and the anatomical and clinical result in my hands is all that the most sanguine operator could wish for.

It is sometimes a surprise to me to hear the varying opinions expressed concerning Alexander's operation, even at this late date; many have as their basis a lack of familiarity with the subject, and the class of cases for which it should be done; other adverse opinions are well grounded, yet in the light of my own experience I cannot but think they arise from contact with operations poorly done, and in many instances on improperly selected patients.

The chief field of this operation is for the correction of backward displacements of the uterus, associated with or without a coincident displacement of the adnexa. It is a prerequisite that the uterus shall be free of adhesions; can be easily replaced in its normal position, the bladder having previously been emptied; and that it shows no tendency to return to the malposition so long as the patient remains quiet upon her side on the examining table. If the adnexa of the uterus should have adhesions about them, and this condition be attended by a retroverted uterus, the patient will not be benefited by Alexander's operation unless these adhesions have been previously divided.

In this class of cases there will be found almost invariably adhesions existing between the uterus and the adjacent structures.

To one trained in pelvic examinations it is, however, in most instances an easy matter to determine the mobility or fixation of a backwardly displaced uterus, and to detect any abnormal condition of the appendages. If there is any doubt existing, especially in cases of fleshy women, recourse can be had to an examination under an anæsthetic, by which all doubtful points can be settled.

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*Read before the West End Medical Society of New York City.

Such is the method of determining in each case whether Alexander's operation will be of benefit.

During the last eight years, having followed, as closely as it is possible to do, the after-results of this operation in all patients from our service at the Woman's Hospital, and being thoroughly conversant with the after-results of those in my private practice, I am convinced that in my hands no other operation for a like condition will yield the same constant anatomical result and the satisfactory clinical relief.

A backward malposition of the uterus is usually associated in multiparous women with a laceration of the cervix, and a tear in the floor of the vagina. There is also, as a result of the deranged circulation, an endometritis. A repair of the torn cervix and vaginal wall, together with the curettage, is done at the same time that the Alexander operation is performed, the order being curettage, repair of cervix, Alexander's operation, and repair of vaginal floor.

Technique of Operation.—After using various methods of doing this operation, each differing from one another in minute detail, the following course, as devised by myself in 1896, has been adhered to since this date, and has given a uniform anatomical result.

By this method the operation is changed from one of difficulty and uncertainty to one of perfect ease, and an absolute assurance of obtaining a large healthy ligament amply able to perform the function desired.

In my entire personal experience I have never found the ligament absent, nor have I found it emerging elsewhere than through the external abdominal ring.

The method is as follows: In the ordinary way, an incision of one inch to an inch and a half is made parallel to Poupart's ligament. The lower angle of the incision extends a fraction of an inch below the pubic spine and the greater length above.

This incision is continued rapidly through the skin and superficial layer of fat, no attention being given at the time to the capillary bleeding, which occasionally is quite free. If this does not stop within a few seconds under pressure, torsion is applied to the small vessels persisting in oozing.

The wound being dry, a portion of the tissue near the bottom is caught up with a pair of hemostatic forceps. A similar portion is picked up by another pair opposite to the one in place. By drawing on these very lightly, the intervening tissue is put on sufficient tension to divide it rapidly and easily with a sharp knife. The forceps in place act as light retractors, and while being thus used the tissue at the bottom of the now deeper wound is again caught up by a similar set placed opposite each other. The first pair applied are now removed, and the tissue between the second pair is divided as before.

Continuing in this way, each time applying the forceps deeper down, the tissues are rapidly divided throughout the length of the wound down to the aponeurosis of the external oblique. This is readily recognized by its glistening, large white fibers. During this dissection any persistent bleeding should be checked by torsion, since the surrounding tissues will become stained and prevent a ready recognition of the aponeurosis, the desire being not to injure this in any way.

In the process of dissection I desire to call attention to the superficial fascia. This varies considerably in density, and is found midway between the aponeurosis of the external oblique and the skin. It is separated from the aponeurosis by a layer of fat of varying thickness. This fascia is the point of stumbling of most operators not thoroughly familiar with the operation. If the underlying fat is not abundant, the external ring can be easily felt through the thin layer. The operator cuts down on what he believes to be the fascia lying between the pillars of the ring. He is rewarded with the protrusion of the knuckle of fat so often spoken of. As he has been directed, he seizes this with his forceps, expecting to withdraw with it the ligament. He fails, and continues to search without success. He either gives it up or finds, after much search, his error.

This mistake may arise also from this overlying fascia being unusually dense, and resembling to a degree the aponeurosis. Especially is this possible when there has been free and obstinate oozing, coloring the surrounding tissue and preventing an accurate recognition of the layers.

The possibility of this error being borne in mind and avoided, the aponeurosis of the external oblique is exposed throughout the length of the wound. The side walls of the incision being lightly retracted, it is usual readily to recognize the external ring by its white pillars, the intervening space being filled in by a membrane (intercolumnar fascia) of a more delicate structure and hence darker shade. At times the pillars of the ring are so little separated, or the intercolumnar fascia is of such density, that to the eye there is no apparent ring. Here the sense of touch will often assist the operator.

First locating the spine of the pubis, or where it should be, with the finger, gentle pressure just above and beyond this locality will, in almost every instance, give at this point a slight feeling of weakness in the fascia. If this difference in resistance is not perceptible to the touch, a knowledge of the anatomical position of the ring above and obliquely to the other side of the spine is all that is necessary for an easy finding of the ligament. In this instance the small incision through the fascia should be made just beyond the spine, the cut being directed parallel to Poupart's ligament. The intercolumnar fascia, or the space between what should be the pillars of the ring, is cleanly cut through. The underlying structures are grasped with smooth-jawed forceps and drawn upward. While held in this position, the parts between the jaws of the forceps are separated from the adjacent parts by tearing aside the connective tissue.

At this stage there is almost always found, to the outer side of the tissue elevated by the forceps, the genital branch of the genito-crural nerve. If not here, it is within the tissue grasped by the forceps. Near this is the accompanying small vein. Care is taken not to injure this nerve, or to include it in the sutures to be afterwards placed. To accomplish this, it is isolated and temporarily held apart by the loop of a ligature.

The tissue between the jaws of the forceps, consisting of the round ligament and some fat, is grasped by the fingers, or a pair of smooth-jawed forceps, as the operator may fancy, and firm traction exerted. A few fibers of fascia become prominent by their thread-like tension. These are severed. In most cases the ligament is then readily withdrawn to the point of the cuff of the peritoneum, reflected over on it. This is stripped back until the ligament ceases to be withdrawn any further.

In cases where the ligament is not withdrawn with ease from the canal, the cause is due to some muscular fasciculi between the ligament and canal. By a continued steadily applied force to the end of the ligament these are broken up, and the desired length of about four inches obtained.

The pubic attachment of the ligament being now severed, two fine black silk sutures are passed, each through one pillar of the ring, the ligament, over the separated nerve, and through the corresponding pillar of the other side. Before passing these sutures through the ligament, it is allowed to drop slightly back, the desire being to relieve the tension, and also to allow the peritoneal cuff that has been stripped back to retract into the general peritoneal cavity.

The ligament thus being under moderate tension, the suture nearest the internal ring is first gently tied. The ligament is then dropped and the remaining suture secured. The end of the ligament now projects through an opening in the external fascia, snugly surrounding but not constricting it.

This is dropped back in the wound, the floor of which is the external oblique aponeurosis. Before doing this, however, its distal end is surrounded and tied with a fine strand of gut to prevent an oozing, which would color the surrounding tissues for some time unless prevented.

If the intervening fat between the aponeurosis and skin is of some depth, it is my custom to coapt the sides with a running suture of fine catgut, in order to obliterate dead spaces. This precaution is not, however, necessary in the majority of cases.

The skin is coapted by three or four fine black silk sutures.

A spica is snugly applied and not disturbed for forty-eight hours. The wounds are then dressed daily with sterile gauze. On the fifth or sixth day the skin sutures are removed.

The patient remains in bed for three weeks.

Anatomical Result.—The chief agents maintaining the uterus in its natural forward position are the utero-sacral ligaments and intra-abdominal pressure.

The utero-sacral ligaments, by their attachment, draw the lower segment of the uterus in a backward direction toward the sacrum. Thus it is that in vaginal examinations the finger comes first in contact with the anterior lip of the cervix. The body of the uterus, on account of the backward position of the cervix, now assumes a forward direction.

In this position intra-abdominal pressure (resulting from the erect position, breathing, etc.) is directed against the posterior wall of the uterus, pushing this organ still more forward, and with the utero-sacral ligaments maintaining it in this position. The broad ligaments and the included round ligaments act more as guys to the fundus of the uterus, preventing too great a motion backward. Especially is this true of the round ligament, which is made up largely of muscular tissue.

It is then reasonable to shorten these ligaments (take up the slack, so to speak), when it is desired to restore to an anterior position a uterus that has become displaced backward.

When the uterus is thus restored to a forward position, the intra-abdominal pressure and the utero-sacral ligaments are given an opportunity to exert their restraining influence, the former at once and the latter as soon as these ligaments have regained their tone. The broad ligaments also regain a tone that had been lost by the malposition of the uterus.

The object, then, of replacing and retaining a uterus in an anterior position by shortening the round ligaments is that, while thus placed, the anatomical structures, naturally holding this organ forward, are given an opportunity to regain their normal tone, after which they will exercise their natural functions. A striking example of this has recently come under my notice. It is as follows:

In February, 1898, a Mrs. H. came under my care for a retroverted, adherent uterus. The abdomen was opened, the adhesions were divided, and a diseased right tube and ovary were removed. The round ligaments were then shortened through the external abdominal ring.

The patient consulted me last month, two years after the first operation, complaining of pain over the remaining ovary and tube. Upon examination a small ovarian cyst was found; the uterus was in excellent position. I removed this cyst two weeks ago. It was of much interest to note the condition of the round ligaments within the abdomen after this lapse of two years. They were under no tension. The uterus could be even pushed backward without causing much tension on these ligaments. When released the fundus would resume its anterior position. The uterus was plainly being held in its normal position by the utero-sacral ligaments that had regained their tone, and by the guying influence of the round and broad ligaments.

I shall have occasion to refer to this most instructive case later, in connection with the appearance of the tissues around the internal ring, immediately after the shortening of the ligaments at the first operation and their appearance two years after.

When the uterus is held forward by shortening the round ligaments, the correction of the malposition is thoroughly satisfactory. The uterus is brought to a forward position, not antiflexed, yet resting in a natural position, which, when the patient is standing, is made still more forward by the intra-abdominal pressure.

It is my custom after the ligaments are withdrawn for the usual length of four inches, to assure myself of the correct position of the uterus before proceeding with the operation. This is done by an assistant, catching the uterus between two fingers in the vagina and the other hand on the abdomen.

Preference is given to this method over that of the sound, since one can intelligently push back the intestines, which not infrequently obstruct the upward and forward motion of the fundus of the uterus by their presence above and in front of it.

Surgical Result.—As I have stated, the invariable result is now a primary union. The line scar of only an inch to an inch and a half is soon covered by the growth of hair natural to this locality, and within a few months can only be found under the closest inspection.

Suppuration, so often spoken of as a result of this operation, is a condition now rarely ever encountered. During the first three years of the time included in this paper suppuration did occur at times. Its occurrence is now directly traceable to the method of operating at that time, necessitating not infrequently a search for the ligament of considerable duration, and a laceration of the surrounding tissues in the process of locating and isolating it. I cannot urge too great a care in avoiding laceration of tissue in this operation.

The withdrawal of the ligament through a clean-cut incision will never be followed by suppuration, unless through septic ligatures.

Permanence of Result.—I have, wherever possible followed with care all of the 230 cases operated on at the Woman's Hospital, up to January, 1900, as also those done in my private practice.

I am aware of only one in which the uterus has resumed its backward position. In this instance the ligaments were anchored with chromicized catgut. A subsequent operation was done on this patient for appendicitis. The uterus was found to be free and the appendages healthy.

From this experience, and on account of the uncertain time that chromicized gut will remain intact, I have never used it in this operation since the above occurrence.

Sutures.—The suture preferred to fix the ligaments to the pillars of the ring, is fine black silk of the size ordinarily used for intestinal work. This should be freshly boiled, and allowed to remain covered by its boiled water until used.

Clinical Result.—The relief from symptoms following this operation is, in the large majority of cases most gratifying to the patient as well as the operator. The distressing bearing-down pain in the back ceases almost at once. The pain over the scars, so often complained of as following this operation, does not occur when the nerve emerging from the ring with the ligaments is carefully isolated and not included within the anchoring sutures. This has been done for the last five years.

Previous to this my custom was the same as that of other operators, to sever this nerve, since it interfered with the easy withdrawal of the ligament from the canal. I have only seen trouble arise from it in three instances, all of which were in thin women when the suprapubic fat was poorly developed. In each case its color rendered its removal very easy. I formerly used chromicized catgut. It was abandoned on account of the uncertainty of the length of time it would last. At present we are using kangaroo tendon through the ligament in place of the silk; the knots are, however, so large that I personally prefer the silk.

Separation and Preservation of the Nerve.—I regard this as a most important part of the operation.

Up to five years previous, my custom was to sever this nerve whenever it presented itself, the object being to permit the ligament to be easily drawn out. This was the accepted technique. We had, as others, not infrequently to face a more or less annoying pain over the cicatrix complained of by the patients. This pain was frequently obstinate. I became convinced that the pain was due to the severed nerve being caught in the cicatrix. Since adopting the method of separating it and placing it beneath the suture, the annoying neuralgia complained of has ceased to be noticeable.

Relation to Child-Bearing.—There is an enormous amount of statistics on this subject, and in no instance has there been reported any complication in pregnancy or delivery as the result of shortening of the round ligaments. As the uterus through the months of pregnancy enlarges in size, and the fundus ascends towards the diaphragm, the round ligaments keep pace and become larger, longer, and more vascular.

Being made up of the same involuntary character of muscular fibers as the uterus, it retracts with the uterus at the time of labor, and subsequently undergoes involution in connection with the uterus.

When pregnancy follows this operation, the same increase in size and length occurs, and the same subsequent retraction. The non-interference of this operation with the progress of pregnancy is beautifully illustrated in a unique case done by myself some time since.

In July, 1898, a Mrs. P. was brought to me by a member of this society. I was aware of her local condition, hence did not examine her as I should have done. The object of her visit was to arrange with me a day on which the Alexander operation could be done. When under ether and ready for the operation, it was seen that the patient was about two months pregnant, the uterus being retroverted in the hollow of the sacrum. Neither the patient, nor her physician, nor myself had suspected this condition.

After consultation, it was decided to shorten the round ligaments and omit the operation on the cervix and perineum for a later date. Two very vascular, thick ligaments were withdrawn with ease. They were almost a half of an inch in diameter, twice the size of a normal ligament, and abundantly supplied with blood vessels.

The pregnancy was uninterrupted and the confinement was normal. The uterus is now in excellent position. I will have occasion to refer again to this patient under a different head.

Hernia Following.—It is recognized that inguinal hernia does at times occur after this operation under certain conditions.

Among the first few operations, as done at the Woman's Hospital, I am aware of two such cases occurring. Since then, though having made every effort to keep in touch with all of the Alexander operations, there has come under my observation only one instance of this kind following work done by Dr. Cleveland or myself. The causes of hernia following this operation are twofold:

1. At the internal abdominal ring.
2. Some fault of operation at the external ring.

I regard that both of these causes, predisposing to hernia, can be controlled by the operator.

1. At the internal abdominal ring the round ligament passes into the inguinal canal. If the abdomen has been opened for any purpose, and at the same time the round ligaments shortened, the operator can note the following conditions about the peritoneal aspect of the internal ring. As this ligament is withdrawn from the canal, it will be observed that the peritoneum, transversalis fascia, and interposed layer of fat. form a series of small ridges (puckerings), arranged somewhat in a concentric manner closely around the internal round ligament as a center.

If this ring is of the ordinary natural size, these puckerings will encroach upon this opening, and really present a barrier to the formation of a hernia.

If, on the contrary, the ring is unusually large, these folds spoken of will, when the ligament is withdrawn to its fullest extent, be partly drawn into the gaping opening, causing a depression at this point of a slightly conic shape.

If now the peritoneal cuff along the ligament is stripped back as far as can be through the external ring, and the ligament afterward allowed to recede about a half of an inch within the canal, relieving thereby the tension, the depression spoken of as occurring over the internal ring will be obliterated, and in its place will occur the folds of fat and fascia mentioned above.

It will be readily seen from the above that the possibility of hernia, as far as the internal ring is concerned, is in proportion to the extra size of this opening. It is also seen that, to avoid the possibility of this condition, the ligament, after the peritoneal cuff is stripped back to the fullest extent, should be allowed to recede a short distance to obliterate this cup-shaped depression, and incidentally to relieve the tension on the fibers of the ligament. When thus allowed to recede, the large internal ring is reenforced by the puckerings of tissue round about it, and the tendency to hernia would be even less than existed before the operation.

2. *Faulty Operation at the External Ring.*—If the ligament is withdrawn from this opening through a clean-cut incision, and without injuring the aponeurosis of the external oblique, this opening is strengthened rather than weakened.

This is evident when we remember that the ligament in the canal forms adhesions with the surrounding walls, and at the external ring fills up the space between the pillars, becoming closely attached to these and the muscular floor.

On the contrary, if the operator is forced to continue a long search for the ligament, and in doing so, not only slits up the ring, but lacerates the underlying muscle, it is but reasonable to expect a hernia on account of the weakened walls and floor of the canal. Under such conditions the strength of the canal can only be restored by accurately bringing together in a separate manner the various layers.

If, during the isolation of the ligament, the pubic attachment of the ligament is unfortunately destroyed, or if the ligament is broken off in the canal when only partly withdrawn, either of which accidents rarely happens to me now, my custom is first to attempt to pick up the end from the canal. If this cannot be done without mutilating the surrounding tissues, I deem it better surgery to continue the incision beyond the internal ring and do a Bassini operation.

Size of the Ligament.—When the former method of operating by touch was in vogue, the ligament separated was occasionally so small as to be worthless for the purpose intended. Since the method devised by me in 1896 has been in use, and the ligament has been isolated under the eye, the size has been constantly about one-quarter of an inch in diameter; occasionally they are much larger.

The occasional worthlessly small ligaments of former years were only a portion, the other part being left in the canal.

Two months before preparing this paper for your society, I completed the operation on the patient mentioned before, on whom Alexander's operation was done while two months pregnant, the operation on the pelvic floor and cervix being left for this later date.

The local condition after this two-years' lapse of time was most instructive. The uterus was receiving no support from the vaginal column, since the pelvic floor had been badly torn in previous labors.

The position of the uterus was forward, but had fallen to a lower plane in the pelvis than that normally occupied. The round ligaments had retained the uterus in an anterior position unassisted throughout the involution following the confinement, and only through the lack of support from below had it sunk to a lower plane in the pelvis.

INTERMITTENT CLAUDICATION (INTERMITTENT LIMPING), DUE TO OBLITERATING ARTERITIS.

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Mrs. L., widow; aged seventy-eight years, was a patient of Dr. F. A. Burrall, and seen by me in consultation with him. Family history, negative. Father a very healthy, long-lived man; lived to be eighty-six years old. Previous history presents nothing of importance. She has been a healthy, active woman all her life up to within recent years. There is some tendency to gout in her family history and her personal history, but it is slight. She has one or two Heberden nodules on her fingers. Six years ago she had a slight attack of right hemiplegia. There was no shock or cerebral disturbance at the time, and she seemed to have recovered completely after a few months. Since then she has been reasonably well until her present illness came on.

One month before she was seen by me she had rather suddenly, during the daytime, a sensation of coldness in her left foot; this was combined with some objective coldness, and with some pain, stiffness, and weakness in that extremity. She went to bed, and was under the care of her physician, Dr. Burrall. During the succeeding weeks she complained of a good deal of pain and disagreeable sensory disturbances in the foot, especially along the back of the foot and up the anterior surface of the leg. The leg also was slightly swollen and weak, and she was able to walk a little, but was kept in bed. There was no other special disturbance, and the right leg was not at all involved. At the end of a month the pain and a good deal of the coldness and swelling had gone; she was feeling nearly well, though the leg was still weak, when she noticed suddenly, during the day, a sensation of pricking and numbness of the left arm and hand. This also felt a little weaker and she had a slight pain in it.

She was seen by me on the following day in consultation with Dr. Burrall. I found her lying in bed, and complaining of some pain and coldness in the left leg, and some numbness and weakness in the left arm. She was an active, well-nourished looking woman, well preserved for her age.

There was no sign of any paralysis of the face, nor was there any deviation of the tongue or any disturbance of the eyes or pupils. There was a slight trace of defective innervation of the right side of the face, a relic of her old hemiplegia. The fingers of her left hand felt cold and moist, but she did not feel any sensation of coldness herself. There was a very slight œdema of the arm. The grip of the left hand was forty and that of the right was fifty, showing some appreciable weakness. There was no disturbance of sensation objectively in the hand and no tenderness. The pulse in the left arm could not be felt either at the wrist, in the axilla, or at the elbow; the pulse in the right arm was easily distinguishable, rather full and rapid, being 90° F.

The left leg looked normal and was not swollen, though it had been. The power of the left leg was slightly diminished. There was no anæsthesia and no tenderness, nor did it look particularly different in color from the right leg. The knee-jerks on the right side were exaggerated, the plantar reflex of the right side was exaggerated and of the flexor type. The knee-jerk on the left leg was diminished and the plantar reflex absent. It was impossible to feel the pulse in the foot or the popliteal space on the left side, though the pulse was distinctly present in the right leg. There was no blueness or discoloration of any kind upon either extremity

The heart was beating rapidly and without intermissions; there was a decided systolic bruit at the base. Carotid pulsations were distinctly felt on each side of the neck. There was already some improvement in the condition of the left arm over the previous twenty-four hours. The patient had no trouble with the rectum, bladder, or digestion. Urine was normal; low specific gravity, but no albumin or sugar.

The patient's general picture was that of a slight left hemiplegia with paresthesia of the arm and leg, and pallor and coldness and slight œdema of the part.

The diagnosis was a stoppage of the large arteries of the extremities, either by thrombosis or by spasm or both. The case appeared to me to belong among those described by Charcot, Erb, and other writers, as intermittent claudication.

The patient remained, as I am informed by Dr. Burrall, about the same for several days. She then suffered from nausea, became more depressed, and finally died in her sleep.

"Intermittent claudication," or limping, is a term first used by Charcot in 1854,[1] to describe a condition characterized by sudden pain, stiffness, and weakness in one leg, brought on by walking, and disappearing after a few minutes' rest to return when walking is resumed. His first patient was a man, fifty-four years old, who subsequently died, and was found to have an aneurysm of the iliac artery, which partly cut off the blood supply to the leg. He referred to the condition as a "paralysie douloureuse," and called attention to similar phenomena observed by veterinarians in horses (Bouley, Rademacher, Böther, and others), and dependent on an obliteration of the aorta or of the iliac or femoral. In 1886[2] he reported two other cases. In one of these the patient had for three months attacks of intermittent limping, followed ultimately by gangrene of the leg. In 1887[3] he reported another case in a man suffering from diabetes. In one of his cases post mortem showed an obliterating arteritis. Finally, in 1891,[4] he reported another case in a syphilitic. Further contributions were made by Sabourin in 1873, "Thèse de Paris;" by Delaunay in 1890, "Thèse de Paris;" by Magrez in 1892, "Thèse de Paris;" by Levet in 1894, "Thèse de Paris. The literature to date of other cases was given by Bourgeois in 1897, "Thèse de Paris." This included the description of a case involving the arm, reported by Nothnagel (*Berliner klinische Wochenschrift*, 1867, No. 51, p. 536).

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*Read at meeting of Practioners' Society, January 3, 1902.

In Germany, Goldflam first studied the subject exhaustively in an article entitled "Ueber Intermittent Hinken (Claudication intermittente Charcot's) in Arteritis der Beine." *Deutsche medizinische Wochenschrift* (Intermittent limping), 1895, No. 36.

The whole subject was again reviewed by Erb in an article entitled "Ueber das intermittente Hinken und andere Störungen in Folge von Gefässkrankheiten," *Deutsche Zeitschrift für Nervenheilkunde*, XII, 1898, p. 1; and Goldflam supplemented his first article with new cases and deductions in the *Neurologisches Centralblatt*, March 1, 1901, p. 197.*

There is a general agreement as to the characteristics of typical cases. The patient while walking is suddenly taken with pain, stiffness, weakness, and paresthesias of the leg. He is obliged to rest, and in fifteen or twenty minutes is able to walk again, but with a return of the symptoms. There are also vasomotor disturbances, associated with the condition, and the arteries of the foot, and often of the popliteal space, cannot be felt to pulsate. This latter is considered the diagnostic point. Erb examined the foot arteries (dorsalis pedis and posterior tibial) and found that pulsation could be felt in 99 per cent. of 700 patients, and Goldflam examined 200 with about the same result. There are variants from the ordinary type, in which the symptoms are not intermittent, and in which there it no paralysis, only paresthesias and vasomotor disturbances. The absence of the foot-pulse here determines the diagnosis.

While Charcot attributed the trouble more to disease of the large arterial trunks, Erb takes the view that it is usually an obliterative arteritis of the end arteries, and that vasomotor spasm is an element in causing the attacks. The trouble usually occurs in the later periods of life, and has been associated with exposure, diabetes, alcoholism, excessive use of tobacco (Erb), and syphilis. Goldflam, however, says that in his cases tobacco, syphilis, and alcoholism played little part, and that the malady occurs oftenest in neurotic persons. The symptoms may improve or cease to progress, but they are sometimes the forerunner of gangrene of the extremities. They may end in a condition resembling Raymond's disease, persistent acroparesthesias, or erythromelalgia.

I have examined over fifty hospital patients with a view to determine the frequency of the presence of this foot pulse. I could always find the posterior tibial, but the dorsalis pedis was sometimes absent, or, at least, beyond my power of detection. This is about the experience of Goldflam. Very little has been written about this subject by American physicians, and hence it seemed worth while to report my case, which is not of the classical type, but which certainly belongs, pathologically, in the group of motor and sensory troubles of the extremities due to obliterating arteritis and vasomotor spasm. In my case, I could exclude embolism, but I cannot say that there was not thrombosis. This, however, is in accord with other reported cases.

Summary.—There is a group of symptoms characterized by intermittent or temporary attacks of paralysis, usually of one leg, accompanied with pain, paresthesia, stiffness, and vasomotor disturbances, and absence of pulsation of one or both foot arteries.

It is chronic in course and may lead to gangrene, or symptoms resembling erythromelalgia or Raymond's disease. It affects oftenest one leg, but may attack both, and may affect the arm. It occurs in middle-aged people of neurotic temperament, is due to, or associated with, exposure, alcoholism, gout, diabetes, excessive use of tobacco, and syphilis.

It is due to arterial sclerosis, causing obliteration of the smaller arteries, also to disease such as aneurysm of the large trunks.

The trouble has been called painful paralysis, intermittent claudication, intermittent limping, and, perhaps most appropriately, intermittent muscular paralysis, due to arterial sclerosis. The diagnostic points are the absence of the foot pulse, together with the symptoms above enumerated.

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1. Sur la claudication intermittente observée dans un cas d'oblitération complète de l'une des artères chaques primatives. Compte-rendus Société de Biologie, 1858. 2 Series, tome XII, p. 225; and *Gazette Médicale de Paris*, 1859, No. 19, p. 282.
2. *Progrès Médical*, 1887, No. 32-33.
3. "Leçons du Mardi." Vol I, p. 44, 1892.
4. *Bulletin Médical*, December, 1891.

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*A few other cases have been reported in the last three years, notably one by Grassmann (*Deutsches Arch. f. klin. Med.*, Vol. LXVI, 1899, p. 500), who proposes to call the affection "Intermittent muscular paralysis, due to arterial sclerosis."

UNILATERAL RIGHT-SIDED VENOUS THROMBOSIS, ASSOCIATED WITH CARDIAC DISEASE; AUTOPSY.*

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The case is that of a woman, forty years of age, admitted to Bellevue Hospital, November 1, 1901. The family history was negative. The patient herself had been a steady and heavy drinker of beer and whiskey. There was no venereal history. Five years ago she had suffered from acute articular rheumatism and was confined to her bed five months. Since then she has had many attacks, accompanied with cough, dyspnœa and swelling of extremities. During the past two weeks she had grown steadily worse. Ten days ago the right arm and side began to swell, and the patient became delirious. On admission to the hospital the temperature was 100.2°, the pulse 96, the respirations 36. The patient looked very sick and lay in a drowsy state, answering some question intelligently when roused, but soon relapsing into unconsciousness. There was marked dyspnœa, and the lips, ear-lobes, and nose were very cyanotic. There was general œdema of the whole body. The right arm and shoulder, and right side of the neck, and the right side of the body, front and back, as far down as the umbilicus, were greatly swollen and œdematous. The swelling of the right breast was so great that it closely simulated a tumor. Examination of the chest showed the presence of considerable fluid in the right pleural cavity. The heart was enlarged, and at the apex was heard a soft, blowing, systolic murmur, transmitted into the axilla. No abnormal sounds were heard over the aortic, pulmonary, or tricuspid valves, nor was there any thrill or pulsation observed anywhere in the chest. Examination of the abdominal organs gave negative results. The inguinal glands were slightly enlarged, otherwise no glandular enlargement was detected anywhere, save for a small, hard firm mass felt high up in the right axilla. No distinct glands, however, were made out. The urine was scanty in amount and contained a marked trace of albumin and a few granular casts. Examination of the blood gave hæmoglobin 72 per cent., red cells 4,352,000 to the cubic millimeter, leucocytes 13,200, increased one week later to 18,000.

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*Read at meeting of Practitioners' Society, January 3, 1902.

On the day following admission, the right side of the chest was aspirated and about three pints of clear straw-colored serum obtained. During the next few days the œdema of the lower extremities diminished, but the general condition of the patient grew worse. There was slight fever, the temperature ranging from 99° to 100.6°. The physical signs in the chest remained the same and the œdema of the right upper extremity persisted. It was evident that there was obstruction of the venous circulation of the right side, but there was no clue as to its cause. I was myself inclined to attribute it to pressure from an enlarged mediastinal gland. Others thought a new growth more probable. Of aneurysm there was no sign. On November 9 the patient died.

The following is the report of the autopsy, made by Dr. E. L. Dow: Body fairly well nourished. Skin very white. Moderate œdema of all of the subcutaneous tissues with considerable straw-colored fluid in all of the serous cavities and with a disproportionate, excessive œdema of the tissues of the right arm, axilla, and forearm.

Dissection down to the large blood vessels in the right axilla showed the right subclavian and the right axillary veins and their small tributaries to be the seat of a firm, white and red thrombus, and the right brachial vein to be filled with a firm dark clot. There was no thrombosis of the jugular veins. The corresponding arteries were apparently normal. No gross evidence of local traumatism or inflammation was present. The thrombus ended abruptly at the beginning of the right innominate in a rounded end. The superior vena cava was free from any thrombus, but the right auricle contained a firm pink thrombus, especially marked in the appendix.

The tricuspid, aortic, and mitral valves were the seat of an acute endocarditis, showing many small red bead vegetations on their edges. The mitral valve was also somewhat thickened and contracted by old fibrous tissue growth. The heart muscle was pale, firm, and somewhat hypertrophied. All of the cavities were much dilated, especially that of the left auricle.

The aorta, coronary, and other arteries showed nothing of importance.

The lungs showed moderate brown induration with œdema, and one recent hemorrhagic infarct in the middle lobe of the right lung. The bronchial lymph nodes were somewhat enlarged and deeply pigmented, but apparently had no relation with the thrombosed veins. The right pleural cavity contained about three pints of clear serum.

The liver and spleen showed only chronic passive congestion.

The kidneys presented an extreme degree of a secondarily contracted white kidney.

The pancreas, adrenals, and bladder showed nothing of interest.

The cavity of the uterus was filled with a small amount of bloody mucus.

The stomach and intestines gave evidence of a moderate chronic mucous inflammation.

The brain could not be examined, as no permission was obtained to open the skull.

There was no evidence of otitis, mastoiditis, or any inflammation in the nasopharynx.

Microscopical examination of the thrombosed veins gave no evidence of phlebitis, and showed the thrombus to be non-organized.

Welch* has so recently and so thoroughly discussed the subject of venous thrombosis in cardiac disease that I shall content myself with simply recording this additional case. The situation of the thrombus is of interest, being on the right side alone, whereas in twenty-two of the twenty-four cases collected by Welch, the thrombosis affected the veins of the left side. Perhaps pressure from the large accumulation of fluid in the right pleural cavity may have been a factor in the unusual localization of the thrombus. It is unfortunate that no bacteriological examination was made in this case, as Welch believes that bacteria are in all probability the immediately exciting cause of the thrombosis, apart from the question of localization.

THE MANAGEMENT OF CRITICAL CASES OF RUPTURED EXTRA-UTERINE PREGNANCY, WITH THE REPORT OF A CASE OF COMBINED INTRA- AND EXTRA-UTERINE PREGNANCY.†

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The following observations are based on an experience of twenty cases of my own of extra-uterine pregnancy, in all of which recovery took place after operation, and of cases seen in private consultations, and with my colleagues at the hospital.

As such patients are not afflicted with a disease or an infection in the first instance, but are suffering only from an accidental rupture of a blood vessel, they present the most favorable opportunities for surgical successes. At the present time we have little doubt about our ability to stop hemorrhages, and our aseptic precautions should be perfect. The only seemingly insurmountable difficulty has been that we are frequently called to operate on patients who are exsanguinated and pulseless. Such patients almost invariably die during the operation, or soon after. The proper management of this difficulty is, therefore, of the utmost importance; for if such cases can be successfully operated on, the mortality of ruptured extra-uterine pregnancy should be very low indeed.

In one of my early cases (February 11, 1893) the patient was suddenly taken with weakness and vomiting, and a severe pain in her left side. The pulse became rapid, and she was soon in a critical condition. When she arrived at the hospital the next day she was very pale, with sunken eyes, and a bad expression; abdomen swollen and tympanitic; pulse very poor. I felt certain that she could not live through an operation, and waited to try the effect of twenty-four hours' treatment with stimulants. On the following day the pulse and general condition had so far improved that I was willing to operate, and did so with a good result. I was so much impressed by the rapid improvement of this patient that I have never risked an operation in an extra-uterine pregnancy until my patient had gained a fairly good pulse, and I am astonished to find that none of them have died while waiting for the rally. My experience has been so favorable that I now confidently expect them to rally, and I am sure I have had my share of desperate cases. Let me quote one or two:

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* "Transactions of the Association of American Physicians," Vol. XV., 1900, p. 441.

† Read before the Obstetrical Society of Boston, December 17, 1901.

On March 9, 1900, Mrs. E. G. entered my wards at the hospital with a typical history of rupture of an extra-uterine pregnancy. "She was very pale and blanched, presenting every sign of hemorrhage. Pulse rapid and almost imperceptible; respiration feeble; extremities cold. She was manifestly unfit for operation." Dr. Mumford saw her and confirmed this opinion. She was stimulated during the night with brandy and coffee, and with hot salt solution per rectum and small doses of morphia. In twenty-four hours her condition had improved very much; her pulse had come down somewhat, but was still very weak. I therefore waited another twenty-four hours, and her condition gradually and steadily improved, so that in forty-eight hours she had a still less shaky pulse, and began to look better. I then operated, finishing with a pulse weak and rapid, but she soon rallied again and recovered.

Another case was seen with Drs. Sabine and Houghton in Brookline, on April 28, 1900. Dr. Houghton had been called to the patient because she had collapsed with a sudden pain and fallen on the bathroom floor. He found her ashen in color, and with absolutely no radial pulse. When I saw her she was ghastly white, unable to speak, and almost pulseless, with cold nose and extremities. The abdomen was moderately swollen and tympanitic. Although her condition seemed hopeless, I gave a hopeful prognosis, saying that in my experience such patients usually rallied enough to make a favorable operation possible. She was treated with stimulants and salt solution under her breasts and small doses of morphia. In twenty-four hours she had notably improved, and in fifty-four hours she looked better, and had a pulse between 130 and 140. Fearing there might still be oozing from the ruptured tube, I took this opportunity to do a rapid operation, and finished with the patient in a critical condition. She was very feeble for two days, but gradually improved and made a good recovery.

On the other side of the question, you are doubtless familiar with the fatal results which attend these operations on patients in a collapsed condition. On looking up the records of the Massachusetts General Hospital for the last five years, I find that seventy-five cases of extra-uterine pregnancy have been operated on, with three deaths, a mortality of 4 per cent., which, I think, is a good record, considering the fact that unfavorable cases are frequently sent there as a last resort. On looking over the records of the three cases that died, I find that they were all operated on soon after entrance, and all were in a more or less collapsed state.

Case I.—Patient very weak and of a yellowish color; entered the Massachusetts General Hospital August 27, 1897; temperature 101.4°. There was great prostration, with a very weak pulse. An infusion of two pints of salt solution was given in the arm. Brandy and strychniæ were given during the night. Operation was performed the next morning after the patient's entrance. The abdomen was washed out and left full of salt solution, with a wick in the pelvis. The patient was infused with salt solution during the operation. She died the next day—sepsis?

Case II.—The patient entered hospital October 11, 1899. Temperature 102°; pulse 132. Patient cyanotic, with cold extremities. Operation immediately after entrance. Abdomen washed out; wicks in pelvis. Pulse 180 during the operation. Died next morning.

Case III.—The patient entered September 27, 1900; temperature 100°; pulse 120; in very poor condition; immediate operation under little more than primary etherization; abdomen washed out; patient infused and given strychnia during operation; died soon after operation.

In the last report of one of the large American hospitals I find in the table of surgical operations cases of ectopic gestation with six deaths. The deaths are accounted for as follows:

1. Exhaustion, four days.
2. Exhaustion, hemorrhage, five days.
3. Shock, hemorrhage, forty-eight hours.
4. Shock, hemorrhage, twenty-four hours.
5. Shock, six hours.
6. Hemorrhage, three days.

Waiting and stimulating could scarcely have failed to have improved these results.

One rarely hears of a person dying of extra-uterine pregnancy without the assistance of a surgeon, but we constantly hear of persons who have not rallied from the operation.

Beside finding by experience that it is a better practice to wait for a rally in these critical cases, I think I see other reasons for waiting. After reading the records of twenty or thirty of these cases, it becomes apparent that they run a chronic or a subacute course after the first collapse. The histories usually read something as follows: The patient suffered a sudden severe pain in the left side, and fell down in a faint; pallor, feeble pulse, and a critical condition for several days; up and about in a week; after ten days or two weeks another attack like the first, perhaps more or less alarming. This sort of history runs on from ten days to three or four months. The hemorrhage in these cases then has a marked tendency to stop and to recur. Perhaps it stops on account of a weakened heart stroke. We usually find on the top of the pelvis a mass of intestines matted together with firm adhesions, which must offer considerable resistance to a rapid pouring out of blood. Moreover, this blood is not wholly lost to the patient, but is more or less reabsorbed by the peritoneum.

When a patient begins to rally from the severe prostration of one of these hemorrhages, it is no easy matter to decide when the operation should be done. If we wait too long, the bleeding may begin again, or we may conclude that there is a steady ooze which does not stop. It requires the best kind of surgical judgment to choose the most favorable moment for operation. In view of the above argument, I feel sure it is always safer to wait than to operate in a doubtful case.

The operation should be done quickly and accurately, without excessive handling. I usually scoop out enough of the clotted blood to enable me to find the uterus. I then quickly pass a ligature around the uterine end of the affected tube; this sometimes stops active bleeding, and is a useful handle to pull the tube into view. I next pass a ligature around the other end of the tube and remove the tube from between the ligatures. I never wash out the abdominal cavity or try to clean out the clots, because the blood in the abdomen is just what the patient needs, and the manipulation required to remove it takes time and produces shock. Washing out also requires time and more apparatus, and, therefore, adds to the danger of errors in aseptic technique. I almost always close the abdomen without drainage.

A Case of Combined Intra- and Extra-Uterine Preg-

nancy.—The patient, Mrs. A., aged thirty-five years, and thirteen years married, was sent to me in November, 1890, by Dr. Croston of Haverhill. She had had a miscarriage, and complained of a persistent pain in her left side. I found a small tumor to the right of the uterus. On December 27, 1890, I operated, and found a cyst of the broad ligament on the right side, as well as several small cysts of both ovaries. I removed the right ovary and tube, but excised the cysts from the left ovary, stitching the ovarian wound together, so as to leave about half the ovary in good condition. After the operation the pain in her side continued more or less severe until 1895, when the uterus was curetted. This was soon followed by pregnancy, and a child was born in October, 1896. She was then very well until her present illness.

On December 10, 1900, she had her last regular menstruation; one month later there was only a slight staining. Two weeks later she had another slight show, and an attack of severe abdominal pain, which caused her to turn white. A physician was called, who injected morphia, saying that she was having a miscarriage. She remained in bed five days. Two days later, January 27, Dr. Maurice Clarke was called, and found her flowing and in severe pain. She got up the next day, and was fairly well during the next week, when Dr. Clarke sent her to me, thinking she might have an extra-uterine pregnancy. She came to my office on February 4, when I found the uterus somewhat enlarged and softened. I also noticed that the left ovary was considerably enlarged, but she said that I had told her that the ovary was enlarged several years before. I wrote to Dr. Clarke that I thought she was pregnant, but could not be certain whether it was an intra- or an extra-uterine pregnancy, and advised careful watching. On February 9 she had severe pain and flowing, and on February 11 she passed a piece of membrane as large as two thumbs, which was examined by Dr. Benson of Haverhill, and found to contain chorionic villi; later a small fœtus was found in this membrane. Two days later Dr. Clarke curetted the uterus on account of a slight odor of the discharge with some rise in temperature. She seemed to do well for several days, but during the next two weeks she suffered from gas and abdominal pain. At last she sat up in a chair, and this brought on a very severe abdominal pain, which required morphia. The pain and gas continued in spite of every effort for relief. I was called to see her on February 25, and found her so very white and sallow that I immediately suspected internal hemorrhage. The pulse was somewhat accelerated, and the evening temperature had been running up to 101°. The abdomen was swollen and tympanitic, and a large mass could plainly be felt extending up from the pelvis half way to the umbillicus. It seemed to be a typical case of ruptured extra-uterine pregnancy, except for the fact that she had already had a miscarriage. We also had to consider the possibility of the pelvic tumor being an abscess due to infection from the miscarriage, but her pallor and a moderate mobility of the mass were signs in favor of extra-uterine pregnancy ruptured. The question was a difficult one, and I operated without being perfectly sure which it might be.

Operation, February 26.—I found the pelvic tumor consisted of a large mass of dark blood clots, which I partially turned out; the left Fallopian tube was much enlarged, ruptured and bleeding; the uterine end was normal in size and appearance; it was cut away between two ligatures, and the bleeding entirely ceased; the clots were partially wiped out, and the abdomen closed tightly without washing or drainage; the patient made a rapid and perfect recovery, sitting up on the fifteenth day; Dr. Whitney's report on the embryo passed at the miscarriage and of the tube removed at the operation.

"The specimen of Mrs. A., Haverhill, February 27, 1901, consisted of about 8 cms. of the Fallopian tube, which was dilated. In one part was a more or less homogeneous, hemorrhagic mass closely infiltrating into the wall, and measuring about 3 cms. The surface, which projected into the tube, was very much roughened and shaggy. The preparation made from this showed branching filamentous threads, with club extremities, characteristic of the villi of chorion of the early months of pregnancy. Careful examination failed to reveal the presence of any other structure of the embryo.

"The embryo, which was received previous to this specimen, measured about 3 cms., was considerably macerated, and ossification of the ribs and skull was well marked. It was estimated to be somewhere in the neighborhood of two and one-half to three months. The exact stage of the chorion villi in the tubal specimen could not be absolutely determined beyond that it was very nearly the second month. If other chorion villi were found in connection with this embryo, it shows that there must have been a double pregnancy, one intra- and the other extra-uterine, for there does not seem to be any marked loss at the place where the villi are adherent to the wall of the tube."

Points of Minor Interest.—A constant pain in the left side, lasting for several years, dating from a miscarriage, was due to a chronic endometritis, and was cured by curetting. A sterility of seven years was cured by the same curetting. A conservative operation on a small cyst of the left ovary made pregnancy possible. An extra-uterine pregnancy followed an old endometritis and a varied gynecological experience. Pallor and moderate mobility of a rapidly growing pelvic tumor led to the hypothesis of another pregnancy (extra-uterine) as against a pelvic abscess due to infection from a recent miscarriage.

I have found accounts of seventy published cases of combined intra- and extra-uterine pregnancy. One interesting case is recently reported by Mrs. Boyd, M.D. (*British Medical Journal*, October 5, 1901.) In this case the doctor found the uterus enlarged and softened, and Douglas fossa filled with a mass. When first seen the uterus was the size of an ordinary extra-uterine pregnancy, but on further observation it was found that the uterus was increasing in size, while the mass decreased. Abdominal section was done, and the right tube, size of an orange, was removed and found to contain chorion villi. The patient was later delivered of a healthy child.

Unusually High Death Rate.—Although fewer cases of typhoid fever and of smallpox are reported to the Philadelphia Bureau of Health for the week ended February 15, the total number of deaths was unusually large—namely, 602, as compared with 581 for the preceding week and 522 for the corresponding week of the previous year, and with 503 for the corresponding week of two years earlier. A round hundred of deaths were due to pneumonia, while sixty-four resulted from pulmonary tuberculosis; forty-seven were due to nephritis, thirty-eight to diseases of the heart, twenty-eight due to typhoid fever and also to gastritis and enteritis, twenty-three to apoplexy (not including ten due to paralysis), nineteen to smallpox and also to old age, sixteen to diphtheria. Twenty-one deaths are attributed to "inflammation of the brain." The number of cases of typhoid fever for the week was 157, of smallpox 74, of diphtheria 671, of scarlet fever 62.

A PRELIMINARY NOTE ON THE PREVENTION OF NAUSEA AND VOMITING FOLLOWING ETHER ANÆSTHESIA.*

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SINCE the discovery of the use of ether as an anæsthetic by Morton, in 1846, there has been a continued attempt to rid anæsthesia of one of its most disagreeable, if not dangerous, features, viz., nausea and vomiting following anæsthesia. No part of the ordeal of undergoing a surgical operation is more distasteful to the patient than are the retching, nausea, and thirst which are suffered in post-anæsthesia cases. The danger of vomiting is so well recognized to-day that every surgeon insists that the patient shall have no food for six to eight hours previous to the operation. Anæsthesia statistics show an appreciable death-rate from inhalation pneumonia, which is the result of inspiring mucus and vomitus during vomiting.

The literature on this subject shows that numerous investigators have endeavored to solve the cause and apply the proper remedy. Hewett believed vomiting to be a characteristic effect of the drug, and advised the use of pure ether. Webster and Blumfield assigned the cause to the quantity of mucus swallowed during the commencement of anæsthesia. Others have thought vomiting to be due to the action of the ether circulating in the blood on the vomiting center of the medulla. Golden thinks it more frequently the result of improper preparation of patients and improper methods of administering the anæsthetic, rather than to the result of the drug itself.

A long list of remedies has been proposed as preventatives and cures for post-anæsthesia vomiting. Kappler recommends the application of an ice bag over the stomach. Hewett noted that a draught of hot water often relieved vomiting. Hare advises the use of atropine, in doses of 1-1,200 of a grain, given just previous to the anæsthetic. Snow used brandy and water in small doses, given after the operation. Arongon used a cloth wet with vinegar applied to the nose after anæsthesia. Camphor monobromate, sodium bicarbonate, and cerium oxalate are drugs in common use, which are given with the hope of lessening vomiting after anæsthesia. Hirschman of Detroit has recently published a paper in which he urges the use of chloretone in doses of ten to twenty grains, given one hour previous to the anæsthetic. Several surgeons use the method of spraying the nose and pharynx with a cocaine solution before anæsthesia.

When I first started to work on this subject, I believed that gastric irritability was due to swallowed mucus and ether, so I endeavored to stop vomiting by washing out the stomach after etherization. This practice lessened, but did not stop vomiting. I found on washing out the stomach after anæsthesia that the stomach contents contained traces of ether. This led me to think that it might be possible that ether is excreted from the blood into the stomach and, acting there as an irritant, causes all of the phenomena, of gastric irritation and subsequent acute gastritis.

The experimental proof that ether is excreted by the mucous membrane of the stomach, I have endeavored to obtain in the following way: I selected cases which did not get up bronchial irritation with excess of mucus, and withdrew the stomach contents of these cases with a stomach tube, shortly after the anæsthetic was stopped. Ether was found present in sufficient quantities in these cases to give a distinct odor to the specimen, but time did not permit me to use the usual chemical methods for determining the actual amount of ether present.

In a later paper on this subject, I shall publish the results of some experiments on animals, by which I hope to demonstrate that ether is excreted by the cells of the mucous membrane of the stomach, and that it produces there, pathologically, an acute gastritis. Such experimental evidence, coupled with the results of the microscopic examination of the kidneys of animals which have inhaled large quantities of ether vapor, will show, I predict, that ether is capable of producing definite and well-marked lesions during the excretion.

The clinical evidence in support of this theory can be seen in the everyday routine of ether cases. The use of small quantities of ether in short operations causes little gastric disturbance, and the patient feels well again in a couple of hours. The use of the closed inhalers—as those devised by Bennett, Clary, and Goldan—has shown that by lessening the quantity of ether used patients do better in every way.

Acting on this theory that ether is excreted into the stomach, I have endeavored to find a treatment for other cases which would do three things: Accelerate the excretion of ether, prevent its irritant action in the stomach, and reduce the quantity of ether used to a minimum.

The excretion of ether, as well as the excretion of any other poison, is facilitated by saturation of the patient with water. Such a saturation obtained by giving water freely up to the very minute anæsthesia is begun, gives the kidneys, lungs, stomach, mucous membranes, and skin a chance to excrete ether rapidly. The treatment of ether cases in vogue to-day does exactly the opposite, viz., as much fluid is extracted from the patient by means of cathartics, salines, and enemas, before anæsthesia, as possible; added to this is the fact that many surgeons forbid the patient to take fluids for several hours previous to the operation. Such treatment sends the patient to the operating table with a dry skin, parched lips, small pulse, excreting urine of a high specific gravity (1,025-1,040), in fact, in no condition to excrete a large amount of an irritant poison. A century ago Claude Bernard proved that ether acted on each tissue of the body, and we believe this to-day, but still do not provide for the excretion of such an irritant.

Preventing the irritant effect of ether on the stomach requires simply the dilution of the ether as it is excreted. A glass or so of water drunk at the commencement of anæsthesia serves to hold in solution considerable ether (ether being soluble in water in the proportion of 1-10).

The limiting of the amount of ether used in all cases is, I believe, a most important factor. The use of closed inhalers has done much to aid this. By means of an inhaler, such as has been devised by Dr. Bennett, with the inducting of anæsthesia by means of nitrous oxide, the amount of ether actually needed for any surgical operation can be greatly reduced by proper care and skill. Comparing my ether statistics when I used the ordinary Allis inhaler with the results obtained with the Bennett inhaler, I find I use one ounce now where I used eight to ten ounces then. A better type of anæsthesia is obtained, and the safety to the patient is greatly enhanced.

The question of preventing an excess of secretion of mucus in the larynx and bronchi is important in this connection. Such mucus, if excessive, is swallowed, and adds to the gastric irritability. The cause is too strong ether vapor. Ether vapor, concentrated enough to cause spasm of the glottis, gagging, and resistance of the patient, is strong enough to cause irritation of the respiratory mucous membrane with excess of mucus. Spencer proved by experiments on dogs that vapor containing 3.5 per cent. ether would anæsthetize animals for several hours without affecting the pulse or respiration. The vapor in the ordinary inhaler is much more concentrated. A comparison between the concentration necessary to carry on anæsthesia and the strength in everyday use shows that a too highly concentrated ether vapor is ordinarily used. This is the cause of excess of mucus.

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*Dr. Hess' death occurred before this MS. was sent for publication.

I report the following cases from the gynecological service of Dr. W. M. Polk at Bellevue Hospital, and in reporting them I wish to express my indebtedness to Dr. Polk for so kindly extending to me the opportunities for investigating this subject. These cases received no further treatment than ℥ vj - ℥ x water just before beginning the anæsthetic, and plenty of water after, and are consecutive cases in that they are the only cases which have received this treatment.

Case I.—K. D., aged twenty, curettage, January 14, 1901. Six ounces of water were given immediately before beginning the anæsthetic. Anæsthesia with NO followed by ether. Began 3.15, under anæsthetic by 3.18; operation began 3.48, ended 4 o'clock; quantity, ℥ js. Patient recovered 4.15; patient urged to drink water by nurse as soon as conscious. No nausea or vomiting.

Case II.—M. S., aged eighteen, perineorrhaphy, January 15, 1901. Six ounces of water were given before the anæsthetic. Anæsthesia with NO and ether. Began 2.10, under 2.12; operation began 2.25, ended 2.45; ℥ j. Patient recovered 2.55, and was given ℥ x water. Result, no nausea or vomiting.

Case III.—M. F., aged twenty, post-partum curettage, January 18, 1901. Six ounces water given immediately before beginning the anæsthetic. Anæsthesia with NO followed by ether. Began 2.10, under anæsthetic 2.12; operation began 2.30, ended 2.40; recovered 2.58, ℥ ji water was given as soon as patient was conscious. Result, no vomiting.

Case IV.—L. M., aged twenty-five; post-partum curettage, January 18, 1901. Six ounces water given before the anæsthetic. Anæsthesia by NO and ether. Began 3.05, under 3.01; operation began 3.20, ended 3.50; recovered 4.10; ℥ jss. water given freely after operation. Result, no vomiting.

Case V.—N. J., B. H., aged twenty-three; curettage and packing February 1, 1901. Preparation of patient same as in Case I. Anæsthesia with NO followed by ether. Began 1.59, under 2.03; operation began 2.30, ended 2.50; patient recovered consciousness 4.05. Amount of water given freely after operation; ether, ℥ ji. This case had, entirely against orders, taken solid food previous to the operation. Patient vomited once before consciousness was regained.

Case VI.—S., aged twenty-one; double salpingo-oophorectomy, February 4, 1901. Same patient given ℥ vj. water just before anæsthetizing. Anæsthesia with NO followed by ether. Began 2, under 2.01; operation began 2.35, ended 5.00; ℥ jv.; patient recovered 6 p.m. Saline infusion under breasts, 7.30 c.c. given at 5 o'clock. Patient did not vomit.

Case VII.—R. H., Bellevue Hospital, aged twenty, February 8, 1901; case of post-partum curettage. In preparation for operation patient was given 2 c.c. pills at night, followed by ℥ ss of Rochelle salts at 5 o'clock the following morning. No breakfast allowed other than a cup of coffee. Patient was given ℥ viij of water before beginning the anæsthetic. Anæsthesia with NO followed by ether, using the Bennett inhaler. Began 2, under 2.02; operation began 2.30, ended 2.45. Patient recovered consciousness 2.45. No vomiting.

Conclusion.—1. Post-anæsthesia vomiting is a source of danger and great discomfort to patient, and is preventable.

2. It is due to excretion of ether into stomach, with resulting acute gastritis.

3. Drugs are of no avail in prevention or treatment of post-anæsthetic vomiting.

4. The present technique of preparation of patients for etherization is faulty, in that fluids are usually entirely prohibited or limited, whereas they should be pushed to aid in excretion of ether.

5. The dose of ether should be as small as possible, and the strength of ether vapor should not cause bronchial irritation with excess of mucus.

6. The combined use of NO and ether gives the best results.

7. In anticipation of gastric irritation, give one to two glasses of water just before beginning anæsthetic.

Diagnosis of Aortic Aneurysm.—A. R. Edwards mentions, among the various differential points, the following: Differentiation from solid tumors rests upon their propagated non-expansive pulsation, their more rapid development, leucocytosis and cachexia. In aneurysm, the lymph glands may be enlarged either from lymph stasis or from extension to them of inflammation about the aneurysm. Their enlargement is much more frequent, however, in mediastinal tumor, and continued increase argues directly for neoplasm. Pain, recurrent paralysis, dysphagia, are common to all tumors; vascular or neoplastic venous ectasia is more common in tumor. A few rare instances of coincidence of tumor and aneurysm are observed. The pulsation in carcinoma is sometimes associated with a "back stroke" in the diastole, but this is feeble if present. The bruit in tumor is usually systolic, while murmurs are not rarely absent in aneurysm. Tugging is present in both. The time element is important, aneurysm running a much more protracted course. Exploratory puncture and diagnosis *ex juvantibus* with iodide are also differentially important. Finally, differentiation from other causes for pulsation, a throbbing, aortic regurgitation, beating in aortitis, pulsation in pneumonia (Graves), in tumor of the lung or pleura, in serous or purulent pleurisy, is usually made when all symptoms and signs are carefully weighed.—*Illinois Medical Journal.*

The Action of Quinine on the Malarial Parasite.—Achille Capogrossi concludes, from experimentation, that the presence of quinine in solutions, added to preparations of malarial blood, is not in direct relation to the expulsion of the parasites from the red corpuscles, inasmuch as this may be produced by solutions of various alkaloids, and by other fluids. Neither is this expulsion obtained with constancy under identical conditions, but appears to depend on various other factors, such as the discoloration and swelling of the corpuscle. If quinine be added to malarial blood under conditions which prevent this swelling and discoloration, the expulsion will not take place. The curative influence of quinine in malaria can, therefore, not be due to its expelling the parasite from the cell.—*Il Policlinico.*

A Case of Acute Gastric Catarrh Simulating Ulcer of the Stomach.—G. Jacontini was called to see a patient suffering from intense pain in the epigastric region, with incoercible vomiting, which had been a symptom for some time, and which was frequently bloody, and from a general condition of depression. Everything pointed to ulcer of the pylorus. The course of the disease, however, showed that this was not the cause of the trouble. The author does not describe the treatment adopted, but the pain and vomiting disappeared, and in about twelve days the patient was cured. The conclusion is reached that it was a case of unusually intense and acute gastric catarrh.—*Giornale Internazionale delle Scienze Mediche.*

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WHAT CONSTITUTES SUCCESSFUL VACCINATION.

BETWEEN efficient vaccination and successful vaccination there is a great difference. The operation may be performed efficiently and yet not be successful. In order to confer immunity to smallpox upon a person several contributory circumstances must be taken into account—the condition of the lymph, the thoroughness of the vaccination, and the state of the individual's health at the time.

Dr. Durgin, Chairman of the Boston Board of Health, writing in the *Boston Medical and Surgical Journal*, January 30, says: "To secure full vaccination, I believe that a child should not only be vaccinated when very young, but that the physician should feel called upon to exhaust all susceptibility to smallpox by repeating the operation until it will no longer take effect." The same writer, referring to vaccine, says: "The difference between humanized and bovine lymph in the Republic of Mexico is shown by the fact that for ninety-seven years in that country they have used almost nothing but humanized lymph. They never revaccinate, neither do they have smallpox among the vaccinated." The success of these methods in Mexico so greatly impressed Dr. Durgin that at the last meeting of the American Public Health Association he prevailed upon that body to appoint a committee to investigate and report upon the respective immunizing power of human and bovine lymph.

The Boston physician, with regard to the technique of the operation, says: "A scarification one-eighth to one-quarter of an inch in diameter is ample. The use of a shield on the whole is a nuisance, but care in rubbing on and drying in the lymph is important. The physician should always see the patient at the end of a week or ten days, and tell him whether or not there is a typical vesicle, and if it is not, should repeat the operation."

Dr. Sidney Coupland, at a recent discussion of the Royal Medical and Chirurgical Society, in London, on vaccination, said, concerning what might be regarded as efficient vaccination, that since the purified lymph might give rise to such a small amount of scarring, the size and area of the scars could no longer be considered as evidence of effective vaccination, and reliance would have to be placed rather on the number of scars than on either their depth or area. It was a well-recognized fact that those persons with more scars were better protected than those with fewer scars. With regard to the protective value of a previous attack of smallpox, he said that out of 250 people who had been stricken in childhood, ten contracted a second attack when exposed to infection. With regard to the protective value of vaccination, he said that about one in four persons who had been vaccinated in infancy contracted smallpox if exposed to infection in later life.

Revaccination conferred absolute immunity, and even in a patient who had had smallpox the immunity could be prolonged by vaccination. In children under ten years of age who had been vaccinated in infancy, the liability to contract smallpox when exposed to infection was one in twelve, while in those who were unvaccinated the liability was two in three.

Dr. Coupland did not consider all even recently vaccinated persons were absolutely immune, owing to their vaccination with various strains of lymph, some of which might have become inert.

Dr. Copeman considered that the same amount of vaccination was necessary in the child as in the adult, and, as a rule, the vesiculation was less severe in relation to the amount of vaccine used in the child than in the adult. With regard to inert lymph, he said that when it was suspected that a vaccination had failed because of inert lymph the patient should not at once be revaccinated, but should wait a month for a certain amount of local immunity sometimes produced even by an apparently inert lymph. It was generally assumed that the glycerinated lymph was less patent than the older form of lymph. This he did not think was the case, for in the preparation of the calf lymph the epithelium in which the vaccine organisms were supposed to be was scraped off, whereas in the lymph obtained from the vesicles only the fluid was taken.

The definition of a successful vaccination, presumably, is that by means of the method conducted efficiently, an individual is rendered immune to smallpox for a period or throughout his life.

There is, however, a certain amount of difficulty in deciding when a person is thus free from the infection of the disease, and the advice of Dr. Durgin "that the physician should feel called upon to exhaust all susceptibility to smallpox by repeating vaccination until it will no longer take effect," would seem to be based on sound premises.

As to whether humanized lymph possesses the remarkable immunizing qualities attributed to it by Dr. Liccada of Mexico is a point which certainly calls for investigation.

In order to perform vaccination thoroughly under present conditions, pure and fresh lymph is the first essential; strict aseptic precautions must also be used, and a sufficient area must be operated upon for the purpose of vesicular absorption.

Revaccination must also be practiced whenever deemed necessary. By following such methods vaccination will attain its greatest possible success.

THE TREATMENT OF TUBERCULOUS PERITONITIS.

MANY collections of statistics and many reported cases of tubercular peritonitis have seemed to confirm the dictum that the operative form of treatment holds out the best prospect of curing or ameliorating this form of tubercular infection. During the last few years, however, the disease has been studied closely, and observers have come to recognize that there are several more or less well-marked varieties which pursue different clinical courses, and are amenable to treatment in different degrees. The clinical differences, as might be expected, depend upon differences in the character of the pathological lesion.

In *Annals of Surgery*, December, 1901, Fenger of Chicago publishes a paper on the disease in question, and while offering many personal experiences and ideas, he also quotes from a paper by Borchgrevink, who seems to have analyzed the subject in a very satisfactory manner, and to have made some valuable suggestions. Both these writers agree with most others in recognizing three varieties of the disease: a suppurative form, a serous exudative form, and a form characterized by the formation of adhesions. It is easy to see that the possibilities and outcome after operation, in cases of these different classes, would be influenced by the extent and character of the pathological changes, and some of the discrepancies in clinical reports undoubtedly depend upon an imperfect recognition of these differences, which must often have been manifest at the time of operation, though their significance may frequently have been misunderstood. The form of the disease characterized by the accumulation of quantities of caseous matter among the coils of intestines, which are more or less adherent, naturally offers much greater surgical difficulty than a case without adhesions, in which the peritoneum is studded with miliary tubercles, and in which there is a collection of clear or turbid serous fluid. The caseous matter, in the first type of case, is very prone to disorganization into a purulent fluid, much like that found in tubercular joints. The form of tubercular peritonitis, in which the formation of adhesions is a prominent condition, is, as might be supposed, not favorable for operative treatment, but it is comparatively uncommon.

With these differences in pathology before us, it is easy to understand how operators have had variable experiences in attempting to benefit patients by opening and washing out the abdomen. Those cases without adhesions, and with a collection of serous fluid in the abdominal cavity, have been those in which the best results have naturally been obtained. When there have been adhesions with collections of tubercular purulent matter in various parts of the abdomen, the evacuation of one or two such, immediately in the line of the incision, can obviously have no effect upon those which are remote. The opinions of observers upon the best plan of treatment, when adhesions are extensive, are contradictory and inconclusive. Some believe that, in many cases, benefit is accomplished by incision; but most, and among these Fenger and Borchgrevink, think that no good can be thus accomplished. There is, without question, considerable danger of causing a fecal fistula by operating upon such cases, and this is a serious and unpleasant complication, and the chance that the tubercular process can be thus stopped, is very small. It is a safe general rule to say that, when a patient's general condition is good, and he is free from fever, laparotomy will prove beneficial, unless some unexpected intraabdominal complications are met with. When the tubercular process is a progressive one, as is manifested by fever and other symptoms, the operation will cause a serious drain on the resources of the patient, and much better results can be attained by medical and dietetic treatment. The prospects are not, however, alluring. The writers whose views we are discussing say, in conclusion, that tubercular peritonitis is a condition which the surgeon must hand back to the physician, admitting that his best efforts have been unavailing, to render it reasonably amenable to surgical treatment, except in a few cases belonging in a pretty well-defined division of the subject.

The radical operations which have been attempted upon tubercular lesions in the peritoneum have proved uniformly disappointing, and attempts to cure the disease by such means are not justifiable.

THE DESTRUCTION BY THE PANCREAS OF A SUBSTANCE INHIBITING GLYCOLYSIS.

THE relation of the pancreas to glycosuria and diabetes has been the subject of many recent researches. Lépine and Boulud, at the meeting of the Société de Médecine of May 7, 1900, announced that they have succeeded in extracting from the urine of patients with diabetes, and from that of patients with pneumonia, a crystalline substance, which, injected under the skin of a guinea pig, or introduced into the jugular vein of a dog, produced glycosuria in these animals.

Further researches along the same line, conducted by the authors mentioned above, were reported in a recent number of *Lyon Medical* (January 25, 1902). Lèpine and Boulud have perfected the process of extracting the crystalline substance which produces glycosuria, and have tried to find in what way it causes the appearance of sugar in the urine. They added a small quantity of this substance to 100 cc. of the normal defibrinated blood of a dog, and found that, after standing for an hour at the temperature of 38° C., this blood had lost but very little of its reducing power and of its fermentable sugar, while under the same conditions normal blood shows a strongly marked diminution of the reducing power, and an almost complete disappearance of the fermentable sugar. In this manner they established the fact that very small quantities of this substance impede glycolysis in the blood.

They next added a few centigrammes of this crystalline substance, obtained from several litres of urine from pneumonia patients, to a litre of the normal defibrinated blood of a dog. After having convinced themselves that this amount of toxic substance was sufficient to inhibit glycolysis, they passed this blood through a large portion of a dog's pancreas, which they isolated in the living animal for this purpose. Collected from the principal vein, immediately after its passage through the pancreas, this blood was found to have recovered its glycolytic power. The authors conclude that these experiments demonstrate:—(1) That the crystallizable substance extracted by them from the urine of patients with various diseases impedes glycolysis; (2) That this substance is destroyed during its passage through the vessels of a living pancreas; (3) That, therefore, in addition to its other functions, the pancreas exercises an antitoxic faculty, which is of the greatest importance. The pancreas favors glycolysis in the tissues, by destroying the substance which inhibits the decomposition of glucose.

The corollary to this conclusion, although it is not stated by the French authors mentioned, would naturally be that anything that disturbs the functions of the pancreas, be it faulty diet or disease, will affect unfavorably its action of promoting glycolysis in the tissues. It would be of great interest to determine, if possible, the exact chemical nature of the crystalline substance isolated by Lépine and Boulud, and the conditions under which it is produced in the body.

Home Treatment of Tuberculosis.

Dr. Lawrence F. Flick of Philadelphia has been for long a voluminous writer upon, and an energetic advocate of, the home treatment of pulmonary consumption.

By home treatment he means treatment of the disease at the place where it was contracted, in contradistinction to treatment in a climate selected for its curative qualities.

He further divides home treatment in two divisions, one of which is known as closed treatment and the other as open treatment.

Dr. Flick, in a pamphlet reprinted from the *Journal of Tuberculosis*, gives the result of his experience with regard to these forms of treatment.

By closed treatment is meant such as is obtained in a sanatorium, in which the patient is shut off from the world, and is subjected to strict discipline. By open treatment is meant that at the patient's home, among his relatives and friends, with possibly some occupation and with considerable liberty.

Naturally, Dr. Flick is of the opinion that the closed treatment possesses many and manifold advantages over the open treatment, but taking into consideration the undoubted fact that the latter is the only treatment which is practicable at the present time for the average case, his paper is restricted to an exposition of his views with regard to the care of the consumptive at home.

In the first place, the need of an early diagnosis is emphasized, and the general practitioner is advised to be a little more on the alert in looking for tuberculosis than he has been in the past, and the various physical and other symptoms denoting lung trouble are briefly enumerated.

The food question is dealt with at some length, and, except in cases of poor digestion, Dr. Fleck favors forced feeding, although, perhaps, not to the excessive extent insisted upon in most German sanatoria.

With respect to fresh air, the views expressed are in line with those of the majority of modern authorities on the treatment of tuberculosis.

Absolute rest is recommended if the disease be in an active stage, but moderate exercise if incipient or if activity has been arrested.

Medication, thinks Dr. Flick, is an important factor in the successful treatment of tuberculosis, if the drugs are judiciously and intelligently used.

The iodine compounds used in solution as inunctions are especially praised, and various drugs are advised; to be administered, however, with due regard to the individual's idiosyncrasies and condition. Opiates and antidiaphoretics find no place in the list.

The following table will show the result of Dr. Flick's open treatment:

Cured	18	per cent.
Disease arrested	10	"
Very much improved	26	"
Temporarily improved	19	"
Not improved	27	"

Open treatment of pulmonary tuberculosis must be the one relied upon, until sanatoria are far more plentiful than now. And it is well that a good knowledge of such treatment should be widely diffused by means of intelligently-written articles on the subject.

The fact that climate does not exert the preponderating influence, formerly attributed to it, upon tuberculous patients, is now thoroughly understood. In some cases those rationally treated at home will make a more favorable progress than others who have been despatched to a highly vaunted health resort.

The assertion may be made that the consumptive at the present time stands a better chance of regaining health than ever before, and the outlook for the future is yet more promising.

The Race Question in the United States.

The increase of the colored population of this country provides a fruitful theme for discussion, and is viewed by many able writers through very different spectacles.

Some think that the importation of negroes to America has been in every way a most deplorable circumstance, and that if it were possible to banish the entire community of black people, that the white inhabitants would greatly benefit by such an expulsion. Others hold that the remedy lies in educating the negro, and teaching him to become a useful member of society.

Mr. R. P. Brorup has recently published a pamphlet, in which he treats the subject on somewhat novel lines. He commences by denying that any real benefits are conferred upon the civilized world by teaching savage or pagan nations, methods whereby they are enabled to prolong life, and points out that Holland has, by the brains of her civilization, doubled the number of adherents to Mohammedanism in the island of Java in less than thirty years; while England has achieved nearly as much for Egypt in a like space of time.

This doubling of population of various kinds may be conceived of, says Mr. Brorup, as achievements more splendid in the process than the final results. The ability to do it may be a matter of boasting, but a far-sighted policy would rather shrink from the responsibility, both as a matter of self-preservation, and in view of the possible effect on the world's best interests.

The writer then turns his attention to the situation as regards race in the United States, and delivers himself as follows: "The native Americans have suffered in the struggle with foreigners for numerical supremacy; physically their strength and endurance has proved unequal to the contest. Their superior mental qualities, instead of helping their own race, are at the service of their competitors for the possession of the country; they will invent, plan, and direct, and by their intellectual activity give the latter that chance for growth and expansion of which, with their superior physical endowments, they are able to take full advantage. Thus we have the sociological phenomenon of a people of a country, after being overcome in a struggle for existence on the ground of brute endurance, helping its competitors by its intellectual activity and accumulation of capital to complete the conquest.

From the foregoing quotations it will be gathered that Mr. Brorup does not so much fear the negro population as the constant influx of cheap alien labor from abroad, and thinks that regulation and restriction of immigration in favor of nationalities kindred to our own race, and capable of assimilation, would seem an obvious measure if the interests of our civilization are an object of any concern.

There is no more complex problem, and no one more difficult to solve than this of immigration. It is, however, a sociological rather than a medical question, and yet, in a measure, it bears upon the health of the population of the United States as a whole.

The old stock native-born American is inclined to brain development at the expense of physique, and needs the infusion of fresh blood to produce the *mens sana in corpore sano.*

Nevertheless, it cannot be doubted that a large number of immigrants make undesirable citizens in every way, and should be discriminated against as far as possible.

Scientific Work in America.

Mr. Carl Snyder's article in the January number of the *North American Review*, in which he declared that the United States was far behind Europe in almost every branch of scientific research, has drawn forth many and emphatic disclaimers. Some, however, of the papers written to refute this statement have prejudiced their own case by the vehemence of their arguments, and err quite as much on the side of exaggeration as did the article which caused their protests.

Dr. Simon Newcomb, in the *North American Review*, February, gives a fair and dispassionate presentation of the present conditions of scientific work on this continent, and shows that Mr. Snyder's picture is now not true, whatever it may have been in the past.

Dr. Newcomb points to the munificence with which private individuals have endowed our institutions for learning and research as a proof of the high appreciation with which our people regard the acquirement of knowledge, and urges that this alone is a sufficient answer to the charge brought by Mr. Snyder.

The eminent scientist claims that it is in our failure to estimate the individual scientific investigator that we stand so far behind other enlightened nations, and clinches his argument with several prominent examples drawn from the list of distinguished men of learning and science of Europe and of this country.

Again, the treatment of national scientific organizations of Europe and of America is cited as an evidence that the Government of the United States displays no keen interest in advancing the cause of science or of scientific men.

Dr. Newcomb thinks that the cure for these conditions is to introduce the academic element into the political atmosphere of the capital, and considers that the most effective way to bring this about would seem to lie in the establishment of a great university or other scientific institution, having as little connection with the government as possible, yet not so foreign to it as to be of no interest to the authorities. He is of the opinion that great things may be hoped of the Carnegie Institution as a coming agency of reform in this direction.

The fact is certainly to be deplored that so little has been done to advance science and to encourage its disciples in the past, but, at the same time, there are undeniable signs that all branches of learning, and especially that pertaining to scientific research, will be paid due regard in the future.

An Osteopath's Defence of His Calling.

In the New York *Sun*, February 9, is a specious albeit plausible defence of osteopathy, by a professor of that art.

The gentlemen in question feigns that he is sad, because the ordinary citizen is ignorant in regard to the nature and claims of the science, and forthwith proceeds to enlighten him on the subject. He deprecates the general idea that it is something to do with the bones, and is only an emphasized massage, and claims that it is really what its name implies, a species of bone healing, and remarks that an extraordinary thorough knowledge of anatomy and physiology and a remarkably educated sense of touch are the great essentials for the osteopath.

As an example of the possession of this knowledge, and of this educated touch, and the capacity to put them into practice for the treatment of disease, the writer instances the following case:

"One woman came here with rheumatism or neuralgia. She had suffered for a long time with pain in her side, and had tried all sorts of treatment.

"I found, upon examination, that one of her ribs had in some way been forced out of normal position. Two ribs were close together, pressing on the local nerves and causing severe irritation.

"What was the common sense treatment? To get the ribs back into place you say! Well, that's what I did!

"This is her last visit. She is cured. What was the use of giving her medicine for her blood and nerves, while the source of nerve irritation was not removed."

However, osteopaths do not confine themselves to the cure of complaints like rheumatism or neuralgia, by such simple methods as the foregoing, but declare that diphtheria, and even cancer, can be cured by osteopathic treatment, skilfully performed.

The afore quoted writer says, "In Boston, to my own personal knowledge, several cases of cancer came for osteopathic treatment. In each case, reputable regular physicians had pronounced the trouble cancer, and said that operating was the only course. The cases were cured by osteopathy.

"The patients went back to the doctors, and in each case were told that the trouble had not been cancer, because if it had, osteopathy could not have cured it. Mind you, I am not stating that osteopathy is a sure cure for cancer."

The expert in osteopathy concluded by denying that it was not so true as once, that the standards for admission into his profession were low, and brought forward the school over which Dr. Still presides in support of his assertion.

In the Medical Record, January 25, the curriculum of a typical osteopathic college was given, and it remains only to be said that if, with such a course of training in anatomy and physiology, the graduates go forth into the world possessed of the extraordinary thorough knowledge of anatomy and physiology, claimed by the writer in the *Sun* as the great essentials of an osteopath, either the osteopathic students must be singularly gifted individuals, endowed with a marvellous facility of acquiring proficiency, in the above-mentioned subjects, or that there must be but very few real osteopaths.

The medical profession does not object to osteopaths pursuing their calling within legitimate lines, but it does stoutly object to these men infringing upon its rights and requiring to be placed upon the same plane, with the same privileges, as those who have earned their position by test examinations.

We, therefore, hastily agree with the argument of the writer in the *Sun* that the general public should become acquainted with the situation in all its bearings.

Institutions for Scientific Research.

The gift of a national institution to the United States by Mr. Carnegie for the encouragement of "investigation, research and discovery" has certain points of similarity to another splendid offering to this country many years ago.

It was in 1829 that an Englishman named Smithson, who had lived much of his life in Italy, left by will the sum of $500,000 to found at Washington an establishment for the increase and diffusion of knowledge among men.

These two gifts to science are not exactly parallel cases, for whereas Smithson was, in a manner of speaking, a foreigner, Mr. Carnegie, although born in Scotland, has lived his working life and amassed his wealth in this country, and may, therefore, be regarded as a true citizen of the land of his adoption.

The work done by the Smithsonian Institution is known in every country, and has advanced the cause of science in many different directions.

The National Library, the Weather Bureau, the

Geological and Coast Surveys and the Fish Commission all owed their inception to the Smithsonian Institution, while the National Museum, the Bureau of American Ethnology and the Zoological, still remain under its care.

The great need in America at the present time is an ample endowment for the purpose of carrying on scientific investigations, and this want the Carnegie Institution will, to a considerable extent, supply.

The scientific men of other large countries, conspicuously of Germany, are not hampered by pecuniary reasons from devoting their lives to the solution of scientific problems, and thus are enabled to gain renown for themselves and to shed luster on their nation.

Here a man who may develop a special aptitude for research in laboratory work, in writing or in both, finds that he must take up some other pursuit by which to earn his daily bread, and consequently can give but a part of his time and energy to his labor of love.

What wonder then that many become discouraged, and that only a few have the pluck to fight against adverse circumstances, and under the most unfavorable conditions to fairly wrest the secrets locked in the bosom of science.

The rich men of America have shown of late that they are beginning to appreciate the situation, and have evinced this appreciation in a practical way. The institution founded by Mr. Carnegie will greatly aid in placing America in the position, with respect to science, to which, by her wealth and brains, she is entitled.

CHRISTIAN SCIENTISTS IN GERMANY.

The cult of Christian Science, a product of America and of modern civilization, and which has flourished so exceedingly in the land of its birth, has within the past year or two, by means of its disciples, been doing missionary work in the old world.

In Great Britain the efforts of the propagators of this hybrid religion have been attended with some measure of success, particularly among the members of the leisured class, who are ever avid of something new, and which may tend to break the monotonous sameness of a life of pleasure.

In Germany the Christian Science movement has also made considerable progress with people who probably find in its tenets a similar attraction as their British brethren.

In Berlin the followers of the sect are said to be increasing at a rapid rate, and their numbers have aroused the ire, not unmixed with alarm, of the Kaiser.

The Emperor of Germany, together with the Cathedral Chaplain and Superintendent of Morals for Berlin, have expressed their determination to use their utmost influence to prevent the further spread of Christian Science. The law will not be invoked to bring about this result, but the Imperial frown will be the fate of those who continue to abide by the teachings of Mrs. Eddy, and this means much in Germany.

The announcement has been made officially that the Kaiser has issued directions that all persons who, contrary to his express wishes, will not cease from practising the Christian Science rites shall hereafter be excluded from the Court.

The Emperor of Germany is often severely criticised for his autocratic actions, but he has frequently shown that many of these are characterized by a sound and patriotic policy. His views with regard to Christian Science are an evidence that the moral and physical well-being of his people are matters near his heart.

News of the Week.

A Possible Convert to Vaccination.—A certain Dr. Immanuel Pfeiffer of Boston, who is apparently considerable of an anti, has long inveighed against vaccination—a vile operation to which he was cruelly subjected in infancy, but to which he has never consented since he arrived at years of discretion. To prove something or nothing, he recently sought permission to visit the Pest House on Gullup's Island, and the health officers, for some inscrutable reason, granted it. On his return he announced that he had exposed himself as much as possible to the disease, and, although he had not been vaccinated for sixty-five years, said he had no fears of being stricken. The Board of Health put a watch on him and kept track of him for a while, when he dropped out of sight. After some time the representatives of the Health Board discovered him in bed at his home in Bedford, suffering from a very severe attack of smallpox. It was thought he would die, but whether he did or not we have not heard.

Sudden Death of a Medical Student.—Mr. Leopold J. Koehler, a student in Cornell Medical College, fell dead in the entrance hall of the college one afternoon recently on returning from lunch with several companions. He was a senior, standing high in his class and in the esteem of his associates, and was to have been graduated next June.

Death of a Giant.—A man died a few days ago in Brooklyn who was over six feet tall and weighed 689 pounds. He was the son of a physician who retired many years ago. The cause of his death was pneumonia.

Smallpox and Politics.—Owing to the prevalence of smallpox, the City Council of Des Moines recently decided to close all churches and theaters, and to prohibit all public gatherings. The decision put a sudden stop to a bitter congressional campaign which was raging in the district, as well as to the campaign for municipal officers.

Death of One of the Separated Xiphopagous Twins.—One of the little Hindoo girls, whose connecting band was severed a short time ago by Dr. Doyen of Paris, died a week after the operation, the cause of death being tuberculosis, from which both children were suffering at the time of the operation. It will be remembered that one of the Brazilian xiphopagous twins, separated about two years ago, also died, the operation being, in her case, the direct cause.

Influenza is prevailing extensively in London, the number of cases having taken a sudden leap upward within the past week. All classes of the community are affected, and all parts of the city are equally invaded.

Fatal Accident to Dr. Traxell—Dr. T. S. Traxell, of Gallatzin, Pa., was killed on February 8, by being struck by a shifting engine on the railroad. He was a member of the Cambria County Medical Society.

Philadelphia County Medical Society.—At a stated meeting held February 12, Dr. George Erety Shoemaker delivered "The Address of the Retiring President" and Dr. George B. McClellan made a demonstration of "Anatomy in Its Application to Medicine, Illustrated by Lantern Slides and the Living Model."

Western Ophthalmological and Otolaryngological Association.—The seventh annual meeting of this society will be held in Chicago, April 10, 11, and 12, 1902, under the presidency of Dr. C. R. Holmes of Cincinnati. The secretary is Dr. William L. Ballenger of Chicago.

The Harrisburg (Pa.) Academy of Medicine.—At the annual meeting of this society, held January 31, the following officers were elected: *President*, Dr.

Hugh Hamilton; *First Vice-President*, Dr. J. Walter Park; *Second Vice-President*, Dr. D. S. Funk; *Secretary*, Dr. Thos. S. Blair; *Treasurer*, Dr. E. H. James; *Trustee*, Dr. W. H. Seibert; *Committee on Admission*, Dr. D. J. Hetrick; *Library Committee*, Dr. C. H. Saul; *Social and Scientific Committee*, Dr. C. C. Cocklin.

The Atlantic County (N. J.) Medical Society.—At a meeting of this society, held February 5, the following officers were elected: *President*, Wm. Edgar Darnall; *Vice-President*, T. Senseman; *Secretary and Treasurer*, Edward Guion; *Reporter*, A. B. Shimer.

The American Congress of Tuberculosis.—This congress will be held at the Hotel Majestic, this city, on May 14, 15, and 16, 1902. The *Honorary President* is Dr. A. N. Bell of Brooklyn; the *President*. Dr. Henry D. Holton of Brattleboro, Vt.; the *Secretary and Treasurer*, Mr. Clark Bell of New York. The executive officers were directed to name *Vice-Presidents* from each State, territory, province, or county, at least three from each, and selected as far as practicable from both professions of law and medicine. More than seventy-five of these have been already selected. There will also be one or more honorary vice-presidents from each State, province, and county. It is hoped to organize a museum of objects related to the study and cure of tuberculosis.

The Harvard Medical Society of New York City.—At the annual meeting of this society, held at the Metropolitan Club on January 24, the following officers were elected: *President*, William B. Coley; *Vice-President*, Myron P. Denton; *Secretary*, J. Hilton Waterman; *Treasurer*, Joseph A. Kenefick.

The Cincinnati Obstetrical Society.—At the annual meeting of this society, held in January, the following officers were elected: *President*, Dr. Julia W. Carpenter; *Vice-President*, Dr. Wm. Gillispie; *Secretary*, Dr. Magnus Tate; *Corresponding Secretary*, Dr. E. L. McKee; *Treasurer*, Dr. C. D. Palmer.

The Jefferson County (N. Y.) Medical Society.—At the annual meeting of this society, held in January, the following officers were elected: *President*, Dr. C. S. Drury, Natural Bridge; *Vice-President*, Dr. John A. Barnette, Watertown; *Secretary*, Dr. F. R. Calkins, Watertown; *Treasurer*, Dr. C. M. Rexford, Watertown.

Christian Science in Germany.—It is reported that Emperor William has had his attention called to the spread of the Christian Science cult and various forms of quackery in Germany, He has had long conferences with the chiefs of police for the purpose of devising measures to counteract the campaign there of the Christian Scientists, who have followers in the higher circles of Berlin society. It is the opinion of many persons high in authority that the treatment of the sick by the adherents of Christian Science should be made illegal in Germany.

Change in the Management of the Paterson Hospital.—The control of the Paterson General Hospital was formally transferred on February 6 from a board of lady managers to one composed of forty of the business and professional men of the city. The ladies built up the institution from a little frame structure on a side street thirty years ago to a large modern brick building. But the increase of the plant necessitated such a large current expenditure that the ladies found it difficult to raise the money, and they decided to call in business men to take charge of the finances. They will still retain their interest in the institution as an advisory board.

Gifts to Kings County Medical Society.—Dr. Henry A. Fairbairn has presented $1,500 to the Medical Society of the County of Kings, of which he is president, as a memorial to his father, the late Rev. Dr. Robert Brinkerhoff Fairbairn. A like amount was presented to the society by Dr. Calvin F. Barber as a memorial to his father, the late Dr. Isaac Henry Barber. Another gift of $250 is from Dr. Nathan T. Beers, Jr.

Consolidation of Medical Journals in Cleveland.—Plans for the amalgamation of the *Cleveland Journal of Medicine* and the *Cleveland Medical Gazette* have been brought to a successful issue. On January 20, 1902, was held the organization meeting of the Cleveland Medical Journal Company, which is composed of physicians interested in the two old journals, together with a good proportion of the representative physicians of Cleveland, numbering in all forty-five stockholders. The two journals have been transferred in their entirety to the new company that will publish the *Cleveland Medical Journal*, which, according to the announcement made, "is to be an independent and free professional institution, conducted for the good of the medical community, with no idea on the part of the stockholders that they shall ever look for dividends." At this meeting a temporary organization was formed consisting of Dr. Marcus Rosenwasser, *President;* Dr. William E. Bruner, *Secretary;* and Dr. Joseph F. Hobson, *Treasurer*. Dr. P. Maxwell Foshay was elected *Editor*, and Dr. Edward S. Lauder, *Associate Editor*.

The Orange County (N. Y.) Medical Association.—At the annual meeting of this society, held at Middletown, on January 15, the following officers were elected: *President*, Dr. M. C. Conner; *Vice-President*, Dr. F. W. Dennis; *Secretary and Treasurer*, Dr. C. I. Redfield; *Delegate to the American Medical Association*, Dr. E. D. Woodhull.

Wills Eye Hospital, Philadelphia.—Dr. McCluney Radcliffe has been appointed Executive Medical officer, a newly created position.

Obituary Notes.—DR. HENRY CORSON of Forest City, Pa., died on February 7, at the age of one hundred and eight years. He was born in Camden, N. J., March 15, 1794, and at the time of his death was the oldest person in the State of Pennsylvania. He began the practice of medicine in Philadelphia in 1802, and he was engaged in practice in Susquehanna county for seventy-five years.

DR. THOS. NEALL PENROSE, Medical Director United States Navy, retired, died at the United States Naval Hospital at Philadelphia on February 13, at the age of sixty-six years. He was graduated from the Medical Department of the University of Pennsylvania in 1858, and at the breaking out of the Civil War entered the army as assistant surgeon. He served throughout the war with the exception of a few months when he was absent on sick leave necessitated by hardships endured in a rebel prison. He entered the regular army in 1861. He was located at the Washington Navy Yard until February, 1862, when he was ordered to the United States Steamer *Harriet Lane*, which became attached to Farragut's fleet. He was under the immediate command of Commodore, afterward Admiral, Porter, and passed through the hottest battles of the Gulf. At one time all the other officers of the ship were either killed or wounded and he was taken prisoner. After a period of imprisonment at Alexandria, Va., he was exchanged, and was later ordered to the United States supply ship *Massachusetts*. After the war he saw continuous service, visiting all parts of the world. From 1872 to 1874 he was at the Naval Hospital in Philadelphia, and in 1893 he was in command of the Naval Hospital at Norfolk. For several years he was a member of the Board to examine applicants for entrance to the service and to examine junior officers for promotion. He was commissioned passed Assistant Surgeon in 1866, Surgeon in 1871, Medical Inspector in 1889 and Medical Director in 1896, being retired in 1897.

LIEUT.-COL. BENJAMIN F. POPE, Deputy Surgeon-General, U. S. A., died at Manila, on February 14, from Bright's disease. Col. Pope was a native of New York, and first entered the military service as Assistant Surgeon of the Tenth New York Heavy Artillery, July 18, 1864. He was made acting Assistant Surgeon in the Regular Army in 1867, and promoted in the same year to First Lieutenant. From 1882 to 1886 he was in charge of the Record and Pension Division with the rank of Major. He was stationed in the Department of the East when the United States declared war on Spain, and was promoted to Lieutenant-Colonel and Chief Surgeon of Volunteers and ordered to Cuba. He was Chief Surgeon of the Fifth Army Corps at Santiago and returned to the United States in August with the troops going to Montauk Point. From that time until last April he served in the Department of the Lakes and the Department of California. He was then made Chief Surgeon of the Division of the Philippines, and on January 1 was promoted to the rank of Lieutenant-Colonel.

DR. THOMAS NEALL PENROSE, Medical Director, U. S. N., retired, died on February 13 at the United States Naval Hospital in Philadelphia of heart and kidney trouble. He was sixty-seven years old. Dr. Penrose was born in Philadelphia and was graduated from the University of Pennsylvania. At the beginning of the Civil War he entered the army as Assistant Surgeon and served throughout the war. From 1872 to 1874 he was stationed at the Naval Hospital in Philadelphia, and in 1893 was in command of the Naval Hospital at Norfolk. He was retired in 1897.

DR. JESSE MEYER of Kingston, N. Y., died on February 16, at the age of eighty years. He was a graduate of the New York University Medical College, in the class of 1844.

DR. JOHN L. MILLION died at his home in Springfield, Ills., of pneumonia, on February 14, at the age of seventy-five years. He was a graduate of the Missouri Medical College, St. Louis, in the class of 1851. During the Civil War he was Surgeon of the Thirty-first Illinois Infantry under Gen. John A. Logan. He was a member of the Board of Pension Examiners, and for thirty years had been Chief Medical Examiner of the Ancient Order of Workmen. A widow and two sons, one a physician, Dr. Edward A. Million, survive him.

DR. JAMES H. HINE died at his home in New Milford, Conn., on February 11, at the age of seventy-nine years. His death was the result of injuries inflicted by a fall about a month ago. He was a graduate of the New York University Medical School, in the class of 1847, and practised continuously in New Milford up to his retirement a few years ago.

DR. HENRY BAKER of this city died on February 14, at the age of sixty-two years. He was a graduate of the New York University Medical School in the class of 1866, and had practised continuously in this city.

DR. HENRY CORSON of Forest City, Pa., died on February 8, at the reputed age of 108 years. It is said that he was the oldest person in the State. It is stated in a despatch from Scranton that he was born near Camden, N. J., on March 15, 1794. He first practised medicine in Philadelphia and later at Montrose, Hartford, Susquehanna and Forest City, all in Pennsylvania. He continued the practice of medicine up to a short time ago.

Correspondence.

OUR LONDON LETTER.

IN PARLIAMENT—THE EPIDEMIC—STREPTOCOCCAL GASTRITIS—PNEUMOCOCCIC GASTRITIS—CLINICAL EXHIBITS—THE "HEART OF THE CHILD"—NATIONAL HOSPITAL—LONDON UNIVERSITY—SOME "ASPECTS OF FRANCE."

LONDON, January 31, 1902.

IN Parliament only a few items of medical interest have transpired. The War Minister has promised that the new Royal Warrant for the Royal Army Medical Corps will shortly be published. An explanation has been offered as to the vessel with smallpox on board, which signalled "all well," but it was not stated that the commander would be prosecuted. The proposed scheme for organized research on cancer has been mentioned, but no promise of government aid has been elicited. The Home Secretary is to be asked next week if he will consult the law officers of the Crown as to the legality of the Medical Council, in their action as to medical aid societies.

The slight decrease I mentioned in the numbers of smallpox cases has been succeeded by an increase fully justifying the anticipation I expressed. Last Saturday the Chairman of the Hospitals Committee of the Asylums Board announced a decrease of 114 in the number of admissions during the preceding fortnight, a slackening of the rate of progress, which he calculated at 20 per cent. Monday's newspapers were accordingly jubilant, but the next day they had to change their tone in the face of fifty-three fresh cases, and the Asylums Board was congratulated on not having relaxed its efforts to cope with the epidemic. After I reported that the cases under treatment had reached the ninth hundred, they dwindled down to 867, at which they stood on Friday; but they began to rise again, and have continued to do so daily. Yesterday there were nearly 1,100 in the several hospitals, and seventy-eight fresh cases were notified. Thus yesterday showed the largest number of admissions, as well as the most patients under treatment. There is, accordingly, a sharp reaction from the optimism of last week, and many are predicting that the epidemic will be worse than that of 1884-5.

The Mile End Workhouse was invaded on Saturday, and out of some 450 inmates forty-two had been attacked by Wednesday, and yesterday seven more were added, including two nurses employed in the Infirmary. At this East End Workhouse the majority of the patients have been women, and it is thought that the disease was introduced by a woman lately admitted.

Among extra metropolitan outbreaks, one at Dartford—where twenty-five cases have been notified—must be regarded as serious, as the infection seems to have been taken to the shore from the hospital ships near. Moreover, there are numerous factories in the district.

Chickenpox is now made notifiable under the acts.

The King has not only expressed a wish that those employed by him should be revaccinated, but has set them the example, and, of course, many previously careless people are imitating his Majesty.

Dr. Cayley related to the Pathological Society a case of phlegmonous gastritis, due to streptococcus infection. On admission, all the symptoms of acute general peritonitis, with dilated stomach, were present. At the post mortem the stomach was found dilated, its coats thickened and infiltrated with pus from the mucous membrane, which was intact, to the peritoneum. The purulent exudation from the submucous coat showed a number of bacilli resembling the bicoli, and a few chains of streptococci; other organs normal. Dr. Cayley thought that the streptococcal infection was primary, and the bicoli a secondary effect. He said two conditions were necessary, the virulent organism and a state of membrane permitting their penetrating. As to the latter, it was remarkable how large a proportion of the patients were intemperate. He was not aware that any fatal case had been diagnosed during life, but Dörbeck claimed to have recognized a case which recovered, mainly from pus in the vomit.

Mr. Foulerton followed with a paper on pneumococcic gastritis. The symptoms in the case related were those of septicæmia with cutaneous petechiæ. At the post mortem there were numerous petechial hemorrhages into the subcutaneous tissue, "mulberry spots," on the face and neck; petechial hemorrhages on the epicardium and into the liver and kidneys, and acute fibrinous exudation over the surface of the stomach. Cultures of diplococcus pneumoniæ were obtained from the exudation, the mulberry spots and an interstitial hemorrhage into the right lung. A section of the wall of the stomach showed an exudation membrane and extensive necrosis of the glandular layer. The only similar case was Dieulafoy's case of pneumococcic ulceration of the stomach.

Dr. H. Spitta described and showed lantern slides of a bacillus he had isolated from the pus in a case of rapidly-spreading gangrene, without emphysema. The wound involved fracture of the four metacarpal bones and the lower third of the radius, and was much contaminated with dirt, having been caused by a lift accident. The bacillus was fatal to guinea pigs in fifteen hours. He had recovered the organism from the subcutaneous, pleural, and peritoneal glands, also in pure culture from the heart blood. It resembled Welch's Bacillus aërogenes capsulatus, but differed clinically by absence of emphysema, which occurred in infection with that.

There was a brave show of cases at the Clinical Society on Friday. Let me name some. One illustrated the value of *x*-rays by showing a dislocation of the scaphoid after an accident. A case of almost complete bilateral facial palsy in a lad of fifteen, who "had paralysis of arms and legs" at five and recovered, but had never been able to "move his face." There is some power in the risorius and depressor anguli oris and orbicularis oris. A girl of eighteen with bilateral cervical ribs and an abnormal bony mass at the first chondro-sternal junction, giving rise to no inconvenience, illustrated by skiagram. A man of twenty with swelling of the shoulder, followed by grating in association with syringomyelia; a child with coxa vara; skiagraph shown. A lad of seventeen, who, after a fall, had had separation of the epiphysis of the head of the femur, demonstrated by *x*-rays—a condition very difficult to determine otherwise.

Two cases of intestinal excision: One, a man of thirty—on operation, in May, 1899, an obstruction was found from a hard growth around the ileo-cæcal valve. The distended hypertrophied small intestine was evacuated and anastomosed with the colon. Six weeks later the cæcum, with some inches of colon and ileum, was excised. The patient is now in good health, though the growth was carcinoma. The other case was carcinoma of the transverse colon in a woman of fifty-eight, a diabetic. Nearly five inches of colon was removed and end to end anastomosis made October 25, 1900. No sign of recurrence; patient in good health ever since. Both these cases were exhibited by Mr. Barker, the operator.

The annual meeting of the Harveian Society was held on the 16th inst., when Dr. Lees gave his valedictory address on "The Heart of the Child," a subject he feared to be much neglected. He gave important hints on physical examination in children, emphasizing gentleness in percussion. Dilatation of the left ventricle he found frequent, showing its causes are many, and perhaps the child's heart muscle specially susceptible to toxins. A very injurious cause is rheumatism, now shown to be due to a diplococcus, which has been found in the tissues of the heart. The slightest sign of rheumatism in a child calls for daily examination of the heart, on account of the disastrous effect on the patient's future. Salicylates may be freely given and leeches applied, followed by an ice bag, with precautions against chill. Ventricular dilatation, caused by toxæmia, may require strychnine and, perhaps, digitalis. The dangerous dilatation, which often follows diphtheria, is best treated by atropin, hypodermically.

A vote of thanks was accorded for the address. The new president, Mr. Watson Cheyne, was then inducted and a *conversazione* opened.

At last the National Hospital has completely rid itself of the old board. Two of the former members endeavored to get a seat on the new board and, out-voted at the meeting of governors, demanded a poll. This was carried, and they were defeated.

The Faculty of Medicine of the University has been increased from 158 to 359 members, in order to take in all the recognized teachers of advanced and intermediate medical studies. The faculty would seem to be a rather unwieldy body. It has already declared that no scheme of matriculation will be satisfactory that does not permit a wide choice of subjects.

Liverpool had a very successful meeting on Monday to promote the establishment of a university in that city. The object is to be embodied in an omnibus bill in Parliament. Already £80,000 has been subscribed towards the realization of the scheme.

Miss Cobbe has been rampaging against the doctors again, and telling them how to treat cancer by "lawful and humane methods." Among other cures she recommends infusion of violets and other plans which galvanists and herbalists can suggest. This and other trash has been admitted to the *Daily News*, which, since it went pro-Boer, seems to be descending to the position of those yellow papers which pander to every form of quackery.

There is an association here for the prevention of premature burial, which held its annual meeting on Tuesday, when Mr. Brindley James, a well-known medical reformer, and ex-president of the West Kent Medical Society, gave an address on "Some Aspects of Trance." He treated his subject largely from an historical point of view, which gave him scope for interesting items.

Progress of Medical Science.

The Boston Medical and Surgical Journal, Feb. 13, 1902.

Treatment of Inversion of the Uterus.—E. W. Cushing reports a case in which he successfully used Thomas' method (in which the abdomen is opened and the funnel dilated, so that the uterus can be replaced in its proper position) by combining with it the Trendelenburg position. His arguments in support of this operation are that in case there are adhesions they can be separated with more care and discrimination from above; that the uterus, having been replaced, it is evident that the ligaments which are to support it will be elongated and weakened, and it will, presumably, be advantageous to fasten the fundus to the abdominal wall; that the uterus, having a great tendency, to bleed, and the patient being exsanguinated, less blood will be lost if all the manipulation can be done from above, while the patient has the pelvis elevated, and the ovarian and uterine arteries can be compressed; and that the whole operation will be cleaner, and there will be less chance of septic infection if it is not necessary to open the cul-de-sac of Douglas. The author's experience in the case reported was in entire conformity with what he expected, and he considers Thomas' operation with the Trendelenburg position as the operation of election in cases of uterine inversion.

Faulty Uterine Growth.—Daniel H. Craig holds that the uterine ligaments play a considerable part in these cases, and that unless proper attention be paid to them, success in treatment is much more difficult, if not unattainable. Cases of faulty growth he divides into two classes; the first comprising absence of growth, the second tardy or delayed growth. In the latter the cavity and cervix are of about equal length, and it is in this class that treatment seems to be of most value. The symptoms are deficient or absent menstruation, a childlike appearance (but, as a rule, advanced intelligence), constipation, and very sound sleeping. Treatment must be general and local. Cessation from studies, out-door life, gymnastics, and the exhibition of iron, with some laxative, constitute the main points of the general treatment. To induce growth of the organs, active (not passive) congestion must be induced, and can be secured by the intracervical application of impure carbolic acid, negative galvanism, faradism, with the use every night of two-quart, very hot douches. We must be sure that real growth and not merely swelling results. A tendency to retroversion during growth must be met by a small pessary, but when the ligaments become strong, which will be in perhaps six months after the uterus is of normal size and menstruation is regular, it can be removed.

Journal of the American Medical Association, Feb. 15, 1902.

Treatment of Obesity.—Heinrich Stern gives some elaborate dietetic tables, and discusses the necessity for limiting the amount of water taken. Concerning exercise, he says that in starting treatment most stress should be laid on passive and resistance movements. Faradism, massage, mechanotherapy—in short, all methods contributing toward the improvement of the circulation—will be followed by most beneficial results. The employment of cold hydropathic procedures, resulting in increased oxidation of fatty material, and the systematic performance of lung gymnastics, are other suitable means in the combatment of hydroplasmic obesity. For medicines, we may give for the heart, strychnine; for the blood, iron, and for the intestinal tract, beta napthalin, bismuth salicylate, or hydrastis canadensis. To relieve constipation, saline enemata, podophyllin, leptandrin, or calomel may be given. Thyroid, as a general rule, is contraindicated in hydroplasmic obesity.

Prevention of Pelvic Inflammatory Disease After Marriage.—R. B. Hall enumerates as the causes of this condition, gonorrhœal infection, exposure during the menstrual period, and septic infection following abortion. Laceration of the cervix and perineum plays no insignificant rôle in the cause of pelvic inflammation. In laceration of the cervix, with the usual laceration of the perineum and the retroversion that so often accompanies these injuries, with the endometritis following it if the injuries are not repaired, we have a condition present which may lead to pelvic disease in a large percentage of these cases. These patients all have subinvolution following their delivery, and many of them drift along until the endometritis becomes chronic or, even, a salpingitis is established. It is the physician's duty to repair the cervix and perineum within a few months after injury, before chronic endometritis and salpingitis are established, and before the uterus has been in the malposition long enough to cause extensive disease of the ovaries from pressure, to which the ovaries are always subjected after they are dragged down with the uterus in its abnormal position.

The Problems of Serum-Therapy.—J. McFarland believes that evidence is becoming more and more convincing that serum acts chemically in the cure of disease. The formation of the new substances in the blood may be explained by the "lateral-chain" theory of Ehrlich. This theory presupposes that the stimulating substances introduced into the experiment animal have the power of combining with certain groups of molecules in the protoplasm of certain cells in the body, for which they have affinity. The combination is succeeded by a regeneration of the lateral chains, which appear in a quantity slightly in excess of that existing before the stimulation of combination occurred. When more of the combining substance is now injected into the animal and the combining lateral chains again consumed, another still more copious regeneration occurs, and so on until the particular lateral chains are present in great excess, pass out of the cells into the blood where it is known to us as antitoxin. The chemical theory is supported by the following evidence: (1) The action of antitoxin on toxin always takes place in fixed proportions without relation to the quantity employed; (2) The separation of antitoxin and toxin when once mixed under proper proportions is probably impossible; and (3) The occurrence of the reaction *in vitro* is one of the best proofs that it does not occur through some indirect action of the body cells. Metchnikoff found that the introduction of any kind of cellular tissue into the body increases the ability of the blood to act destructively upon that kind of tissue. Thus, if blood of one animal is injected into another, its serum becomes hæmolytically active. If comminuted epithelium is introduced, the serum becomes ebitheliolytic in its tendencies, etc. Here we find an entirely new reaction, with an entirely new sphere of usefulness. Unfortunately, it is still too new to predict what may be the value, if any, of this phenomenon in practice. The possibility of thus attacking cancer at once appeals to us. How desirable it would be to produce a serum whose activity would be to inhibit the growth of epithelium and hasten the destruction of epithelial cells!

New York Medical Journal, February 15, 1902.

The Eye, Ear, and Throat Sequelæ of Typhoid Fever.—L. D. Brose gives several clinical histories illustrating respectively retrobulbar optic-nerve inflammation, loss of vision through hemorrhage into the vitreous of both eyes, paralysis of the muscles of accommodation, middle-ear inflammation, with involvement of the mastoid, and paralysis of the laryngeal muscles, all of which were observed as sequelæ of typhoid fever.

How to See Stomach Curvatures with the Naked Eye.—M. I. Knapp gives the following rule: The patient lies on a table in the usual dorsal position, with abdomen bare. The examiner stands at the side or at the shoulder of the patient, brings his eyes on the same level with the prominence of the patient's abdomen, and watches abdominal respiration with one eye or both. The patient breathes in a normal way, and the examiner follows certain lines which he sees move up and down with the respiration on the abdominal surface. The curvatures of the stomach will be seen distinctly as very fine lines moving under the skin with the respiration. After watching these lines for a few respirations, the observer notes where they stop each time, and marks the lines with ink. These are the lines produced by the curvatures. To corroborate, percussion is made in the following way: The closely apposed index and middle fingers of the left hand are placed on the abdomen, so that the ink line, representing the curvature, is between the two. Now the examiner percusses, very gently, over each finger, without separating them and without removing them from the place. If the line marked on the abdomen exactly corresponds with the curvature, the difference in the percussion resonance over each finger will be heard. As very gentle percussion is required, the use of the stethoscope will be found of material value. For that purpose the stethoscope does not necessarily have to be placed over the stomach, but can be placed anywhere on the abdomen. When there is a doubt as to the identity of the organ over which percussion is made one must resort to inflation of the colon.

The Management of Cerebral Hemorrhage and Its Abortive Treatment.—W. Browning advocates the use of powerful quickly-acting muscular and vasodepressants, such as gelsemium, aconite, and veratrum. These are, of course, to be used at the time of the seizure. Gelsemine is now pretty generally available, and is more convenient as well as, presumably, more exact. The author begins with a dose of from one-tenth to one-eighth of a grain, and continues in one-twentieth of a grain doses. Aconitine is his next alternative, and is efficient. His initial dose is from the one-hundreth to the one-fiftieth of a grain, the latter dose being usually required at first. For the headache he gives one of the coaltar analgenis in small doses. He adds the following "Don'ts." Don't give stimulants. Their use in such cases is most reprehensible. So often we see them freely given, notably the alcoholic. The patient is prostrated, and the lay mind naturally turns to tonics and bracers—about the worst thing that can be done. Don't resort to saline injections. During the acute stage, a limitation of fluids is in order. Don't use the depressant diaphoretics, such as ipecac, pilocarpine, or apomorphine. They tend to nauseate, an inclination otherwise too common, and, in the degree of attempts at vomiting, most undesirable. Don't prescribe digitalis. He has repeatedly seen it bring on another attack. It is a dangerous drug in any individual with a liability to apoplexy, and for this, if for no other reason, of questionable utility in nephritics. Where anything of the sort must be used, strophanthus is, in his experience, far safer. Don't resort to opiates. They are likewise contraindicated. Don't try nitrites, as their use in any form is here out of place. Don't permit any muscular exertion on the patient's part; and moving by others should be limited as much as possible.

American Medicine, February 15, 1902.

A Consideration of Twenty-eight Cases of Tuberculous Peritonitis at the Boston City Hospital, with Particular Reference to the Results of Operative Treatment.—John T. Bottomley summarizes his observations as follows: (1) We may reasonably expect cures to follow the operation in from 30 per cent. to 40 per cent. of all cases. In fatal cases the patients usually die within a few months after operation; (2) Family history does not appear to be important etiologically; but previous inflammatory affections of the abdominal viscera may have etiological significance; (3) Operation usually affords at least temporary improvement, either locally or generally, even in cases that later may prove fatal. The use of drainage following the operation should be avoided when possible; (4) Inferences as to the remote results of operation should be drawn very guardedly, if at all, from the immediate results; though in cases in which either local or general benefit does not immediately follow an operation the prognosis is very unfavorable.

One of the Etiological Factors in the Production of a Deflected and Deformed Nasal Septum and the Methods for Its Relief.—Nelson M. Black concludes that in cases of deflected septum the bony structure has become weakened primarily by traumatism, strumous or rachitic diathesis, nasopharyngeal adenoids, or the result of some of the infectious diseases of childhood; in fact, anything which tends to lessen the resisting power of the bony septum. The resistance to what the writer believes to be the natural tendency of the palatine portion of the maxilla to becoming more V-shaped, being to a certain extent weakened, it continues to arch, buckling the already weakened perpendicular septum more and more, the cartilaginous portion yielding the most (as it is the weakest and is two-thirds surrounded by the bony structure of the septum) until it occludes the nares. It must be remembered that the etiological factors which tend to produce irregularities of the superior maxilla are causative as well of deflected septum. The fact remains that in order to achieve a satisfactory and permanent result in deflected and deformed nasal septa with the high-arched palate, we should remove the active factors, the high-arched palate and acute-angled alveolar processes.

Medical News, February 15, 1902.

A History of the Army Post Exchange or Canteen.—Dunning S. Wilson reviews various reports, letters, resolutions, and discussions on this subject in order to give a correct and impartial verdict concerning it. He states that, after a patient effort covering several months, he has accumulated a mass of evidence in favor of the canteen which would make a volume of itself if it were all published. He has obtained the views of both men and women, religious workers and others, and has by every available means sought to obtain the expressions of the most conservative. Although individuals may hold various opinions, still it must be accepted that the medical and line officers of the army are without doubt in a position to judge most clearly of the benefits and evils of the canteen. The writer also calls attention to the ignorance of the general public of the meaning of the term canteen, they often thinking that it means a liquor flask carried by the soldier. This one point gives a little indication of how blindly the public follows the leader without "rhyme or reason." The general opinion of those who know, concludes the author, is that the canteen "promotes the morals, temperance, discipline, and health of the men." and that the act of abolishing it was ill-advised.

Retinal Lesions of Chronic Interstitial Nephritis.—Edward Jackson sums up these lesions under discussion as follows: (1) Alterations in the contour, size, and color of the retinal vessels; (2) Hemorrhages and the progressively changing exudates, which constitute steps in the removal of effused blood; (3) Retinal œdema; (4) Degenerative changes in the neural elements of the retina, and alterations in the layer of pigment epithelium; (5) Deposits of exudate, which perhaps have a significance somewhat different from that of the foregoing symptoms. The retinal lesions are closely associated with vascular changes. In the great majority of cases they appear just when the prolonged high vascular tension begins to be insufficient and elimination is failing. The association with vascular degeneration is more constant than association with albumin in the urine, casts of any form, or any other clinical evidence of renal disease. Whether the vascular changes cause the retinal lesions, or whether their connection is that both spring from a common cause, the retinal symptoms take from this close connection great importance. They throw light upon the condition of the central nervous system and also that of other organs of the body. They are most important both as a means of understanding the essential nature of this disease process, and as throwing light on the character and course of the individual case.

The Röntgen Method in the Diagnosis of Renal and Ureteral Calculi.—Charles Lester Leonard declares that the use of the Röntgen method is essentially one of diagnosis, and that as such it should be used by professional men only. The diagnostician must possess professional knowledge, special technic and clinical experience with this method. It is often of great service in suspected renal lithiasis, when the typical symptoms are wanting or confused, and a differentiation from diseases of neighboring organs is often impossible by the older methods. The differentiation between renal lithiasis and other forms of nephritic disease is often even more difficult. A small renal calculus may cause symptoms identical with those of incipient malignant or tuberculous disease, and, by blocking the ureter, it often causes anuria and destruction of the kidney. The Röntgen method has shown that calculi in the ureter give rise to renal colic more frequently than when they are in the calices or pelvis of the kidney. This method is of great value in cases of complete obstructive anuria. It often happens that the symptoms are so indefinite even in the case of a large calculus in the calices or pelvis of the kidney, that an absolute diagnosis is impossible except by exploratory operation or the Röntgen method. This method is the only means of differentiating between those cases that demand immediate operation and those in which medical or expectant treatment is justifiable. The chance also of error in the negative diagnosis is very slight, and the calculi that may be overlooked are so small that their final expulsion is certain.

Philadelphia Medical Journal, February 15, 1902.

What Constitutes "Septic Poisoning" in Accident Policies?—G. W. H. Kemper concludes that: (1) The surgeon who is insured and receives a disabling wound, unfitting him for practising his profession, is entitled to an indemnity, whether he contracts septic poisoning or not; (2) A surgeon, while operating, may become infected through an old injury, or a new wound; the effects are the same in either instance. There is no valid reason why a policy should not indemnify alike in both cases; (3) If a surgeon cannot recover indemnity from an infection received through a sore, or an abrasion, then he gains nothing from a clause or rider attached to his general policy. In other words, the term "septic poisoning" in an accident policy is simply an aid to secure policy holders!

A New and Improved Method of Closing Vesicovaginal Fistulæ, with Report of a Case.—A. Lapthorn Smith describes the method which he employs in these cases. After careful disinfection of the vagina, the latter is incised across in front of the cervix and the bladder pushed off the uterus in the same way as in the first step in vaginal hysterectomy. In this case he reports the vagina was easily separated from the bladder with the finger everywhere except where the two edges had become united at the fistula. With the finger between the bladder and vagina, it is easy, with a few cuts of the scissors, to separate them from one end of the fistula to the other. This gives a raw edge, and obviates the necessity of cutting away a particle of either bladder or vagina. The long tear in the bladder in this case was caught with a catgut stitch at either end, taking in only the muscular wall. While these were held on the stretch, the muscular wall was brought together with an over-and-over fine chromicized catgut suture going back fully an eighth of an inch on each side, but taking care not to penetrate the cavity of the bladder, or even to touch the mucous membrane. The slit in the vagina was closed with interrupted silkworm gut passed through the vagina, then through muscular wall of the bladder, but half an inch to the right of the tear in the bladder, and then through the other side of the vagina, thus displacing the bladder half an inch to the patient's left, so that the line of suturing in the two membranes was no longer in the same place as the line of the tear was. Thus the suture of the bladder was strengthened in front by half an inch of solid vagina. A *catheter à demeure* was left in the bladder. By this method no stitches are left in the bladder mucous membrane, which are apt to become the nuclei of calculi. The union of the edges is very firm, while the *catheter à demeure* removes all tension and places the bladder at complete rest.

The Lancet, February 8, 1902.

A Case of Syphilitic Pneumonia.—The case is reported by J. G. Gibbon, his patient being an adult male. The diagnosis was based on the history of the case, and the remarkable clearing up of all symptoms under antisyphilitic treatment. A second and fatal attack showed that there had been only temporary subsidence of the original malady.

Acute Suffocative Pulmonary Œdema.—A case of this nature is reported by T. Lissaman. He found that the cautious inhalation of chloroform was of great benefit, the patient being given a whiff of the drug and a whiff of air in alternate inhalations. The gasping, short nature of the breathing, and the obvious obstruction, due to the frothy material in the air-passages, prevented any great amount of chloroform vapor being introduced into the lungs. However, after from ten to thirty minutes of administration in this way, a marvellous change came over the patient. The lividity disappeared, the breathing became easier, the action of the heart became far less labored, and the respirations slowed down, the patient lying back on the pillows apparently asleep. This condition lasted perhaps for an hour, when the patient was roused, and expressed herself as feeling all right. Concerning the nature of the affection, Lissaman advances the following hypothesis: He says that for some unknown reason there is a spasm of the pulmonary venous (or efferent) system. This will account for the rapid engorgement of the lung and the consequent extravasation of serous exudation in the alveoli, just as engorgement occurs in a limb in venous obstruction. Spasm of the efferent vessels alone would allow rapid accumulation of blood in the (afferent) pulmonary artery and its branches, and the terrific labor of the heart which is present appears to be an effort to overcome this obstruction. The continued obstruction would eventually lead to general systemic venous engorgement, hence the lividity of the face, etc.

Preliminary Note on the Possibility of Treating Mitral Stenosis by Surgical Methods.—Lauder Brunton discusses the possibility of dividing stenosed mitral valves. He has tried the operation on the cadaver and upon a living animal, and calls the attention of surgeons to the matter, for the operation, if ever done, must be done by them. The first question that arises, he says, is whether the mitral orifice should be enlarged by elongating the natural opening or whether the valves should be cut through their middle at right angles to the normal opening. He thinks there can be little doubt that the former would be the better plan, but the latter is more easily performed, and it might be sufficient to effect the desired purpose of facilitating the flow of blood from the auricle into the ventricle. He describes the knives he has used and his plan for exposing the heart, following the suggestions of Ninni of Naples. It consists in making incisions from the left edge of the sternum outwards to the left along the lower edges of the third and fifth ribs, connecting their outer ends by a third incision, and dividing both the soft structures and the fourth and fifth ribs. The window thus made is forcibly turned back on the sternum, the sternal attachments of the ribs yielding to the pressure. In this way the heart is sufficiently exposed, and the lung, being pushed back, the pericardium can be divided and the knife can be introduced into the ventricle. He has only inserted the knife into the ventricle *in situ*, and if one wished to operate through the auricle the window would probably require to be made by an incision at the lower border of the second rib, although by pulling upon the heart it might be displaced sufficiently to allow a knife to be put into the auricle even when the incision is made at the lower border of the third rib. In many experiments made for other purposes he says he has been astonished at the way in which the heart went on beating, apparently quite unaffected by pulling, compressing, or handling of any kind. In operating on the heart the knife should be introduced during diastole, as one is less likely to wound the opposite wall of the ventricle. The pericardium should not only be opened for convenience of operation, but should be left open, so as to allow any blood which might ooze out through the ventricular wound to flow away instead of remaining in the pericardial cavity, for the heart has very little power, indeed, to resist pressure from pericardial distension, especially if it comes on rapidly.

British Medical Journal, February 8, 1902.

Arsenic in the Hair of Beriberi Patients from Penang.—Ronald Ross speaks of twenty samples of hair which he has lately received from beriberi patients, mostly Chinese. Dixon Mann, who analyzed the specimens, reported that six out of the twenty specimens contained arsenic, two yielded more than a trace, two yielded a trace, two a minute trace, and the rest showed none at all. This observer thinks that the question as to arsenic being a causal agent must remain open at present. The writer noted a curious apparent relation between the presence of arsenic and the duration of the cases from Penang. Nearly all the positive cases were recent and nearly all the negative cases were older. This relation may be only a coincidence, but it increases the evidence in favor of the cases being arsenical, since it suggests that the arsenic was present only at a certain stage of the disease. The Penang people work largely in tin manufactories, and are brought into close contact with arsenic.

Two Cases of Recovery after Operation for Diffuse Peritonitis from Perforation of the Appendix.—Charles A. Morton defines diffuse peritonitis as an infection far beyond the limits of an ordinary appendix abscess; it is not a general peritonitis. Early operation is of the greatest importance. The signs of diffuse peritonitis are not always distinct from those of severe localized appendicitis. In the first case here described there was little doubt that a widespread infection of the peritoneum was present. There was great pain and the face was drawn and anxious. The lower two-thirds of the abdomen was distended and very tender, and the breathing was entirely thoracic. Vomiting was persistent. Operation verified the diagnosis. The perforated appendix was removed. The patient recovered from the operation, but the last time she was seen there was still a small patch of surface granulations. The second case was more striking, for a few hours before operation the patients' pulse was only 100, there was no rise of temperature, and the tenderness and rigidity of the abdomen were confined to the region of the appendix, and there was no distention at all. Yet, on opening the abdomen, the lower part was found to be full of pus. Severe pain and frequent vomiting were the prominent symptoms, but they are often very marked in well localized forms of appendicitis. On opening the abdomen, there was seen a very large quantity of pus in the pelvis and right loin. The appendix, which was perforated, was removed, and drainage tubes were in dented. The patient recovered.

Intracranial Thrombosis as the Cause of Double Optic Neuritis in Cases of Chlorosis.—C. O. Hawthorne reports this case. The patient was a girl aged seventeen years, distinctly anemic, and suffering to some degree with menstrual irregularity. She was also afflicted with diplopia and double optic neuritis. The double vision was of sudden and recent origin, and was due to a paralysis of the external rectus muscle of the right eyeball. Visual acuity was normal, there was a slight degree of hypermetropia, and the ophthalmoscope revealed considerable optic neuritis in each fundus. Later there were retinal changes in each macular region, but after a few weeks' treatment by rest and the administration of iron, the optic neuritis subsided and the ocular paralysis disappeared.

The writer presents the following argument: The simultaneous occurrence of the optic neuritis and the sixth nerve paralysis suggests a common origin; the nature and temporary duration of the two events makes it difficult to imagine any single cause capable of producing them other than an intracranial lesion; an intracranial thrombosis may certainly produce them; intracranial thrombosis is a recognized possibility in chlorosis; this patient is the subject of chlorosis; therefore it may be concluded with a considerable measure of confidence that both the optic neuritis and the sixth nerve paralysis were due to intracranial thrombosis. Thrombosis is probably the cause of optic neuritis when this occurs in chlorosis apart from other incidents having a possibly cerebral origin. The thrombosis which occurs in chlorosis is in all probability an aseptic process. One of the factors in its causation is, doubtless, a sluggish state of the circulation, due to cardiac weakness. Complete rest is imperative to prevent embolism. Care must be taken, however, not to reduce the vigor of the circulation too much. Thus, cardiac tonics, as well as iron, seem to be indicated in cases of chlorosis accompanied by optic neuritis. When a passive thrombus has been fully formed, a reasonable amount of exercise is advisable.

Deutsche medicinische Wochenschrift, January 23, 1902.

Chronic Progressive Chorea.—A Westphal reports two cases of this disease in illustration of its etiology and course. The first patient was a woman whose father was choreic, but whose hereditary history otherwise was good. The first symptoms of the disease developed after a normal puerperium five years ago. At that time she suddenly began to show violent attacks of temper, and at periods became uncontrollable. These gradually subsided, but the mental faculties progressively became impaired. Muscular twitchings soon made their appearance, and rapidly increased in intensity and extent, until at the present time all of the voluntary muscles are more or less affected. There is a nasal intonation in the voice. The knee reflexes are increased. This case especially illustrates the dementia so frequently present in chronic progressive chorea of hereditary origin. The second case was a man forty-one years of age. No hereditary history was present, and the choreic symptoms developed suddenly as the apparent result of trauma. The muscular twitchings and speech were much the same as in the first case, with the exception that the voluntary movements were not materially interfered with. These cases illustrate sporadic and hereditary forms of this disease, which are practically indistinguishable on symptomatology.

Estimation of the Quality of Human Milk by Means of Microscopical Examination.—Dr. Friedmann says that the quality of human milk may be readily judged by microscopical examination. The breast is to be milked until it flows freely, when a small drop is to be taken on a glass slide and examined under a lens giving 400 to 500 magnifications. It is seen that the fat is present in droplets of various sizes, and may be divided into three classes—large, medium-sized, and small. In perfectly normal milk the medium-sized droplets predominate; the small come next in number; while the large are infrequent, only 10 to 20 occurring on the average in each field of the microscope. Furthermore, in milk of good quality the droplets very closely approximate each other and only rarely are free spaces left between them. On a variation in these characteristics a diagnosis of the quality of the milk is made. When the large droplets are in excess of their usual number the milk is of good nutritive value, but is liable to cause digestive disturbances in the child. When there is a total reduction in the number of droplets and the small forms predominate, the nutritive value is always low. As this method of examination is easy of performance, it is recommended for routine employment in all cases, as accurate indications for treatment are to be derived therefrom and much infantile sickness may be prevented thereby.

Black-Water Fever.—M. Otto reports a case of black-water fever occurring in quartan malaria as illustrative of the theory that quinine is the causative factor of hæmoglobinuria in malaria. In this case the blood first made its appearance after the exhibition of a large dose of quinine (5 gms.). The patient had been suffering from malaria for some weeks, but quinine had not been previously taken except in one of two very small doses. The hæmoglobinuria was very pronounced, but, no more quinine being given, soon subsided. In a few days quinine was again administered, and was promptly followed by the presence of blood pigment in the urine, but this second attack was not as severe as the first. The administration of the drug was then carried on by the rectum and was not followed by hæmoglobinuria; it is probable that this was due to the small amount thus absorbed. Later renewed attempts were made to give quinine by the stomach, but whenever any considerable amount was taken hæmoglobinuria promptly occurred. The vast majority of the cases of black-water fever hitherto observed have occurred in tropical countries, and in connection with the pernicious form of malaria. The fact that this case developed in Germany, in a patient who had never been outside the limits of the country, and was plainly brought on by the administration of large doses of quinine, lends strength to the theory that this disease results from the action of quinine upon the blood of certain malarial patients.

Deutsche medicinische Wochenschrift, January 30, 1902.

Pathology of Fever.—E. Aronsohn enters into a consideration of the various steps which have led to the existing ideas concerning the mode of production of fever. It is probable that the so-called heat center in the corpus striatum is only one of a number of similar centers which regulate the heat production of the body. The acceptance of this view, however, is not vital for a correct appreciation of the pathology of fever. It is necessary in considering this subject to ascertain, if possible, the portions of the body in which the increased production of heat takes place, or, if no increased production occurs, but deficient radiation is the cause of the increased temperature, that portion of the body in which such increased temperature is most marked. A large amount of experimental work has been done upon this phase of the subject, and one after another the various body glands have been designated as such centers. Many facts, however, show that the body glands are not concerned in the production of the increased temperature in fever, and it is certain, generally speaking, that glandular activity is decreased rather than increased in the presence of elevated body temperatures. Some have thought that the sources of increased temperature are to be found in the blood and originate in the metabolic changes there going on. Aronsohn's investigations show that such is not the case; for an animal in which fever is artifically produced by means of a puncture of the heat center still maintains its increased temperature when a large portion of its blood is withdrawn and replaced by deci-normal salt solution. Physiology has established the fact that under normal conditions four-fifths of the heat production of the body takes place in the muscular tissues, and it seems reasonable to suppose, therefore, that in fever the source of the increased temperature is to be found in these structures. Experimentation demonstrates that such is the case. Artificial fever was produced, as above, in rabbits by means of puncture and curare injection. This substance, as is well known, simply paralyses the intramuscular ends of the motor nerves. By this means the metabolic changes taking place in the muscles are checked. Shortly following the injection of this substance, there was a marked fall in the temperature. Animals in which the inoculation was practised previous to the puncture showed very little if any fever. The author thinks this demonstrates that the principal sources of increased heat production in fever are the muscular tissues. He believes that, as the result of mechanical electrical, or chemical irritation, the heat center becomes affected so that the trophomotor apparatus of the body muscles (voluntary and involuntary) becomes damaged, and the normal heat production and radiation in them altered. The type of fever thus produced will vary according to the characteristics of the factors operative upon the heat center and the various pathological conditions, if any, present in the body.

French Journals.

Two Cases of Torsion of the Pedicle of Ovarian Cysts.—Capdepon and Duvergey make this report. The first patient was aged fifty-eight years, and had passed the menopause. She had noticed for two years a progressive increase in the size of her abdomen. At the time of observation she suffered from a sudden attack of acute pain in the abdomen, and the tumor in a short time doubled in volume. Vomiting began, and, on examination, there were found all the signs of an ovarian cyst. Laparotomy verified the diagnosis and revealed the cyst, which was filled with about fifteen liters of bloody fluid. The pedicle was found to have made two complete turns on its axis. The recovery was uneventful.—*Journal de Médecine de Bordeaux*, January 26, 1902.

A Mediastinal Tumor.—Ingelrans and Brassart report this tumor, which was discovered at autopsy in a young man of twenty-seven years. The patient had retrosternal pain; and on examination before death the face was found to be cyanosed, and dyspnœa was very distressing. The axillary and right clavicular glands were enlarged. The right arm was œdematous. The pulse was scarcely perceptible; there was no cardiac murmur. The breath sounds were feeble on the left side, and all the signs of a pneumonic patch were noted on the right. There was no digestive disturbance, and phonation was normal. There were some dilated veins in the legs, and at these places there was a little œdema. The patient died from cardiac syncope, after an attack of intense dyspnœa. At autopsy the lymphadenoma was found developed to as great a degree in the anterior as in the posterior mediastinum.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, January 26, 1902.

Discovery of Eberth's Bacillus in the Blood of Typhoid Patients During the First Days of the Fever.—M. J. Courmont points out the inconveniences of serum diagnosis, which can often not be made till late in the disease. Various observers have discovered the bacillus in the blood of "rose spots," but the search for it in the blood of the general circulation has almost always proved fruitless. This is probably due to two causes: There are very few bacilli in the blood, and a culture made with a few drops only is apt to be sterile. The blood is certainly a bad culture medium for the bacillus, as it has a decided bactericidal action. The small quantity of blood that is put into the bouillon can suffice to check the growth of the microbes. Courmont takes about 3 c.c. from the vein at the fold of the elbow, and puts it at once into ½ liter of bouillon. In eight cases, almost all grave it is true, he has obtained from the first and up to the twenty-third day positive cultures. He has also found the bacillus in the relapse of the fever. The writer believes that this method affords a sure and early means of diagnosis of typhoid fever.—*Lyon Médical*, January 26, 1902.

Post-Operative Hemorrhages after Abdominal Hysterectomy.—Voituriez declares that the post-operative hemorrhages are not very rare after abdominal operations. They may occur early or late. When early, they may be the result of absence of ligature, or of a slipped ligature. They may be arterial or venous. In some patients the venous system is highly developed, the veins are distended, and the valves are insufficient. However, the hemorrhage is most often arterial, and its origin is easily recognized on examination. The detachment of adhesions, in which blood vessels course sometimes, gives rise to hemorrhages. A hemorrhage may occur eight days after the operation. These latter are rare, and may be due to septicæmic infection, or to separation of a cicatrix, which exposes the blood vessels. The subperitoneal and intraperitoneal hemorrhage must be differentiated. The prognosis is very variable, according to the time of interference and the vitality of the patient. The writer then calls attention to the value of saline injections, as the danger from a large hemorrhage is not so great from the loss of blood cells as it is from the diminution in blood pressure, and in the sudden decrease in amount of volume of blood in the circulation.—*Journal des Sciences Médicales de Lille*, January 25, 1902.

Congenital Coccygeal Multiple Cysts and Fibrous Tumor.—M. T. Brennan and Choquette describe the case of a small girl of three months upon whom they operated. The tumor was pediculated, very hard, smooth, movable, without fluctuation, in the center of which was a small polyp, a little softer than the rest of the mass. This tumor was in the coccygeal region, and was the size of a small hen's egg. It was congenital and had increased in size since birth. By rectal palpation several small smooth, elastic tumors were felt under the mucosa, although the latter was freely movable over them. The tumor was so fibrous that it almost creaked under the scalpel. The small polyp was softer. When the fibrous tumor was cut through, there were discovered several small cysts with colorless, gelatinous contents, not containing a trace of fat. When the tumor was removed there appeared on each side of the wound two osseous plaques, teratological remnants of the coccyx. There was no connection with the spinal canal. The osseous plaques were removed and the wound curetted and drained with iodoform gauze. Some days after the operation the child contracted whooping-cough and died. The wound was healed. There had been no suppuration. The tumor was purely fibrous, with no sarcomatous elements. The cysts seemed to be of the nature of the adult dermoid cyst, though not a perfect type.—*La Revue Médicale du Canada*, January 22, 1902.

The Kidney in Tuberculous Patients.—M. E. Guihal states that the examination of urine in tuberculous patients is of the highest interest, since within certain limits it shows the condition of these organs. The quantity of urine may be modified in various ways: polyuria is most often observed, and is always the rule in amyloid degeneration. Albuminuria is the most important pathological sign furnished by urinary examination. Statistics vary as to the frequency of this symptom. It varies according to the age and according to diverse forms of pulmonary tuberculosis. Le Noir declares that it is very frequent in adolescents, falls to a minimum between thirty and forty years; it is a little more frequent from forty to fifty years, but the minimum is reached at about the age of sixty. The quantity of albumin is also very variable. It is most often moderate. The clinical form of this symptom may also vary; it may be temporary, intermittent or permanent. The amount of urea excreted is in general diminished. The elimination of phosphates is generally diminished. The chlorides are usually above normal. The toxicity of the urine is noticeably diminished. The presence of the diazo reaction of Ehrlich is, as a rule, of grave prognostic significance. Chronic parenchymatous nephritis develops chiefly in the first stages of tuberculosis. Its onset is often most insidious. Renal lesions do not appear to hasten the evolution of pulmonary tuberculosis. They are unfavorable to the general condition of the patient. They are an obstacle to forced feeding, and in some cases to medicinal treatment.—*Gazette des Hôpitaux, Civils et Militaires*, January 25, 1902.

Sugar for Russian Soldiers.—The question of adding sugar to the daily rations of the Russian soldier is at present occupying the attention of the army commissariat department.

Society Reports.

THE PRACTITIONERS' SOCIETY.

168th Regular Meeting, Held on Friday, January 3, 1902.

Joseph D. Bryant, M.D., President, in the Chair.

Chronic Unilateral Lymph Œdema.—By Dr. Robert Abbe.—The three cases illustrated by photograph (one of them by the patient herself) show an interesting phase of œdematous enlargement of one thigh, which contrasts strongly with œdema of other types, and is rare enough to be of interest.

Two have been watched for six and twelve years, respectively (Nos. 1 and 2), and have shown no tendency to extend to the opposite side. One has shown itself above and below the knee from the onset, but very slightly in the foot. The other confined its appearance to the thigh from the first, and only slightly involved the lower leg after many years, and never the foot.

It would be proper to class these cases as local elephantiasis of non-filarial origin, but, from their having some features resembling ordinary œdema, and from the contrasting pathology, it is better to speak of them as lymph œdema.

The hard non-pitting character of the swelling, as well as its localization, is characteristic, and its pathology is of interest.

We see by contrast: (1) A neurotic œdema in the precincts of fractures, lasting months, as in Colles' fracture of the forearm, which swells the forearm above and below the wrist. This does not involve the lymphatics apparently, and is a non-inflammatory type of disturbed innervation resulting in a serous transudation; (2) A true œdema of cardiac or renal origin; (3) A serous œdema from venous stasis associated with vascular obstruction; (4) A lymph œdema from filarial origin as in the tropical elephantiasis; (5) A chronic lymph œdema from repeated infective inflammation, as in recurrent erysipelas attacks (of which I show a photo taken by me some years since, in which case the patient had had many attacks of facial erysipelas.)

This hard lymph œdema also appears in occasional cases around necrosis infection (of which I show a good sketch in illustration—No. 3). It is also seen most typically in the hard, brawny leg with chronic ulcers and varicose veins.

I speak of these to explain the pathology which I also believe may be ascribed to the cases shown.

I will only specify one (the patient shown to-night—No. 1), whose history elucidates the matter. When I saw the patient in 1894 she was twenty-six years old. Twelve years before, she was well, and had a fall over the banisters, followed by a fever and recovery.

Shortly afterward, her mother remembers an attack of "inflammation of the bowels," with fever, and a suspicion of appendicitis.

Four years ago, she began to have this hard swelling of her lower leg above the knee, without cause. She is a music teacher, and does no work that would affect it.

Occasionally she has had pain over the appendix. I have watched her for seven years, and on one occasion found a marked tender tumor of the appendix region, which I thought entirely characteristic, but it disappeared, without operation.

My belief is that she has had an infection of the lymphatics running into the thigh and leg, by a very insidious extension, begetting an occlusive thickening, which, as time has gone on, has resulted in hyperplasia. Ziegler states that "endothelial cells of the lymphatic channels take part in the neoplastic formation and produce connective tissue."

The pathological fact, then, associated with chronic lymph œdema, is not simply a lymph stasis, but a low grade of bacterial infection of the lymphatic capillaries extending insidiously, occasionally cropping out in distant parts by migrating colonies, and inducing secondary chronic hyperplasia.

Dr. Charles McBurney said if the explanation offered by Dr. Abbe for this chronic œdema was the correct one, he was at a loss to understand why the condition was so rare, in view of the fact that many cases are apparently open to the same danger. The speaker said he had observed two cases similar to those reported by Dr. Abbe, which seemed to be dependent on operative interference. Both patients gave a history of having been operated on for hernia. One showed the evidences of a very extensive operation, including the removal of the veins and other tissues from around the vas deferens. Subsequent to the operation, the patient's penis and scrotum and the lower abdominal wall became hard and œdematous. The condition was painless, but the swelling was so extensive that it almost disabled the patient. The patient was very slow to improve.

In the other case, the hernial operation was followed by hydrocele and a characteristic swelling of the scrotum and root of the penis. In both of these cases, Dr. McBurney said, he attributed the condition to the fact that the lymphatics had been so extensively destroyed that a lymph stasis was produced.

Dr. Beverley Robinson said that in the case shown by Dr. Abbe there seemed to be considerable enlargement of the tibia, and it would be interesting to verify this by means of an x-ray picture. The speaker said that in a similar case which he saw many years ago, there was undoubted enlargement of the bone.

Dr. W. Gilman Thompson said he had photographs of three cases very similar to the one shown by Dr. Abbe. In two of his cases, the speaker said, the condition occurred in men; the third case was in a girl who was under his observation at Bellevue Hospital for more than two years. In all three of the cases the chief characteristics of the œdema were its firmness and unilateral localization. In the two men it was located between the knee and ankle, and in the girl it extended from the groin to the ankle. In none of the cases were the feet involved. In the case of the girl referred to, the blood was frequently examined for filaria, but without result. On several occasions there was extensive exudation from the lymph vessels in the thigh. There was much hypertrophy of the skin, which occasionally broke down from irritation, and from the abrased surfaces lymph would exude. This patient also had at times an œdematous swelling over the shoulder and neck; it was on the same side of the body as the affected lower extremity, but intermittent in character and less hard and brawny, and more suggestive of the mucinous œdema occasionally seen in myxœdema.

Dr. Thompson said that in each of the three cases the etiology of the condition remained unknown; no cause whatever could be found for the lymphangitis. Various methods were tried to reduce the œdema, such as the application of an Esmarch bandage and the use of local applications to improve the circulation, but the reduction was only temporary. In all of his cases the hypertrophy of the skin was more marked than in Dr. Abbe's case. The speaker said he was rather skeptical about the explanation of this condition which Dr. Abbe had advanced, for the same reason as that given by Dr. McBurney, namely, that these cases are so rare, whereas localized sepsis is so common. Furthermore, a localized sepsis would not explain those cases where the œdematous foci were widely separated, as in one of his cases where the shoulder and leg were involved.

Dr. V. P. Gibney referred to a case coming under his observation where a condition of elephantiasis of both limbs, but chiefly of the right, followed an injury to the right knee. The patient was a woman, well advanced in years, who fell and displaced the external semi-lunar cartilage. It was put back into place, but slipped out occasionally afterward, and subsequently she developed a rheumatic condition involving both knees, and from that time on both legs began to be œdematous, the swelling extending down to the malleoli, the feet remaining normal in size. The speaker said he was at first inclined to believe that the feet were exempt on account of the more or less constant wearing of shoes, and with this idea he bandaged the swollen limbs; but this only produced temporary improvement.

The above case, Dr. Gibney said, suggested rheumatism as a possible etiologic factor. Several competent men who have seen this patient regarded the condition as a form of elephantiasis.

Dr. Edward G. Janeway said he had seen one case of this type of œdema in which the swelling appeared in various regions of the body, and finally became permanent in the legs. After extensive operations on the breast for cancer, we occasionally see marked unilateral œdema, which is probably not the result of a recurrent growth, but of interference with the lymph current.

The President, Dr. Bryant, said he had under observation two cases where very decided œdema resulted from operative work. In one instance the œdema came on very promptly after the operation; in the other, later. The question arises whether the condition is merely due to lymph obstruction, or whether it has a different pathology. It should be at once apparent that it is not due to obstruction from disease return, especially in the presence of thorough primary removal alike of present and prospective sites of disease.

Dr. Abbe, in closing, said that in the cases he had observed, the œdema, in the majority of instances, was on the right side. We know that the œdema caused by venous obstruction in typhoid and other fevers is four times as frequent on the left side as on the right, due, as suggested by Dr. Keen, to pressure of the right iliac artery on the vein passing beneath it, which produces a relatively sluggish venous current on the left, and thus allows bacterial colonies to lodge and initiate local phlebitis. Another point that had inclined him to the belief that the cases he had described were due to a distinct pathological infection was that in most of them the œdema began in the thigh before the lower parts of the limb became involved. A simple lymph stasis would probably manifest itself first at the distant part of the limb. In the girl he had shown the œdema had remained localized for many years above the knee.

As regards the treatment of this condition, Dr. Abbe said he had tried bandaging, electricity, applications of iodine, inunctions, and internal medication, all without effect. The speaker said he would adopt Dr. Robinson's suggestion, and have an x-ray picture taken.

A Case of Unilateral Right-Sided Venous Thrombosis, Associated with Cardiac Disease; Autopsy.—Reported by Dr. John Winters Brannan. (See page 291.)

Dr. Janeway said he had seen a number of these cases of cardiac disease complicated by a thrombosis of the veins of one or both of the upper extremities. This subject has recently been very thoroughly discussed by Dr. Welch in the paper which he read before the Association of American Physicians.

Dr. W. Gilman Thompson said that within the past month he saw a case of venous thrombosis involving the left arm. The patient, while apparently enjoying excellent health, suddenly complained of pain in the arm, and within an hour her arm and hand began to swell. The condition was accompanied by severe pain and tenderness in the upper arm. The œdema lasted about two weeks. The condition presented the usual appearance of venous stasis, and there was considerable difference in the temperature of the two upper extremities. At the present time the swelling has largely disappeared, but it recurs slowly when the arm hangs down. This case was especially interesting, Dr. Thompson said, on account of the utter lack of etiology. He has seen it follow grippe and various other diseases, but in this case no explanation could be offered.

Dr. Thompson said he was glad to learn that Dr. Brannan had such a careful examination of the veins made in his case, and the fact that no evidences of a phlebitis were found is interesting. In the cases that develop during the convalescent stage of typhoid fever, it is curious to note that they occur while the patient's condition is improving, when the heart's action is better than it has been before in the course of the disease. The speaker said he had seen it in the third week of convalescence, while the patient was rapidly gaining ground, and when a blood examination did not show any special anæmia. It is very difficult to explain some of these cases of venous thrombosis.

Dr. Beverley Robinson said that in the paper of Dr. Welch, to which Dr. Janeway had referred, the explanation is given that these venous thrombi are probably of infectious origin. The various theories that have been advanced to explain the formation of such a thrombosis, such as the insufficient circulation of the blood, changes in the caliber of the vein, etc., can hardly be regarded as satisfactory, and we must go back to the idea that the formation is dependent upon some unrecognized changes in the condition of the blood itself. The speaker said it was interesting to note that in the case reported by Dr. Brannan the thrombosis was on the right side, as in the majority of cases it occurs on the left side. It is generally accompanied by some heart lesion, usually mitral in character.

A Case of Lateral Sinus Thrombosis, with Operation and Recovery.—Reported by Dr. F. P. Kinnicutt. R. G., male, twenty-six years old, was admitted to the Presbyterian Hospital, in my service, November 8, 1901. Family history unimportant. Personal history, no evidence of gonorrhœal or syphilitic infection. As a child, suffered from epileptiform attacks, which, however, were of infrequent occurrence. Attacks occurred occasionally until four and a half years ago; since then has been free from them. The patient's general health always has been excellent. Four years ago, he noticed that the veins on the lower portion of the abdomen were conspicuous and even hard to the feel, and he thinks they have gradually increased in size since. At about the same time he began to be troubled with varicose veins in both lower extremities, and underwent a surgical operation for the relief of the condition in one of the city hospitals. Recurrence of the trouble a year later, when ulcers developed, which only healed after a very considerable time. Nine days before admission to the hospital, the patient began to be troubled with headache, especially localized over the right temporal region, and also with pain in right eye. The headache persisted, and all attempts to relieve it were without avail. The patient became apathetic and dull. A local application, probably containing atropine, as patient was told it would dilate the pupil, was used for the eye.

Physical Examination on Admission to Hospital—The patient is a well-nourished, muscular man. There is marked hebetude, the speech is slow and thick, and the preceding history could only be obtained from the patient's wife.

The pupils are unequal, that of the right eye being dilated and not reacting to light. The left reacts normally. There is a slight rigidity of the posterior cervical muscles, especially of those of the right side. Firm palpation over the mastoid portion of the right temporal bone elicits much pain over a very localized area. There is no œdema over this area. There is no discharge from the ear. Examination with the speculum reveals a duskiness of the drum membrane, but the natural concave surface is preserved. There is a little redness of a portion of the outer wall of the external canal. The pulse is regular, slow, of fair force. The temperature (mouth) 100° F.

Examination of the various organs elicits only negative signs. There are large areas of dark pigmentation on the anterior and inner surfaces of the right leg, evidently the seat of old ulcers, and similar conditions are noted over the lower portion of the left leg. The left internal saphenous vein is varicose throughout its entire course; the right from below as far as the knee. The superficial external iliac veins on both sides are conspicuous and greatly dilated, the condition being especially marked on the left side of the abdomen. At various points along the course of both veins, the vessels have the feel of hard cords, and at other points they have the beady feel present in advanced endarteritis deformans. The superficial veins elsewhere are not enlarged. There is slight œdema about the ankles.

The walls of the accessible arteries are not appreciably thickened.

The urinary examination is negative. The leucocyte count amounts to 9,500.

During the three subsequent days the patient grew steadily worse, although the local signs described remained unchanged and no new ones were developed. The hebetude became gradually deeper, until the patient lay in a partial stupor, from which he could be aroused with difficulty. The temperature gradually rose to 101.5, the leucocyte count slightly rose (10,000). Culture from blood showed no growth. At no time was Kernig's sign present.

A thrombosis of the right lateral sinus was believed by me to be probable, and my colleague, Dr. McCosh, agreed with me that an exploratory incision was indicated, and on the fourth day after admission the right lateral sinus was exposed by Dr. McCosh. It was found to contain a solid thrombus, an inch in length. It was carefully squeezed out, removed with a curette, and a probe was then easily passed along the sinus for nearly two inches in both directions. There was no evidence of disease of the mastoid cells.

On the day following the operation the patient's mental condition had improved. From this date all symptoms gradually improved, and on the 23d the patient's condition was practically a normal one. On December 15 the patient was discharged from the hospital cured.

He has since returned to his work, and his health is in all respects excellent.

Dr. Kinnicutt said that the evidence upon which the diagnosis of a probable sinus thrombosis was based by him was the hebetude of the patient on admission gradually deepening into stupor, the pain localized over the mastoid portion of the temporal bone, a localized area of sensitiveness on firm pressure over the same site, the evident disturbance of circulation in the drum membrane without the signs of acute inflammation, and finally the presence of thromboidal and sclerotic veins in other parts of the body. The absence of any marked rigidity of the cervical muscles, the character of the pulse, the absence of any symptoms pointing to irritability or of pressure, also the absence of Kernig's sign, which, as a rule, obtains in cases of meningitis, except perhaps of a very localized nature, led him to exclude the diagnosis of a meningitis. The absence of œdema over the mastoid portion of the temporal bone, of ear symptoms beyond the duskiness of the drum membrane, which preserved its natural concave surface, led him to doubt the origin of the trouble in a middle-ear lesion. It remained to consider whether the sinus thrombosis was of the form designated as autochthonous or marantic thrombosis, or was due to a true lesion of the vein. The sclerosis of the external veins was most interesting and of a far more pronounced form than he had before observed. Sclerosis of the veins is comparatively rare, and little is contained in the literature on this subject.

The absence of any of the conditions usually associated with marantic or autochthonous sinus thrombosis, a case of which he had reported to the society during the past year, led him to believe that in the present instance the thrombosis was due to a true lesion of the sinus walls.

Dr. Robinson said that Dr. Kinnicutt deserved much credit for making his diagnosis in this case, but the question arises whether these patients are, as a rule, particularly benefited by operative interference. The plugging of the sinus does not seem to cause any special symptoms, and if that is so, what is the use of removing the thrombus?

Dr. Abbe asked Dr. Kinnicutt to what he attributed the relief of the cerebral symptoms, as no pus was found?

Dr. Kinnicutt said it had been shown by experiment that it was possible for an extensive thrombosis of the cerebral sinuses to exist without causing symptoms, and that the symptoms when present were probably due to an extension of the thrombus of the sinus into the cerebral veins, resulting in localized destruction of the cerebral tissues by hemorrhage, softening, and, in some instances, in subarachnoid and ventricular effusions.

In reply to Dr. Robinson, Dr. Kinnicutt said that in this particular case, at all events, an operation was clearly indicated. The patient was rapidly growing worse, and the speaker said he did not feel satisfied that everything possible had been done without an exploratory operation. In similar cases he would pursue the same course.

Intermittent Claudication Due to Obliterating Arteritis.—Reported by Dr. Charles L. Dana. (See page 290.)

Dr. Kinnicutt asked if there was any appreciable thickening of the vessel walls in the case reported.

Dr. Dana replied that evidence of arterial sclerosis was present, but not marked. The heart's action was feeble, but there was no organic trouble.

Dr. Kinnicutt said he saw no reason why this condition should not occasionally occur in cases of general arterial sclerosis, with myocardial trouble. Clinically, the speaker said, he could recall cases of this kind.

Dr. Dana said the most common examples of this condition were the cases of temporary limping due to a transient paralysis of one leg.

Dr. V. P. Gibney asked whether the condition was anything like the limp sometimes observed in children who have a cardiac lesion resulting from subacute rheumatism? This could hardly be so, however, as we do not often see sclerosis of the vessels in childhood. In those patients it is more apt to be due to a central lesion resulting from an embolus.

Dr. Abbe asked whether these patients had any general symptoms or any evidences of uræmia? From the report given by Dr. Dana, the condition was not unlike that of angio-spasm of uræmic origin sometimes observed in the course of nephritis.

Dr. Thompson said it seemed curious that so large an artery as the femoral could completely occlude itself by a spasm. Experimentally, it is impossible to close it by any kind of irritation; it can be narrowed down to perhaps one-half its size, but cannot be entirely occluded.

Dr. Thompson said that, in listening to Dr. Dana's paper, the question had suggested itself whether cases of transient hemiplegia belonged to this same class. The speaker recalled the case of a physician, who, while seated at luncheon, suddenly became unconscious. His right side was found to be paralyzed, and several clinicians who saw him pronounced the case one of right hemiplegia. After remaining in a state of complete coma for several hours, he suddenly recovered consciousness, and was at once able to make use of the affected arm; a few minutes later, he jumped out of bed, and turned down the light, because it annoyed his eyes. His aphasia did not disappear until the following day.

Dr. Thompson said he had seen several similar cases of complete unilateral paralysis where recovery took place within a few hours, and which obviously could not have been due to a thrombus or embolus.

Dr. Dana, in reply to Dr. Thompson, said that pulsation of the femoral was present, but no pulsation of the popliteal, posterial tibial, or dorsali pedis could be felt.

These arteries were probably sclerosed and thickened, and the lumen small, and it does not take very much spasm to completely close them. When this occurs, it does not produce absolute paralysis of the leg, but simply inability to walk.

Dr. Dana said that the cases he had described were unlike those of acute temporary hemiplegia of uræmic origin. In the latter type, the lesion is cerebral, and is due to local asphyxia of some of the cerebral vessels. They are quite commonly observed in connection with syphilis and paresis, but the distinction between them and the peripheral type is considerable: in the latter there is an absence of pulse, stiffness, vasomotor disturbances, and a good deal of pain due to the obstructed circulation. In both types the claudication is due to a more or less complete shutting down of the arteries, but the ordinary cases we see are examples of cerebral claudication, while these are peripheral.

A Case of Appendicitis with Unusual Manifestations.—Reported by Dr. Charles McBurney. The patient was a young lady, twenty-four years old, who, during the middle of last summer, had an attack of illness which was recognized by a very competent observer as one of moderately acute appendicitis. It subsided in the course of a week, and the patient remained perfectly well until ten days ago, when she again began to complain of intra-abdominal pain. She was seen in consultation with Dr. Kinnicutt, and because of her rising pulse and temperature an early operation was deemed advisable. The peculiarity of the case consisted chiefly in the location of the pain or tenderness. Over the ordinary situation of the appendix there was absolutely none. The belly was flat, and as one palpated upward in the right loin, the tenderness became more and more intense up to the right hypochondrium, where the maximum tenderness existed. On passing the left hand under the loin and behind the right kidney, one could very distinctly lift up a small inflammatory mass, evidently that of an inflamed appendix involving other tissues. It was perfectly clear that it was not the kidney, but when the kidney was raised, it also lifted this inflammatory mass.

With these facts in mind, an incision was made a good deal higher than the ordinary incision for appendicitis. The colon was found and drawn upward out of the wound, in order to bring the base of the appendix into view, but instead of drawing up the caput coli, Dr. McBurney said he found that he was drawing the transverse colon into the wound. This was thereupon put back, and the intestine pulled down from above, and this very soon brought the inflammatory mass into view, but it was necessary to enlarge the external wound before access could be gained to it. When the inflammatory mass was brought out through the wound, it was impossible to recognize in it any portion of the appendix, and yet there was no intervening tissue. One could feel an indurated, small tumor, but could not make out any outline. Eventually, by cutting through a covering of peritoneum, the appendix was made out; it was completely buried in the wall of the colon and covered by a remnant of fœtal life in the form of a very complete peritoneal sac. This had to be incised before the appendix could be dissected out; then it was found easy to remove it, as it was distended with fluid. The wound was closed without suturing, and the patient made an uneventful recovery.

The appendix, on incision, proved to be a closed cyst, which was filled with pus and fluid feces and a single concretion. The sac was considerably distended by the fluid which it contained, and on its inner wall were two necrotic spots, but it was not perforated.

Dr. McBurney said that Huntington, in his description of the fœtal anatomy, mentions the fact that the caput coli is sometimes found in this abnormal situation. Ordinarily, it undergoes a change of position and occupies the lower region in the right iliac fossa, where we usually find it. Dr. McBurney said he had met with this reversed condition of the parts before, but had never recognized it so well.

Dr. Abbe said that one must understand the evolution of the colon in order to meet successfully these emergencies in a certain number of appendicitis cases. The speaker said he had met one similar case.

Dr. Kinnicutt said the case reported by Dr. McBurney was an illustration of the seeming or real tendency toward appendical trouble occasionally observed among members of the same family. The case reported was the third case of appendicitis occurring in the patient's family.

Dr. Bryant said that upon two occasions, in operating for appendicitis, he had been similarly misled by a prolapse of the transverse colon—a general intestine prolapse was not evident in either instance.

Dr. Bryant exhibited an appendix which he had removed that day from a patient who had suffered from two attacks of appendicitis during the last six weeks. The appendix was removed about three weeks subsequent to the second attack, when there were no symptoms present. The lower end of the appendix was apparently a closed sac containing abundant fluid muco-purulent contents. This reference emphasizes in no uncertain manner the subtle danger attendant on a quiescent appendix, thus impressing the wisdom of operative practice in an interval having no apparent local or general evidence of appendicular involvement.

THE NEW YORK PATHOLOGICAL SOCIETY.

Anniversary Meeting, Held January 8, 1902.

Edward K. Dunham, M.D., President.

The Value of the Eosinophile Count in the Differential Diagnosis of Human Blood.—Dr. Orrin S. Wightman was the author of this paper. A number of blood smears from different animals constituted the material for the study forming the basis of this communication. The smears were stained with Ehrlich's tri-acid stain. There was reason to believe that the home of the eosinophile cells was in the bone marrow. The normal percentage of eosinophile cells in the human blood varied from one-fourth of 1 per cent. to 4 per cent. The possible causes of eosinophilia were very varied. The physical status of animals would be expected to bear a distinct relation to the proportion of the kind of cell present. In the author's study 500 cells were assumed as a standard. Blood from the sheep, pigeon, gray rabbit, calf, and goat was examined. In all these animals the percentage of lymphocytes was rather high, varying from a minimum in the goat of 34 to a maximum of 97.6 in the pigeon. These animals also showed a rather small polynuclear count.

Dr. F. C. Wood said that he had been much interested in tracing a possible connection between a large number of eosinophiles in the blood and tapeworm in the stools. He had examined cases containing both round worm and tapeworms, and had found no increase in the eosinophiles, though such increase had been observed in a number of cases. Quite recently he had seen a case in which a considerable increase in the number of eosinophiles in the blood had been observed, and had led to a probable diagnosis, though no segments of worm had been passed. Later, fragments of the worm had been passed. The percentage of eosinophile cells at this time was 20 per cent.; after the worm had been removed, the percentage fell in the course of a few weeks to 8 per cent. One case of Bothriocephalus latus had shown no eosinophile increase, though the stools showed a very large number of Charcot-Leyden crystals, which are usually seen only in connection with an eosinophilia.

In all cases of asthma which he had examined, the percentage of eosinophiles had been high, usually about 20.

Dr. T. C. Janeway said that last year he had made an interesting observation, *i. e.* the occurrence of a moderate eosinophilia, 5 or 6 per cent., in cases of vaccination; but further study had shown that this was by no means a constant phenomenon.

Dr. L. A. **Conner** said that in a case of severe secondary anæmia dependent upon the presence of an intestinal parasite, anchylostoma duodenalis, and occurring in a young boy from Brazil, he had found an eosinophilia amounting to 8 or 12 per cent.

Dr. A. J. **Lartigau** spoke of the presence of eosinophiles in the serous membrane exudates. During the last six months, Dr. Moschcowitz had made cytological examinations of these exudates, and in a certain proportion of these cases, particularly of pleuritic exudate, a very striking eosinophilia had been noted. In one case in particular the cells were almost exclusively eosinophiles, but in that instance the etiology of the pleurisy could not be established. The differential count of the blood showed a very slight increase in the eosinophiles, but it was not proportionate to the increase in the exudate.

Dr. **Wightman** said that one should be mindful of the effect of the personal equation in blood counting, and that in many cases the observer was in doubt as to whether the cells were eosinophiles or polymorphonuclear cells. He had used methylene blue and eosin as controls to the tri-acid stain.

Multilocular Echinococcus Cyst of the Liver.—Dr. L. T. **LeWald** presented this specimen. It had been presented at the last meeting, and had then been described as a primary carcinoma, there having been only a microscopical examination of a frozen section. Further examination showed that there was not sufficient evidence on which to base a diagnosis of carcinoma. There was, it was true, a slight alveolar arrangement, but no true epithelial cells, although there was an infiltration with small round cells, and there were many areas of degeneration. At the suggestion of Drs. Oertel and Dunham a more careful examination had been made of different parts of the tumor, and this showed a structure which answered very well the description of a multilocular echinococcus cyst of the liver. Three cases of this kind had been reported in this country: one by Prudden, in 1873; one by Gardner Dean, in 1877, and one by Oertel, in 1899. In all of these cases, and also in the present instance, the growth had occurred in a foreigner. The symptoms had been quite similar in all the cases. In Prudden's case a diagnosis of hepatic abscess had been made, while in Oertel's case a provisional diagnosis of echinococcus cyst of the liver had been made prior to operation. The tumor in the case presented occupied all of the left lobe of the liver, and was extending peripherally. It was broken down in the center, while the border was made up of dense fibrous tissue. On close examination, one discovered a number of small translucent areas, and these, on microscopical examination, showed the presence of small cysts. The other details of the case had been given at the last meeting of the society.

A Case of Cutaneous Pigmentation, with Lesions in the Adrenal Bodies.—Dr. **Harlow Brooks** reported this case. The subject was a woman of forty-five years. The previous history could not be obtained because of the mental state of the patient at the time of her admission to Bellevue Hospital. Physical examination showed her to be poorly nourished; there was quite marked œdema of the extremities, and over the thigh and entire trunk the skin was deeply pigmented. The patient was almost in a state of collapse. The pulse was small, rapid, and weak. The lungs were apparently healthy. The liver extended two fingers' breadth below the free border of the ribs. On the day after admission, the temperature rose, and the usual symptoms and signs of pneumonia developed. Examination of the urine justified a diagnosis of chronic interstitial nephritis. Examination of the blood showed a condition of extreme primary anæmia. An autopsy could not be obtained until the day after her death, and hence a histological examination of the nervous system was not made. There was a dark brown, glossy pigmentation of the skin on the trunk of the body, and extending down to the middle third of the forearm, and on to the thighs. The backs of the hands were also slightly pigmented. The skin showed many scars from the bites of parasites, and these scars, where they appeared on the pigmented areas, were distinctly white. The skeletal muscles were light brown and very soft. An obliterative subacute pericarditis was present, and the left pleural cavity was obliterated by adhesions. The myocardium was very soft and light. The subcutaneous fat and that over the heart presented a very peculiar color somewhat like that of lard. The thyroid gland was noticeably small, though apparently normal in structure. The lymph nodes of the neck were markedly anthracotic. The left lower lobe showed a pneumonic consolidation and a quite general acute miliary tuberculosis. The liver was enlarged and extremely fatty. The pancreas showed no definite change. Aside from anæmia, the gastro-intestinal tract showed nothing of importance. The left kidney was a typical large white kidney. The right kidney was very small, and its parenchyma was entirely replaced by a production of fibrous tissue, which appeared to enclose old tubercles. The right adrenal body presented a peculiarly pink cortex, and the same was true of the left adrenal, though the latter also presented certain fatty areas in the cortex. On microscopical examination, the peripheral lymph nodes showed no differentiation between cortex and medulla. There was an infiltration with cells, whose nuclei showed a tendency to degeneration. Sections of the peculiar fatty tissue showed no microscopical abnormality. In the voluntary muscles most of the fibers were normal, but some were swollen and degenerated. There was a marked fatty infiltration of the heart muscle, and there was increase of cell pigment. Occasional areas of small round cell infiltration were also found in the myocardium. The stomach showed the lesions of a chronic atrophic gastritis. Almost the entire structure of the lymph nodes was converted into tuberculous tissue. The parenchyma of the liver was almost completely replaced by fat. The left kidney showed acute parenchymatous nephritis and extensive fatty degeneration. Sections of the right atrophic kidney showed the atrophy to have followed an old tubercular process. Numerous sections from the suprarenal gland showed the changes to be about the same on both sides. The capsule was not thickened, but there was a general and very marked augmentation of the connective-tissue framework. The individual fibrillæ were swollen and œdematous. The walls of the blood vessels were somewhat thickened. The vessels were moderately congested, and there were a few extravasations of blood. As a rule, the acini were made up of normal cells, and such alterations as were found involved the whole acinus to about the same degree. There was extensive fatty degeneration in both the medulla and cortex. The pigmentation was quite noticeable. In the medulla and throughout other portions were occasionally found cells which were from two to four times the normal size. Other cells with large chromatic nuclei were found huddled together. Around some of the blood vessels small adenomatous masses were found. In true Addison's disease the pigmentation was usually found in the more exposed parts of the body, whereas, in this case, these areas were the least pigmented. It was very probable that the subjective history, if it could have been obtained, would have been very similar to that of Addison's disease. The lesions of the viscera corresponded rather closely with many cases of Addison's disease, but exposure and the destitute state of the patient would explain these. Tuberculosis of the adrenal might occur without either subjective or objective signs of Addison's disease. He had reported such a case to this society some years ago. The speaker said that he did not look upon this case as one of Addison's diseases, but rather as an example of vagabond's disease with secondary disease of the suprarenal glands, resulting finally in an atypical skin pigmentation.

Dr. T. C. **Janeway** said that Dr. Brooks had presented a very careful and critical report of this case, and it seemed wise not to call this Addison's disease, as the clinical picture certainly lacked some important features of that disease. There was no pigmentation on the mucous membranes and on the exposed portions of the body. Again, the extreme anæmia was not at all characteristic of Addison's disease. In two cases of that disease that he had seen very shortly before death the secondary anæmia had not been at all marked, and the literature consulted at that time had not made anæmia a prominent symptom. The chronic tuberculosis and alcoholism in the case under discussion seemed to explain the lesions found, though an early stage of Addison's disease could not be excluded.

Dr. E. **Libman** said that in one case of Addison's disease, seen two years ago, there was every evidence of anæmia. This case was examined post mortem, and the diagnosis confirmed by finding tuberculosis of the adrenals. In another case there was the usual pigmentation, and the blood picture was that of pernicious anæmia. There was no autopsy on the second case.

Dr. **Conner** asked Dr. Brooks if he thought the changes seen in these adrenals were very uncommon—in other words, if there had been no pigmentation of the skin, would the changes in the adrenals have led him to suspect anything especially abnormal? He asked this question because of the great variations often observed in adrenals which were apparently normal.

Dr. **Warren Coleman** said that he had seen three cases of Addison's disease, and he had also examined microscopically many suprarenal capsules. This study had impressed him with the difficulty of telling much about the adrenal unless this body was obtained very soon after death, was very carefully hardened and cut into sections, and very carefully examined. On gross examination in many of these cases the whole of the medulla and a portion of the cortex were converted into an apparently colloid material. If the hardening were carried on in alcohol or formalin, this could not be well made out under the microscope. Personally, he was not disposed to look upon the changes noted in the adrenals as the cause of the pigmentation in the skin. In one of the cases of Addison's disease that he had seen, in which the diagnosis had not been made during life, he had made the autopsy. The patient had been sent to Bellevue Hospital from the Chambers Street Hospital with a diagnosis of chronic constipation, and although under observation for several weeks at Bellevue Hospital, there seemed to be no reason to change this diagnosis. At the autopsy both adrenals were found completely destroyed by a tubercular process. One of them was considerably larger than normal, and the other only slightly larger than normal. The latter was calcareous, and the former was caseous, and neither showed a trace of adrenal tissue. In this case there was no pigmentation whatever. He was disposed to look upon the pigmentation in Addison's disease as the result of some lesion of the ganglia of the sympathetic. Dühring had shown that a lesion of the sympathetic ganglia might produce pigmentation without causing Addison's disease. He had seen several cases of vagabondism in which there were areas resembling vitiligo, and the distribution was almost identical with that found in Dr. Brooks' case. The malnutrition and the previous depressing influences of the tuberculosis seemed quite sufficient to explain the pigmentation in this case.

Dr. **Carlin Philips** said that he had studied a number of adrenals, and was therefore deeply interested in the case just reported. With the exception of pigmentation, the case presented no symptoms of Addison's disease. The microscopical study of sections of the adrenal was most important, and should be made more generally a routine measure. It was very common to find artefacts. Some of the changes described by Dr. Brooks were undoubtedly pathological—the changes about the vessels, the increase of connective tissue, and the atrophy and disappearance of the glomeruli were not found in normal gland. The alterations in the staining of the nuclei and the change in the fat contents might easily be confounded with changes found in the normal gland.

Dr. P. A. **Levene** said that the case was highly interesting because it added to the doubt which already existed as to the relation between pigmentation of the skin and disease of the adrenals. This case showed both the pigmentation and the changes in the adrenals, but neither presented the appearance characteristic of Addison's disease.

Dr. **Brooks** said that the pigmentation was very profuse and covered the entire trunk, and was altogether different from what he had formerly seen in vagabondism. He thought his attention would have been attracted by the changes in the adrenals, even though skin pigmentation had not been present. He knew of no satisfactory and definite description of the normal structure of the adrenal, and it was quite true that artefacts were apt to be present. Allowing for imperfections in technique, he still had yet to find any such defect which would cause myotosis in the nuclei of the cells, and he had yet to find large giant cells containing atypical mitoses in normal adrenals. He thought that ordinarily marked changes in the adrenal bodies were accompanied by marked changes in the skin. He doubted if the tuberculosis was a prominent factor in the production of the pigmentation. There were very few chronic tubercles present in the lungs of this patient.

Primary Pigmented Sarcoma of the Fourth Ventricle.—Dr. J. H. **Larkin** presented this tumor, which had been removed from a male, fifty-six years of age. There was a history of paralysis of the external rectus and abducens with facial atrophy on the left side. There was no headache or vomiting at first, and no typical picture of such a growth in the early stage. Subsequently the paralysis became well defined, and examination of the eye showed marked choked disk. For three months the man went around, although he occasionally fell in the street and temporarily lost consciousness. Finally the vertigo was so pronounced that he was compelled to remain home constantly, and he eventually died of secondary pneumonia. At the autopsy two tumors were found. On opening the brain he found a tumor, a psammoma of the pineal gland, and on the floor of the fourth ventricle was a very small pigmented tumor at the anterior fovea. On the floor of the ventricle was a very large engorged vein. Sections of the tumor were exhibited under the microscope. The periphery showed the presence of blood pigment, while in the center there was a yellow pigment (melanotic) tumor, composed of polyhedral cells and stroma with many new-formed blood vessels.

Abscesses of the Mesentery with Secondary Thrombosis of the Mesenteric and Portal Veins.—Dr. E. **Libman** said that out of forty-eight autopsies on cases of appendicitis he had found in six suppurative lesions of the mesenteric veins or the portal vein. In four of the cases there were multiple abscesses of the liver. One of these appeared on gross examination to be merely fatty, but microscopical examination proved the presence of pus cells between all the cells. Dr. Libman presented a specimen showing multiple abscesses of the mesenteric nodes with secondary purulent thrombosis of the mesenteric and portal veins. The patient had been admitted on December 14 for appendicitis, having had two chills prior to his admission. At the operation there were found an ulcerated appendix and a mesenteric abscess. The patient did not do well after the operation, and although abscesses in the liver were suspected and searched for, none could be found. Cultures from the case showed the presence of streptococci. A search through the literature showed that this class of complications of appendicitis had occurred in his experience almost twice as often as in the reported experience of others. Perhaps this was to be explained by the fact that most of the other cases had occurred before the days of frequent operations for appendicitis, and when many cases now considered as not being very severe died. Ordinarily a case of suppurative thrombosis of the portal vein with multiple abscesses was looked upon as fatal, but Dr. Libman reported a case which seemed to refute this notion.

Dr. F. C. Wood said that in those cases in which a cure had been observed to take place spontaneously, the infection might be due to a low-grade colon infection, such as is seen in cases of biliary cirrhosis. The invasion of the colon bacilli in the cirrhosis cases only determines small areas of necrosis and pus formation, and may go on to a cure.

Dr. Libman said that in the case he had referred to, in which the abscesses were healing, the infection was found to be due to streptococci, and the case at first appeared to be very virulent. The lesions in the portal vein and liver showed almost complete organization, the fatal issue being due to a large abscess in the mesentery. Specimens from this case were shown .

Bilirubin Crystals in Urine.—Dr. T. C. Janeway exhibited under the microscope bilirubin crystals from the urine of a case of obstructive jaundice of five days' duration. This was the first time that he had met with these crystals under such conditions.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Held January 27, 1902.

Charles N. Dowd, M.D., First Vice-President, in the Chair.

Sterility Due to Faulty Conditions of the Endometrium, and the Best Methods of Treatment.—Dr. W. Gill Wylie took up this part of the discussion of the general subject of sterility. He said that his first experience in this field had been with Dr. Sims' method of dividing the cervix anteriorly and posteriorly. He had soon learned that in a large proportion of cases the desired patency of the canal was not established in this way, but, on the contrary, that the contraction incident to the healing process tended to close the canal. Further study showed that an important factor in the production of sterility was imperfect development of the uterus. This was particularly noticeable among the better classes, probably because many weaklings in this class live to adult life, while among the poor they die before reaching puberty. Another reason was that among the well-to-do the growing girls were often compelled to study so much that the mind was developed at the expense of the body. He had come to look upon the imperfectly developed and anteflexed uterus as an organ, the seat of catarrhal inflammation, and he had, therefore, suggested that these cases be treated by complete divulsion of the cervical canal, curettage, and, if necessary, the application of some antiseptic, and then keeping the canal open for a length of time. Anything which produced a scar must necessarily interfere with the function of the glands and follicles, and hence should be avoided. Moreover, the uterus was different from an ordinary sinus in that it was controlled by a very powerful sphincter. Eighteen years ago he had experimented with various methods of keeping the canal patent. After many trials he had discovered that a drain made of hard rubber was the best. A large, patulous uterus did not, of course, need such a device; it was in the imperfectly developed, indurated and hyperplastic uteri that this device was required. It was essential that whatever was used, it should secure good drainage; if it acted at all as a plug, it would tend to force the secretion of the diseased uterine cavity back into the tubes. His practice has been to leave in the tube for a week or ten days. This treatment would usually relieve dysmenorrhœa, and would often cure the sterility, although sometimes it would be necessary to repeat this treatment. Even under such treatment, one should not expect to get good results immediately. Increasing experience had shown him that the tube could be safely left in for several weeks. The patient should be kept in bed for from five to seven days, and then might be allowed to go around. No douches should be given, but the vulva should be kept scrupulously clean. Instead of keeping the tube in place by a gauze packing, a modification of the Albert Smith pessary should be employed. It should be remembered that if the uterus were prevented from retroverting, the drainage tube could be kept *in situ*. In some instances ectopic gestation had followed this treatment for sterility, and he was inclined to think that perhaps disease of the endometrium had more to do with ectopic gestation than was generally supposed. Cases of gonorrhœal endometritis were not very hopeful, for it was almost impossible to eradicate by any means the disease, and get the lining membrane of the uterus in a sufficiently healthy condition to allow of the occurrence of pregnancy. In some cases of sterility the unhealthy condition of the endometrium was the result of vascular conditions set up by the presence of small fibroids in the anterior wall of the uterus. Still another cause of sterility was a gouty or uric-acid diathesis, especially when occurring in stout women. By laxatives, reduction of the fat, and treatment directed to the general health the sterility could sometimes be overcome.

Sterility Due to Faulty Conditions of the Uterus, and the Best Methods of Treatment.—Dr. Edward J. Ill of Newark, N. J., read this paper. It was well, he said, to bear in mind that sterility was a symptom of many conditions, and not in itself a disease. At the outset a careful inquiry should be made as to the health of both husband and wife, and their relations to each other, and it should be known positively that the semen was normal before instituting treatment of the wife. The uterus should be the last organ thought of in considering the question of sterility. The causes of sterility were either mechanical or pathological. Among the former were the various displacements of the uterus, not forgetting retroposition of the uterus, extreme lateral displacement, and changes in position resulting from cicatricial contraction near the base of the broad ligament. Inflammatory diseases of the cervix, erosions, and cystic degeneration were important causal factors. Among the pathological causes were imperfect development of the uterus, atrophy occurring near the menopause, and the presence of various neoplasms. Fibromata certainly played an important part in the production of sterility. It was well known that 10 per cent. of marriages were sterile. A certain percentage of myomatous women present themselves for treatment for the relief of sterility. All displacements should be remedied by proper operations, other means having failed. When these displacements were complicated by simple hypertrophy, laceration, or erosion, amputation of the cervix at the vaginal junction should precede operation on the round ligaments. The new os should be made in such a way that there would be no exposure of the cervical mucous membrane, and the resulting scar should be as smooth as possible. Vaginal and abdominal fixation should never be practised while the woman was in the active period of sexual life. Retroposition was now and then combined with extreme lateral displacement. Here the shortened ligament must also be stretched by massage and gauze packing after the introduction of a glass plug to act as a lever. For constriction of the os internum, dilatation with steel sounds up to No. 36 French, and the wearing of a No. 32 glass plug for six days, would usually suffice. In cases of congenital ectropion of the cervix, amputation would afford an excellent chance for the occurrence of pregnancy. The sensitive hard uterus of chronic metritis offered very little prospect of a pregnancy, yet success would occasionally follow amputation of the cervix. Cicatricial stenosis could not be cured by dilatation.

Sterility Due to Faulty Conditions of the Tubes and Ovaries.—Dr. **William M. Polk** took up this phase of the subject, and considered also the extent to which operations might be performed upon the uterine appendages for the relief of the condition. He said that it might seem strange to many to suggest an abdominal section for the relief of sterility, but it was much the same as performing cæsarian section for the relief of an already existing pregnancy. The question raised was as to whether one was justified in recommending laparotomy solely for the purpose of relieving sterility. The speaker answered this question in the affirmative, brushing aside lightly the supposed danger of such a procedure. Four illustrative cases were cited. In the first, the relief of sterility was a grave one, involving domestic happiness; in another, the woman was miserable and unhappy because she was barren, while in still another the question of inheritance of property entered into the question. Operations on the appendages had been done, and had resulted in three out of the four in relief of the sterility. He knew of thirty-five cases in which operations on the appendages had cured the sterility. In women in whom there were no symptoms of pelvic disease, and operation was proposed only for the relief of the sterility, it was probable that one would find in the pelvis organized adhesions involving the ovaries and tubes, perhaps also a hydrosalpinx or some muco-pus in the tubes. The tubes should be freed from all adhesions, and the opening of the tube sealed, turned back, and fastened in this position with very fine catgut. The end of the tube should then be placed against the ovary, and held there by a stitch through the mesentery of the tube—not applied directly to the ovary and sutured there, because by so doing the chances of conception were diminished. Small cysts in the ovary should be punctured; larger ones should be excised. The round ligaments should be shortened intra-abdominally, thus curtailing the chances of subsequent formation of adhesions, and eliminating also the baneful effect of retroposition of the uterus.

Dr. **Bache Emmet** said that he was thoroughly convinced of the value of the procedure advocated by Dr. Polk, it being understood, as already stated in that paper, that other recognized therapeutic procedures had been exhausted. He had been under the impression that Dr. A. Palmer Dudley's twenty-eight cases of conservative surgery on the appendages had not been previously sterile, and recorded cases of this class could now be numbered in the hundreds.

Dr. A. **Palmer Dudley** said that chronic passive congestion of the pelvic structures was the prime cause of sterility in women, whether young or old. This subject had been ably discussed in the work on ovarian tumors by the late Dr. Peaslee. Laparotomists knew very well that frequently the ovary was found glued to some portion of the broad ligament. This arrested peristalsis and interfered with the function of the tube. The latter was often found so kinked that the oven could not reach the uterus, and was, therefore, discharged into the pelvic cavity, and died there. He agreed with Dr. Polk regarding the comparative freedom from risk at the present day of laparotomy. He was not partial to the use of Dr. Wylie's stem pessary; indeed, from its action in his own cases, he was afraid of it. In his opinion, it was much better forcibly to dilate the canal with laminaria tents under proper aseptic precautions. Dr. Dudley said that he had recently reported 205 consecutive abdominal sections without a death, in which twenty-eight children were known to have been born at full term after these operations. He was careful to cut the ovary longitudinally instead of transversely, because by the latter method the nerve supply was needlessly interfered with. He was not prepared to say positively that conception had followed surgical work of this kind done on cases of pyosalpinx, although he had the statements of two patients to the effect that pregnancy had followed even in such cases.

Causes of Sterility Occult.—Dr. **Henry C. Coe** said that, to his mind, the causes of sterility were usually much more occult than was commonly supposed. Most surgeons knew that in some cases, even after the most thorough operations on the uterus and appendages, sterility had not been relieved. Because of our lack of knowledge of the true causes of sterility he thought we were apt to assume too much in regard to treatment. He had never yet found a patient who was willing to submit to a laparotomy for the cure of sterility alone in the absence of other symptoms. It was often assumed that sterility had been relieved by an operation on the appendages, and yet such an operation was rarely done alone; it was often combined with dilatation or divulsion, correction of displacements and amputation of the cervix. The most difficult cases to diagnose were those in which the sterility was dependent upon a few fine adhesions at the end of the tubes resulting from a previous attack of gonorrhœal salpingitis. It was time for us to go beyond the old and well-known mechanical theory of sterility, and study the subject from another standpoint. We should be very careful in the matter of prognosis, for patients who were willing to submit to surgical treatment for the relief of sterility expected definite results.

Dr. H. J. **Boldt** thought it was dangerous teaching to advise a patient to go about with a stem pessary in position. After such treatment, an ill-developed uterus would often appear larger, but this increase in size he would not attribute to better development of the organ, but rather to inflammatory processes resulting from the irritation produced by the stem. He agreed with Dr. Ill as to the advisability of doing an amputation of the cervix for hypertrophy. Patients on whom multiple myomectomy was performed were most likely to abort if they conceived at all. While deeply interested in Dr. Polk's paper, he must confess that he had never had a patient who seemed willing to submit to such an operation for the relief of sterility alone. He was thoroughly in accord with Dr. Coe regarding the necessity for great caution in giving a prognosis in these cases, particularly when it was proposed to relieve the condition by an abdominal operation.

Dr. R. **Waldo** said that while listening to the discussion this evening, he had wondered why the removal of a small portion of an ovary or of a tube should relieve the sterility. Was it because the remaining portions were stimulated to increased activity? He could not understand how the removal of a diseased portion of a tube or ovary could favor impregnation, unless by so doing an obstruction was also removed. He had performed a very large number of plastic operations on both the tubes and ovaries. He had invariably slit up the tube, and stitched with fine catgut the lining membrane to the peritoneum, so that the mucous membrane was exposed. We knew very little about the site at which impregnation took place, though he believed that, in a large number of cases, it occurred in the dilated outer portion of the Fallopian tube. One of the speakers had referred to the kinks in the tubes, but it should be remembered that these tubes were always crooked, and that although quite tortuous, it did not follow that the lumen was obstructed.

The Male Often at Fault.—Dr. H. N. **Vineberg** emphasized the absolute necessity of first examining the husband before treating the wife for sterility. Some authors stated that in 33 per cent. of the cases of sterility the fault was with the husband, and his own observations in dispensary practice showed this cause to be operative in about 25 per cent. of the cases. He had heard no mention made of a rather common form of sterility observed in cases in which the sexual organs were normal, *i. e.*, those in which the seminal fluid was ejected immediately after deposition by a spasm of the vagina.

Dr. **Wylie** said that he did not look upon his drainage tube as exactly the same as a stem pessary, and he was positive that there was no occasion for bad results from the woman's going around with the drainage tube in place. Such treatment often caused a decided and permanent development of the uterus, and along with this it was not uncommon to observe a general improvement in the physical development and in the nervous system.

Dr. **Ill** said that he had been so astonished on hearing of the subject about which Dr. Polk proposed to write on this occasion that he had written to over one hundred practitioners to find out their practice, and he had found only four out of this number who said that they had suggested such a procedure to their patients as a means of relieving sterility. When one considered the abject misery of some of these women because of their sterility, it seemed very wise to propose, as Dr. Polk had done this evening, to relieve them by an operation which, at the present day, had been robbed of its terrors.

Dr. J. **Riddle Goffe** said that he had done these conservative operations on the appendages in about 100 cases, operating through the vagina, and he knew of eleven pregnancies having followed these operations. A positive cause of sterility was to be found in occlusion of the tubes, and hence the wisdom of adopting the plan of attacking the appendages. The safest way of doing this, in his opinion, was by operating through the vagina. Dr. Goffe said that he had operated through the vagina on two private patients for the simple indication of sterility. In both instances pathological conditions were discovered and were removed, but only one of the patients conceived following the operation.

Dr. **Polk** said that in this discussion he had carefully eliminated the question of diseased conditions, and had presented the categorical question, "Shall abdominal section be introduced as a cure for sterility?" When it seemed clear that the cause of the trouble lay in the appendages alone, then it was proper to submit to the patient the question of whether or not she was willing to submit to a laparotomy in the hope of being in this way cured of the sterility. In answer to the question as to how one was to determine whether or not there was sufficient disease of the appendages to warrant an abdominal section with this object in view, he would reply that it was easy and safe to make an exploratory incision through the vagina and positively settle this point. In one case in which he had amputated the tube, there was a large hydrosalpinx, and to his surprise the woman subsequently conceived.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held February 6, 1902.

George L. Peabody, M.D., Vice-President, in the Chair.

The Treasury Department and the Exclusion of Consumptives from This Country.—A communication was read from the United States Treasury Department in reply to the letter of inquiry sent by the Academy of Medicine. It stated that a written opinion on the matter had been prepared by the Supervising Surgeon-General of the United States Marine Hospital Service, in response to a specific request from a commissioner of immigration, in which it was stated that tuberculosis of the lungs "is a dangerous contagious disease" within the meaning of the regulations of the Department bearing on this subject.

Dr. S. A. **Knopf** read a number of letters endorsing the resolutions that he had introduced.

Dr. C. E. **Quimby** objected to the resolutions: (1) Because he thought one should not criticise the government in this way without long and careful consideration; (2) Because the present assemblage of, perhaps, fifty or sixty could hardly be taken as representative of the membership of the Academy or of the ten thousand physicians in this city; (3) Because the resolutions appeared to charge that this action of the government was founded upon ill-advised opinion and ignorance; (4) Because it was practically begging the question to say that pulmonary tuberculosis is not a dangerous contagious disease, but is a communicable disease, when every one knew that the consumptive does not directly hand the disease to another but spreads it broadcast through the land; (5) Because if tuberculosis were what we had said it was—a disease requiring the tearing off of the wall-paper and the thorough renovation of the house in which a consumptive had lived, then the disease could not be effectively checked unless the person suffering from it were made a marked individual, and was placed where he could no longer be a menace to the community, and (6) Because he thought we would stultify ourselves by adopting any such resolutions as had been offered to the Academy this evening.

Dr. **William H. Thomson** said that some of the most disgraceful wrangles in medical history had occurred in connection with disputes regarding the meaning of such terms as contagious and communicable. In 1855 the Massachusetts Medical Society had solemnly declared that efforts should not be made to control and quarantine cases of cholera because this disease was not contagious, but one dependent upon a miasm. Dr. Thomson said he was very much in favor of adopting the resolutions presented, because it was unnecessary, cruel and tyrannical to label persons with a name which the masses understood to mean was synonymous with dangerous contagion.

Dr. C. L. **Dana** said that he thought that the chief objection to taking action this evening was the fact already alluded to by Dr. Quimby, *i. e.* that although this Academy had a membership of eight hundred or more there were only fifty or sixty present. Although these resolutions had been under nominal consideration for a month, they had not been referred to a committee, and did not, therefore, come before the Academy at this time with a proper official endorsement. Dr. Dana then moved that these resolutions be referred to a committee of five, to report back to the Academy of Medicine in one month.

Dr. **Alfred Meyer** called attention to the fact that the special rules of the Academy with regard to action on such subjects had been complied with in every respect. Moreover, he saw no reasons why physicians should not be outspoken upon a subject about which they had a right to feel themselves well informed, even though certain governmental medical officers had seen fit to express an official opinion on the same subject a little earlier.

Dr. **Andrew H. Smith** said that as every member of the Academy had received notice that these resolutions were to come up for action at this time it was their own fault if they did not come this evening and voice their opinions.

The motion to refer to a committee was lost, and then the resolutions introduced by Dr. Knopf were adopted in the following form:

Whereas, The Treasury Department of the United States, upon recommendation of the Surgeon-General of the Marine Hospital Service, has recently decided to classify pulmonary tuberculosis with dangerous contagious diseases, be it

Resolved, That the New York Academy of Medicine deeply deplores this decision, which is not based either on clinical experience or on scientific experiments.

Resolved, That the Academy considers the exclusion of non-pauper tuberculous immigrants and consumptive aliens visiting our shores unwise, inhumane, and contrary to the dictates of justice.

Be it further Resolved, That, while the Academy upholds the fact of the communicability of tuberculosis and urges all possible precautions against the spread of the disease, occasioned by tuberculous sputum or food, the Academy is opposed to all measures by which additional hardship is imposed upon the consumptive individual; his family or his physician.

Blackwell's Island as a Site for a Tuberculosis Hospital.—The committee charged with the consideration of this question, consisting of Drs. H. P. Loomis, E. G. Janeway and A. Meyer, presented a report, in which they recommended this island as the place for the care only of advanced cases of consumption, and expressed the opinion that certain vacant buildings which they inspected could be adapted for the care of this class of cases, if, with the co-operation of the Department's architect, it should be found practicable to make any needed alterations. The committee also expressly stated that they did not wish it understood that this report was a final disposition of the matter. The report was adopted, and a copy of the report was ordered sent to the Commissioner of Charities.

The Phenomenon of Inhibition and Its Possibilities in Pathology, Especially in Its Relations to the Diseases of Myxœdema and Exophthalmic Goiter.—Dr. S. J. Meltzer presented a paper with this title, but for lack of time, only read portions of the article. Speaking of the well-known inhibitory action of the vagus nerve, the author said that stimulation of the peripheral end of this nerve caused: (1) Diminution of the number of heart beats; (2) Diminution in the force of the contraction; (3) Diminished tonus of the cardiac muscle; (4) Diminished excitability of the heart muscle; (5) Abolition of the conductivity of the heart muscle, and (6) A reversal of the direction of the current in the heart muscle. There could be no doubt about the omnipresence of the phenomenon of inhibition throughout the body. Rest was a sort of temporary death without any stimulation or any inhibition. The difference between activity and rest was that in the former state excitation was prominent, whereas in the latter inhibition prevailed. The potential energy of the muscles, nerves and nerve fibers were probably of a different kind, yet the nature of the irritability remained the same in all these cases. The inhibitory fibers became exhausted more quickly than the accelerator fibers; hence when both were stimulated at the same time, on the cessation of the stimulation the accelerating action would become manifest. The importance of inhibition to the regulation of animal life was obvious. If the vascular system were controlled by the structures alone, there might result extreme anæmia, and even necrosis of the tissues from excessive inhibition under certain circumstances. Many years ago he had suggested that, in groups of muscles, such as the flexors and extensors, when one set was stimulated to contract, the antagonizing muscles were inhibited. This arrangement had been found to be actually present in connection with the function of respiration. This form of inhibition was certainly a widespread mechanism in the economy.

The Secretion of Bile.—The discharge of bile occurs about one hour after a meal, but what was it that turned the current of bile away from the bowel the rest of the time? Stimulation of the peripheral end of the splanchnic nerve caused contraction of the gall-bladder and relaxation of the circular muscular fibers—in other words, this nerve contained motor fibers for the gall-bladder and inhibitory fibers for the gall-duct. The entrance of the food into the duodenum was what excited the activity of this mechanism. A disturbance in this reflex mechanism would be followed by all the consequences which we know follow mechanical obstruction of the bile passages. He was of the opinion that many cases, diagnosticated as catarrhal jaundice, were, in reality, instances of such nervous disturbance of the mechanism governing the flow of the bile. The co-existence of gastric catarrh and icterus was by no means proof that the case was one of catarrhal icterus. The failure of the bile to reach the duodenum might just as well be the result of a failure of the nervous mechanism as of the presence of a catarrh of the bile duct. He did not, however, wish to be understood as claiming that catarrhal jaundice does not occur To his mind, intestinal colic occurred when two parts of the bowel, not far apart, contract simultaneously, thus giving rise to strong compressing of the intestinal contents, and hence to intense pain. It was probable that at times the sphincter of the gall-bladder and the bile-duct might also contract simultaneously.

Family Periodic Paralysis.—Reference was made to cases of family periodic paralyses—a form of paralysis in which one of the most characteristic features was the total absence of direct or indirect irritability of the muscles to mechanical or electric stimulation. The muscles behaved like the heart muscle when under strong vagus stimulation. Normally, skeletal muscles respond to stimulation. It had been found that potassium monophosphate would abolish the excitability of a muscle, and that this excitability could be restored by washing out the phosphates with normal saline solution. In these cases of paralysis, it had been found that immediately after the attack of paralysis the urine contained three times as much phosphates as before the paralysis, and that during the attack the quantity of phosphates was about normal; hence, it was reasonable to suppose that this form of paralysis was the result of an over-production of the phosphates.

Myxœdema and Graves' Disease.—In myxœdema the heart beats were small and the movements of the bowel were retarded; muscular contractions were slow; the body temperature was lower than normal. The absence of facial expression was dependent upon a lack of tonicity in the facial muscles. In this disease there was most probably a greater or less deviation in favor of inhibition in the muscles of the body. In Graves' disease, the deviation was more in the direction of excitation. The presence of this disease of the *tâche cerebrale* and the great tendency to blushing would seem to point to a special tendency of the great vascular area controlled by the splanchnic nerve to undergo constriction. Dr. Meltzer, in closing, said that the object of this study of inhibition and excitation was to learn more of the influence which certain substances have over these important functions in the body. A hint of what might be learned in this field was afforded by the remarks made about paralysis and the over-production of the phosphates.

Dr. C. L. Dana said that so many facts regarding inhibition had been established that it was time to apply this knowledge, and it could hardly be better done than in the admirable paper just presented. It was certainly true that it had been demonstrated that by irritating certain parts of the brain cortex of the monkey an inhibition of one group of muscles could be produced and an excitation of another, but we had not yet found any center by which we could produce inhibition without causing a contraction. Scheringer had succeeded in inhibiting the action of one of the muscles of the eye, the internal rectus, after having cut the external rectus, and to that extent he had found a sort of inhibitory center for that muscle, but such centers had not been found generally. The theory propounded regarding periodic paralysis was a most fascinating one, but its truth remained yet to be demonstrated. The momentary paralysis of one arm or one leg, so commonly observed in neurasthenics and hysterical persons, might perhaps be explained by a sudden inhibitory influence. The doctrine of inhibition had even been applied to the phenomena of epilepsy, and with apparent good reason. One of the most puzzling phenomena to him in regard to Graves' disease was the vascular changes in the skin, but this had been clearly explained in the paper.

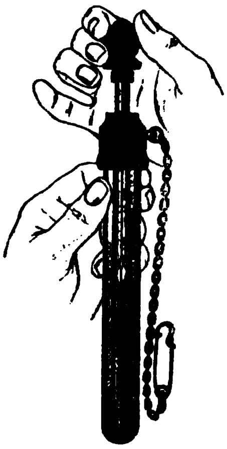
Dr. William H. Thomson said that he had long felt that the familiar inhibitory phenomena connected with the vagus were only a type of many similar phenomena throughout the whole nervous system. He was of the opinion that almost every nerve function was more or less inhibited or controlled by others, and that this applied even to the higher mental processes. Dreams appeared to him to be mental processes devoid of inhibition, and it was chiefly in this respect that they differed from ordinary systematized thought. He had no hesitation in accepting the view advanced by the author, that most of the symptoms of Graves' disease were illustrative of a weakening of the controlling power—a paralysis of inhibition; an uncontrolled excitation. However, he could not agree with him that myxœdema was due to an increase of inhibition and a decrease of excitation. In myxœdema we found the tissues surcharged with a mucoid fluid, which acted upon the muscular and nerve functions very much as ashes do in the banking of the fires of a steam engine. His idea of myxœdema was that all of the vital functions were being slowly extinguished.

Dr. **Meltzer** said that where there was life, inhibition was always present, and we knew now that it was impossible to find centers of inhibition—indeed, this very fact was proof of the omnipresence of inhibitory processes in the body.

New Instruments.

AN ASEPTIC CLINICAL THERMOMETER.

The clinical thermometer is used, perhaps, more constantly and in a greater variety of diseases than any other article of the physician's outfit. The necessity of sterilizing such instruments before use must be recognized, when we reflect that the temperature is most frequently taken in the mouth, which is the abiding place of innumerable germs, and which furnishes a favorable medium for the propagation of bacteria. That the bacterial flora found in the oral cavity can be transmitted by clinical thermometers has been shown by repeated bacteriological examination. The rule of absolute chemical cleanliness should, therefore, be as rigidly observed in the use of clinical thermometers as with instruments used in operations.



The futility of the customary washing of the thermometer in water and then wiping it upon a towel or handkerchief is now generally recognized. Many practitioners attempt to limit the danger of infection by carrying in their thermometer cases a pledget of cotton moistened with an antiseptic solution. This method is found unreliable, since examination of thermometers so carried reveals the presence of bacteria. To be properly sterilized, the instrument must be immersed in the antiseptic solution for a sufficient length of time. The custom adopted by hospitals of keeping thermometers in a disinfecting solution is effective, but is not adapted to the needs of the general practitioner.

To meet the requirements of a practical pocket sterilizer for thermometers, the antiseptic thermometer case, herewith illustrated, has been devised. This consists of a heavy annealed glass tube for holding the antiseptic solution; a rubber diaphragm resting upon the mouth of this tube and making a water-tight closure; a hard rubber neck-band for retaining the diaphragm in position; a hard rubber screw-cap, to which is attached the thermometer, and a safety chain for fastening the whole securely to the clothing. In using this appliance, the glass tube is nearly filled with an antiseptic solution, such as corrosive sublimate 1-500. The neck-band, with diaphragm, is then replaced, and the thermometer inserted through the perforation in the diaphragm. This may then be safely carried in the pocket, since the toughness of the glass insures it against breakage, and the diaphragm prevents leakage.

To remove the thermometer from the case it is only necessary to unscrew the cap, as shown in the cut. On withdrawal of the thermometer, the diaphragm completely closes, so that the solution cannot run out, even though the case be inverted. The thermometer is returned to the case with equal ease. This case is commendable because it is simple in construction and operation; is convenient in size; will not leak, and the thermometer is effectively sterilized, since it is always immersed in the antiseptic solution when not in active use. These cases are made by the Norwich Pharmacal Co.

THE AUTOMATIC LIGATURE PASSER.

By E. PIERRE MALLETT, M.D.,

NEW YORK.

This instrument, a description of which was published several years ago in this journal, has since undergone such an important modification, and has proved itself of such value to me in all abdominal and vaginal work where it is necessary to pass ligatures, that I think it worthy of another presentation. The modification consists in having a strong spring in the handle, which throws open the blades, thus putting the ligature through itself and making its action as nearly automatic as possible. While the accompanying cut shows its action very clearly, a word or two of description may not be out of place. The upper, or needle blade is made like a pedicle needle, except that it has an open or self-threading eye. The lower blade is blunt and smooth and acts as a counter pressure to the needle. In the end of this lower blade is a small slot, just large enough to admit the needle, while across this slot is a groove, which receives and retains the ligature until picked up by the needle. The modus operandi is simplicity itself. A ligature of the desired size is firmly placed in the groove of the lower blade. This blade, the one containing the ligature, is then introduced behind the pedicle, or structure to be ligated, being guided by the fingers of the left hand, which is grasping the pedicle, while the needle blade is passing at the same time over the upper surface of the pedicle under the guidance of the eye. When the particular spot is reached where it is desired to pass the ligature, the handles are firmly compressed and the instrument does the rest. That is, the needle blade is forced

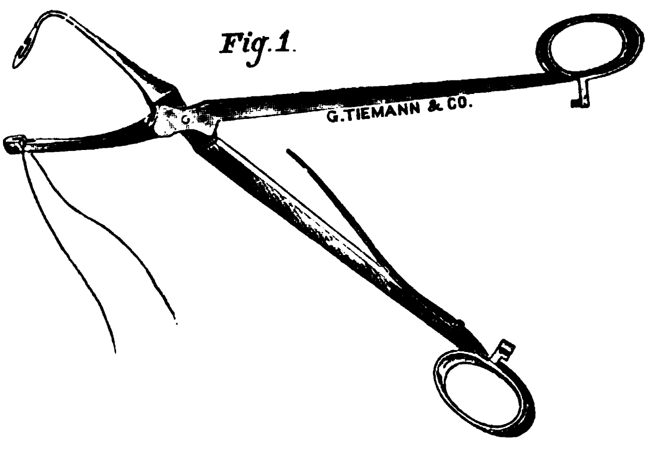


Fig. 1.

through the pedicle, where it picks up the ligature from the groove in the lower blade by means of its open eye. At this point the spring in the handles forces the needle back through the pedicle, taking the ligature with it. The instrument is then withdrawn and the ligature is in place.

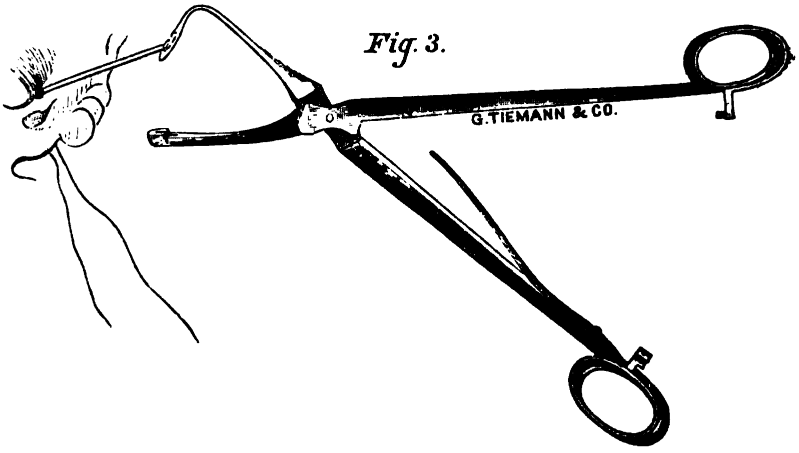


Fig. 3.

The advantages this instrument would seem to possess over those in use at the present time for similar purposes are:

First.—The ease, accuracy and rapidity by which ligatures can be passed through any tissues, particularly those situated deeply in the pelvis.

Second.—The operator is enabled to pass ligatures entirely with one hand, while the other hand is engaged in maintaining the structures in proper position.

Third.—The operator is not dependent upon the skill or dexterity of an assistant in either catching the ligature when it has been passed through the tissues by the pedicle needle, or in placing the ligature properly within the grasp of the Cleveland passer if that instrument be used.

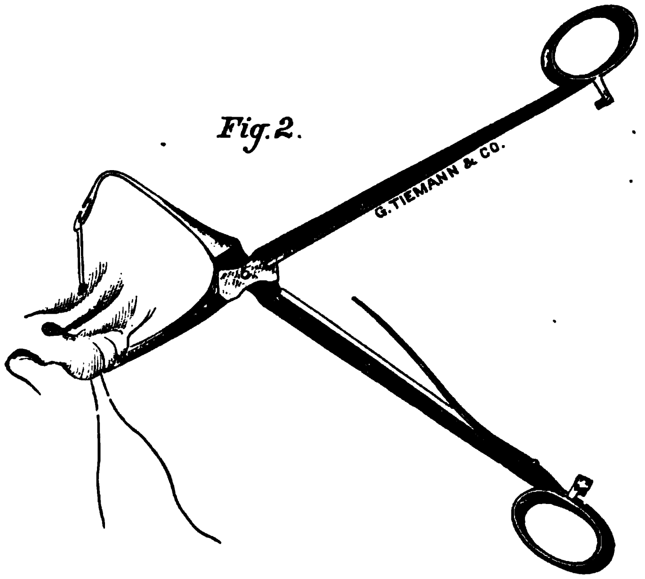


Fig. 2.

THE DORILTON, BROADWAY AND SEVENTY-FIRST STREET.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending February 15, 1902:

	Cases.	Deaths
Measles	962	30
Diphtheria and croup	281	48
Scarlet fever	321	43
Smallpox	58	14
Varicella	96	..
Tuberculosis	238	166
Typhoid fever	20	8
Cerebro-spinal meningitis	..	8

Population of the United States.—The total population of the United States on June 1, 1900, was 76,303,387. Of native-born persons there were 65,843,302, and of foreign born 10,460,088—that is, of every 1,000 persons, in 1900, 863 were born in the United States, and only 137 outside the borders of the country. If in the foreign element are included the children of foreign white parents, the foreign element now constitutes about one-third of the total population—34 per cent.

The native whites of native parentage constitute slightly more than one-half—53.8 per cent.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended February 14, 1902:

SMALLPOX—UNITED STATES.		CASES	DEATHS
District of Columbia, Washington	Jan. 25–Feb. 1	2	
California, Los Angeles	Jan. 25–Feb. 1	7	
San Diego	Jan. 25	1	
San Francisco	Jan. 26–Feb. 2	9	
Illinois, Belleville	Feb. 1–8	4	
Chicago	Feb. 1–8	2	
Danville	Feb. 1–8	2	
Freeport	Feb. 1–8	1	
Galesburg	Feb. 1–8	1	
Indiana, Evansville	Jan. 25–Feb. 8	13	
Indianapolis	Feb. 1–8	23	
Iowa, Clinton	Feb. 1–8	3	
Ottumwa,	Dec. 28–Feb. 1	73	
Kansas, Wichita	Feb. 1–8	1	
Kentucky, Covington	Feb. 2–9	3	
Lexington	Feb. 1–8	3	
Louisiana, New Orleans	Feb. 1–8	3	
Maryland, Baltimore	Feb. 1–8	8	
Massachusetts, Boston	Feb. 1–8	54	7
Brockton	Feb. 1–8	1	
Cambridge	Feb. 1–8	4	
Everett	Jan. 25–Feb. 8	4	
Fall River	Feb. 1–8	1	
Holyoke	Feb. 1–8	1	
Lowell	Feb. 1–8	4	
Malden	Feb. 1–8	1	
New Bedford	Feb. 1–8	1	
Newburyport	Jan. 25–Feb. 8	3	
Somerville	Feb. 1–8	1	
Michigan, Bay City	Jan. 25–Feb. 8	12	
Detroit	Feb. 1–8	6	
Ludington	Feb. 1–8	2	
Minnesota, Minneapolis	Jan. 25–Feb. 1	18	
Montana, Butte	Jan. 24–Feb. 2	1	
Nebraska, Omaha	Feb. 1–8	45	
New Hampshire, Nashua	Feb. 1–8	3	
New Jersey, Camden	Feb. 1–8	8	1
Jersey City	Feb. 2–9	15	
Newark	Feb. 1–8	33	7
New York, Binghamton	Feb. 1–8	1	
New York	Feb. 1–8	61	10
Ohio, Cincinnati	Jan. 31–Feb. 7	12	
Cleveland	Feb. 1–8	5	
Dayton	Feb. 1–8	3	
Hamilton	Feb. 1–8	3	
Toledo	Feb. 1–8	2	
Pennsylvania, Allegheny City	Feb. 1–8	1	
Norristown	Feb. 1–8	1	
Philadelphia	Feb. 1–8	110	20
Pittsburg	Feb. 1–8	1	
Providence	Feb. 1–8	1	
South Carolina, Charleston,	Feb. 1–8	3	
Greenville	Jan. 25–Feb. 8	4	
South Dakota, Sioux Falls,	Feb. 1–8	2	
Tennessee, Memphis	Feb. 1–8	15	
Nashville	Feb. 1–8	1	
Texas, Houston	Feb. 1–8	32	2
Washington, Tacoma	Jan. 24–Feb. 2	20	
Wisconsin, Fond du Lac	Feb. 1–8	3	
Green Bay	Feb. 2–9	19	1
Milwaukee	Feb. 1–8	7	
SMALLPOX—FOREIGN.			
Austria, Budapest	Jan. 15–21	11	
Prague	Jan. 11–18	11	
Belgium, Antwerp	Jan. 11–25	6	1
Brazil, Rio de Janeiro	Dec. 21–Jan. 12	94	94
Canada, Halifax	Jan. 25–Feb. 8	3	
Quebec	Jan. 25–Feb. 3	80	3
Winnipeg	Jan. 25–Feb. 1	10	
Colombia, Cartagena	Jan. 26		2
Great Britain, Liverpool	Jan. 19–25	8	
Italy, Naples	Jan. 18–25	0	1
Rome	Dec. 16–21		1
Russia, Moscow	Jan. 4–13	15	6
Odessa	Jan. 11–25	13	3
St. Petersburg	Jan. 12–25	12	3
Warsaw	Jan. 4–11		2
Spain, Corunna	Jan. 18–25		1
Uruguay, Montevideo	Dec. 28–Jan. 4	77	4

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Original Articles.

SOME VARIETIES, COMPLICATIONS, AND SEQUELÆ OF SMALLPOX AS NOTED IN THE NORFOLK EPIDEMIC OF 1898–99.

BY LEMUEL C. SHEPHERD, M.D.,
NORFOLK, VA.

IT is not my intention to write an exhaustive paper on variola, but only to record some clinical facts noted by us while personally caring for and treating nearly a thousand cases during our recent epidemic.

In describing these varieties of smallpox, I wish emphatically to enforce the view that all these various forms are merely modifications of one and the same disease, and that variola, in all forms, is an entirely separate and distinct disease from varicella, so great an authority as Professor Kaposi of Vienna to the contrary notwithstanding. I was rather surprised, some years ago, to hear him assert in all seriousness at his clinic, while showing the class a case of chickenpox, that it and smallpox were one and the same disease.

In classifying these varieties of smallpox, I found many cases in which the form was not sharply defined, and it was hard to decide to which class the particular case belonged. In addition to the three typical varieties, varioloid, discrete, and confluent variola, we found many cases coming between these and having distinctive features of both its preceding and succeeding variety; however, they all have the same general outline.

I would emphasize the fact that malignant cases may be contracted from the lightest, and will point this out incidentally as I go along with the report of cases.

Varioloid, or benign variola, may be divided into several forms: In the abortive form the pocks fail to pass through the later stages of their development, stopping short at the papular stage, or if reaching the vesicular stage, drying up and shriveling on the fifth or sixth day of the eruption. In other instances the eruption passes rapidly and imperfectly through all phases of its development, producing more or less dwarfed forms of the pustules. In still other instances, the eruption is perfect in its development, passing through each stage naturally, but is extremely discrete.

The following cases are descriptive of these varieties:

CASE I.—H. T., colored female, aged fifteen years, successfully vaccinated about eight years previously, was brought in, March 24, 1899, with modified case; eruptions plentiful, but superficial. She gave a history of few or no premonitory symptoms, disclaiming chill, but admitting some aching, which was general, and not confined to head and back; this eruption had appeared only two days previously. The lesions were discrete, but plentiful, with no areola or swollen base surrounding. They did not grow and mature, but, instead, followed much the usual course of varicella. They began to dry in two days after entrance, and in about a week were scabbed off and clean, leaving only a few dark spots over the face and hands, surfaces exposed to light. Ten days after entrance it would have been hard to tell, except for these spots, that the girl had ever had an eruption. Just twenty-one days after she was brought in, we found in the same house an old woman and a child with well-pronounced cases of smallpox; they had already reached the fourth day of the eruption, so that their incubation period corresponded with our average. The old woman was an invalid, and was confined to one room, and the baby was left with her, and the young girl with abortive smallpox waited upon them the same day she was carried to pest-house.

CASE II.—M. F. S., colored male, thirty-five years old, large and well developed, vaccinated some years previously; found April 6, 1899, with a most discrete eruption, not more than two or three papules on the face, and half a dozen over the chest and shoulders; the papules were small and dry and superficial, resembling acne, not swollen at base; he said there was no itching. The eruption over the forearms and wrists, though very slight in extent, seemed somewhat in advance of the rest, and there were beginning crusts, giving each the appearance of having a little plug in its center. He disclaimed previous headache or backache, chill, fever, or nausea, though some of these symptoms had probably been present to a slight degree. The eruption dried three or four days after entrance, scabbing off, and leaving practically no scar. The patient's wife, recognizing the inspectors when they first found her husband, escaped through the back door of their house. The inspectors were not able to locate her until she became ill herself, when she was compelled to return to her own home, her relatives fearing to harbor her longer since they suspected the nature of her disease.

The house having been watched, she was found immediately upon her return, and was brought in, just eighteen days after her husband, with a discrete though well-marked case.

CASE III.—Henry A., colored, aged thirty years. He thought he had never been vaccinated, and there was no scar to indicate successful vaccination. He was sent to the pest-house November 1, 1898, with an abundant papular eruption over face, hands, and entire body; had been exposed to contagion and had had prodromal symptoms after the usual incubation period. Two other persons were carried from the same house one and two days before, respectively, and one of these presented a well-marked confluent case. All of these had been exposed to a confluent case that had been carried out about eighteen days previously. This patient stated that he had spent the night with the other three when the eruption first appeared upon himself, about two days before being carried to the pest-house. In the case of Henry A. the eruption was vesicular, and did not advance beyond this stage; the vesicles did not grow larger and become filled with pus, but instead they dried rapidly and small scabs formed; there was no secondary fever, and the eruption aborted. The eruption was so abundant, in this case, that had the vesicles grown and become pustules, they would of necessity have run together, and the disease have become confluent.

Case IV.—Robt. H., colored, aged thirty-five years, showed no scar, and was quite sure he had never been vaccinated; was brought in March 29, 1899, with an abundant vesicular eruption, which was general. He had been quite ill with chill, fever, headache, and backache before the eruption appeared. He had no secondary fever, and vesicles dried without becoming pustular.

Case V.—E. H., aged thirty-three years, white; was brought in, May 11, 1899, with a rather mild case. It was peculiar, that while the eruption was normal in regard to the time of its appearance and passed through the various stages of its development, finally becoming pustular, still the pustules were dwarfed and not well filled, and they scabbed over quickly.

During the epidemic we noted a large number of cases with histories similar to this one. Usually the patients had been previously vaccinated; many cases occurred in persons who had been vaccinated within three months with seeming success. The vaccinations had modified the disease but did not protect. We adopted a stronger virus—at least, a more reliable variety.

In the next two cases which I report the eruption was perfect in its development, but extremely discrete.

Case VI.—W. F. A., aged thirty-two years, white, came in, March 12, 1899, with a mild case that was already well advanced; the vesicles were large, having well-marked areolæ, and well filled; they became pustular, and some were umbilicated. Each stage followed the previous one naturally, and finally the case being fully developed without being cut short in any way. However, there were not more than a dozen pustules over the entire body.

Case VII.—Robt. S., aged forty years, white, was a blacksmith. We found him at work in his shop on January 27, 1899. He had a most discrete eruption; three or four large indurated papules about face and head, several over body, and one or two in palms of hands. When I told him that it would be necessary for him to go to the pest-house, he objected loudly. He said that he had never felt better in his life; he had his forge blowing and the iron hot; he had work to do, and he felt like doing it. He assured me that he had not left his shop for more than two weeks, being engaged in his work all day and eating and sleeping in same building alone. He thought it was impossible for him to have been exposed to smallpox. After reaching the pest-house, the patient admitted having had a chill with some general aching three days before. I found the eruption to be perfect in its development, passing through each stage naturally. On February 11, while making rounds in his ward, this man came to me privately with a most pitiful tale. He had received a note from a friend outside telling him of a poor widow with two children who bore the same name as himself, which fact he seemed to think quite a coincidence. He said the note told that there was nothing to eat in the house, no fire, and it was quite certain the mother had smallpox. We were in the midst of a blizzard with about two feet of snow; so, the elements being so much against the woman, he was forced to own that he had visited her house the night before we sent him to the pest-house, and she had fingered the bumps and rubbed his head. The woman had a discrete, but well-marked case.

Discrete variola has, probably, longer incubation and invasion periods than has the confluent variety. Many of us who had to deal with smallpox during this epidemic noted the incubation period as being rather longer than that set down in the books.

The greater number of cases were brought in eighteen days after known exposure, and so, allowing three days for prodromal symptoms, it made the incubation period about fifteen days.

I now report a typical discrete case and then a confluent one. I had not intended to report cases of these, the ordinary varieties, but I find that there still exists doubt in the minds of some members of the profession, in various parts of the country to which this epidemic has now spread, as to its true nature.

I want to emphasize the fact that while many of the cases occurring are mild, still the disease is real smallpox. Therefore, in addition to the atypical cases which I had intended to report only, I will mention briefly the histories of two typical cases which I copy from my case book, and it can be seen how nearly they resemble cases that occurred ann were described fifty or a hundred years ago.

Case VIII.—Arthur D., aged twenty-five years, white, was seen first February 23, 1899. He had no eruption at the time, but complained of headache, backache, and nausea; had temperature of 103.6° F. after a chill. I had been sent for to see his bedfellow, who was developing a confluent case, and had two days start of him, and was already beginning in papular stage, though it is probable they had both been exposed at same time. Eruption had appeared on second man by next day, and his temperature had fallen to a little above normal. The rash appeared first on forehead, neck, and face, and about the wrists, then gradually spread to the extremities. These little macules of the first day had become papular by the second day, and gave the shot-like feel; vesicles had formed on the fourth day, and were large and well filled, becoming pustular about the sixth or seventh day.

At this time the patient complained of much pain and burning of hands and feet. The pustules were quite thick over entire surface, but they did not become confluent. The integument was much swollen, and there was a distinct areola around each pustule. On the seventh day many of the pustules were umbilicated; in two or three days more desiccation began, and desquamation followed in regular order. There was no complication, and patient was discharged March 19, without pitting.

Case IX.—*Confluent.*—J. B. E., aged forty-three years, white, never successfully vaccinated, came in, March 1, with plentiful fine papular eruption, having had severe prodromal symptoms. This patient was in a rather bad physical condition; he had phthisis and was overworked and run down. There was much redness and œdema of integument, even in papular stage, and with beginning pustular stage, about seventh day, the eruption had become confluent over entire body as well as face. Later, when the pustules began to rupture, the entire surface was bathed in a thick yellowish pus, giving that most pronounced odor, which is characteristic of bad cases of smallpox. This viscid pus dried down into thick black crusts; his eyes were entirely closed by them, and his nose and other air passages were so blocked by them that the patient seemed dying of suffocation. He was unconscious for more than three weeks, and wildly delirious for about one week. On one occasion he knocked his nurse down with his fist, and on another he escaped and ran across an adjoining field, a distance of half a mile, before he could be captured and brought back.

When the black crusts had dried and come away, other scales formed and peeled off in successive layers—desquamation extending over several weeks.

This patient was left much pitted, and with almost total absence of hair, beard, and eyebrows. He had a long and tedious convalescence, for, after desquamation was fairly under way, and for several days, he had seemed much better, then his lungs began to give him trouble. His temperature again ran up, cough increased, and he expectorated, each day, large quantities of a green-looking pus, with a gangrenous odor. He developed an enormous appetite at this time, took and assimilated large quantities of food. For two weeks he had each day three quarts of milk, besides buttermilk, eight eggs, and two large bowls of soup, and this, in addition to the "ordinary plain diet" given to other convalescents. He gained flesh rapidly, and two months afterwards he weighed thirty pounds more than when he contracted smallpox.

During the epidemic we treated about sixty confluent cases, and with at least twenty-five the eruption was equally bad as with the case just mentioned. In addition to these we had a much larger number of what might be called semiconfluent; the eruption was confluent over face, but only partly so over body and extremities.

We noted two or three cases of a rather peculiar variety that I find put down as "corymbose," the pustules were confluent in patches or clusters, and the patches were separated from each other by intervals of unaffected skin. This was especially well shown in one case, and since it was complicated with epilepsy, I will mention its history.

Mary J., aged twenty-five years, colored, was sent in, May 6, in the papular stage. In due time the rash became confluent over face and in some parts of her body—over the lower part of abdomen, inner side of thighs, and in the popliteal spaces the eruption was arranged in clusters. There would be seen an irregular space of integument as large as a hand, thickly studded with the fine eruption; these clusters varied somewhat in size and shape, and the integument between clusters was either entirely free of the eruption, or it was extremely discrete. Patient began having convulsions about fourth day of the eruption, and while she was ill with the disease, she had from three to twelve each day; when eruption was better she had them at longer intervals. She was an epileptic, and the disease, smallpox, seemed to increase and aggravate the attacks. The corymbose variety is spoken of as being rare and extremely fatal.

We noted some cases in which the eruption took a peculiar course toward the end of its development. It ran a natural course until it began to scab, when the pustules on the face and other exposed parts became surrounded by red and very much indurated bases, the solid parts of the pocks remained, and were much raised above the surface of the integument; continuing to grow they formed papular excrescences resembling warts. These little growths were hard to reduce. I noticed the condition with two white cases, and with three or four colored men, to a lesser degree; these latter were mulattoes. I think the eruption due to the condition of the skin, and it seems to me the patients were all of a tubercular diathesis.

In regard to complications and sequelæ, probably the most frequent were eye affections. Conjunctivitis was present in about 10 per cent. of the cases. With the confluent cases there was a high grade of inflammation with a plentiful discharge of pus. With the greater number of cases there were localized spots of inflammation, which were evidently due to the formation of pustules on the conjunctiva. The inflammation subsided promptly in all these cases, and as far as we were able to follow up the cases (both the assistant health officer and myself making an effort to watch anything of interest), no bad results have followed. We had two cases of inflammation of the cornea, but these came later in the disease; they followed very bad confluent cases in both instances. With one, a colored woman, the keratitis developed during the stage of desquamation, the inflammation was of a high grade, and an ulcer quickly formed. When the patient was discharged about three weeks later, the eye seemed better, but, upon searching her up later we found that the ulcer had left considerable opacity of the cornea, and vision was somewhat impaired. The other patient, a white man, in whom the ulcer developed about two weeks after he was well of smallpox, had a better result; the ulcer healed, leaving only a slight opaque spot and no impairment of sight.

A noticeable feature with several cases was a marked ptyalism, beginning with vesicular stage and running to late scabbing stage. One white man, with a confluent case, expectorated no less than from two to three pints each day of a viscid, tenacious fluid.

Several cases were complicated with enlarged submaxillary and sublingual glands, coming on mostly in the scabbing stage. In the cases of two negro men these glands seemed to join together and form large abscesses; after freely opening and draining them they gave no further trouble. Several others were complicated with boils or superficial abscesses, the convalescence of some were much prolonged by the presence of these furuncular crops.

A peculiar lesion developed in several cases after the eruption was almost completed. It showed especially well in the case of a negro man after a rather bad, discrete case.

The pustules, instead of drying up and scabbing on the eleventh day began to spread peripherally, so that in a day or two many of the cutaneous lesions consisted of three well-defined parts, namely, a central scab, a surrounding vesicular ring or bleb, which became pustular, and a swollen areola surrounding the pustular ring. Some of these rings measured nearly an inch in diameter. The cause of this secondary eruption seems to be infection by various pyogenic germs; this eruption was present upon the forearms, particularly in cases noted by us. It greatly prolongs convalescence.

Most of the bad cases were complicated with pharyngitis or laryngitis, or both, during the vesicular or early pustular stage, probably due to the presence of the rash in these localities.

Two infants died of either capillary bronchitis or lobular pneumonia complicating confluent cases, one aged five months, and the other only twenty-four days old. With both the lung affection came on in the desquamative stage and after the little patients had seemed much better for two days.

We had three cases complicated with labor, besides two cases of abortion. These patients all made good recoveries, though with one case the labor was abnormal, a transverse presentation, so that podalic version became necessary. We could not be certain of the presence of the rash upon the fœtus, since decomposition was already far advanced.

One case was complicated with dysentery, coming on about fifth or sixth day of the eruption, the amount of blood lost being large.

A case was complicated with typhoid fever, the typhoid symptoms not developing until late in the desquamative stage.

Cancer of breast complicated one case, and the cancer grew rapidly while she was passing through smallpox. The woman said the growth had increased more that one month than it had altogether in the previous three months.

With one case, that of a colored boy, the pigmentary layer was removed. The eruption had been discrete but very thick; slow in developing, taking two or three days to come out after some papules had been present over forehead. It ran a normal course after this, but after desquamation was completed there were left pearly white spots instead of the black ones which ordinarily follow this eruption in the colored race.

We had two cases in which the disease occurred the second time with the same individual; a negro woman about sixty, and a negro man about forty years of age. Both claimed to have had it in childhood, and showed much pitting in evidence. They both had well-marked, though discrete, cases the second time.

FOLLICULAR TONSILLITIS.*

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FOLLICULAR TONSILLITIS is a disease characterized by an exudation of a whitish or yellowish substance from the crypts of the tonsil.

The tonsils are two glandular organs, situated one on each side of the fauces between the anterior and posterior pillars of the soft palate. They consist essentially of a reduplication, more or less extensive, of the oral mucous membrane, in which are enclosed an abundant deposit of adenoid elements, the whole organ having an identity and special function of its own.

The inner surface of the gland presents ten to fifteen orifices leading into small recesses, from which follicles branch out into the interior of the gland.

In its minute anatomy the tonsil resembles the other adenoid structures. It, in common with the rest of the oral mucous membrane, is invested with a thick covering of pavement epithelium, resting upon a single layer of columnar epithelium. Below the epithelium is a delicate endotheloid basement membrane; under this a mucosa formed of interlacing bands of connective tissue. This, in a normal tonsil, is so delicate as to be hardly recognizable, but in chronic disease may be come enormously hypertrophied. Bands of connective tissue extend into the substance of the gland, the whole forming a framework for the adenoid tissue, or proper substance of the gland. This adenoid tissue contains an immense number of lymph corpuscles, which I consider of the utmost importance to the function of the gland.

The function of the tonsil has long been a matter of dispute. Some authorities contend that it is a secreting gland; others that it is an absorbing one. Fox and Swain evidently think that it was placed at the mouth of the fauces for the express purpose of absorbing into the system the germs of infectious disease; Stöhr and Killian believe its function is to destroy deleterious germs.

The secretion of a substance is admitted by all. Under the stimulus of inflammation an exudation is expressed from the mouths of the crypts. This exudation is a hypersecretion of the tonsil itself, reinforced by the products of inflammation, which are serum, fibrin, and pus. The crypts are normally, more or less, filled with a yellowish substance consisting of fat molecules, pavement epithelium, and lymph corpuscles. This substance is greatly increased in tonsillitis. The exudation has no texture, and is not adherent to the tonsil.

I believe that one of the functions of the tonsil is to resist infection, and that this function is probably an acquired one. That nature has provided the body with a system of defence at the entrance of the respiratory tract against the invasion of germs seems hardly to be doubted. The peculiar anatomy of the nose, with its immense amount of mucus-producing surface, and the ring of lymphoid tissue around the pharynx, are provisions of nature, evidently not without a purpose.

The tonsil is composed of this same lymphoid tissue. Its peculiar situation is also worthy of notice. Anterior to the tonsil the mucous membrane has great resisting power. Septic infection of the mouth, considering the frequency of injury, is very rare. Dentists would hardly be able to do much work if the secretions of the mouth were not antagonistic to the development of toxins.

In its possession of a structure capable of producing a large amount of lymph corpuscles, the tonsil is analogous to the spleen, the thyroid gland, the suprarenal capsule, and the lymph nodes themselves. I will endeavor to show that the tonsil is probably allied to those glands in function.

The tonsil might be considered really a lymph gland, partly outside the body, its cells having acquired a special function, due to their situation and the work placed upon them. Evidence of cells becoming specialized for defensive action we see everywhere in nature. The wild pear tree has thorns for its protection, which become branches when the tree is cultivated. The berries of the holly are nestled among the leaves, some of the gemmules of which have become specialized along the border of the leaf to form spines. These spines are evidently produced to resist the onslaughts of birds, who would devour the seeds of future trees.

Killian has shown that man and domestic animals who are exposed to pathogenic germs have relatively large pharyngeal tonsils, but that in animals whose noses are long and complicated the adenoid tissue is absent.

The function of cells in plants can be readily observed. In the drosera, the plant Darwin made such a minute study of, there are cells that can be compared to the lymph corpuscles in man. As evidence that these cells in the drosera do secrete a fluid that is distinctly antagonistic to bacteria, I shall quote an experiment of that most distinguished observer of nature, Charles Darwin:

"During very warm weather I placed together two equalized bits of raw meat, one on the leaf of the drosera, and the other surrounded by wet moss. They were thus left for forty-eight hours, and then examined. The bit on the moss swarmed with infusoria, and was so much decayed that the transverse striæ of the muscular fibers could no longer be distinguished; while that on the bit of leaf, which was bathed in the secretion, was free from infusoria, and its striæ were perfectly distinct in the central and undissolved portion."

If this humble plant, which nature has furnished with cells specialized to assimilate animal matter, is protected from microorganisms in this manner, surely we should almost expect to find such cells in the human body.

The defensive secretions with which nature has provided some animals, such as the serpents, are exceedingly poisonous. The medicinal products which we derive from plants are probably toxins of their lymph cells, which were intended by nature for their defense. It is but necessary to call your attention to the systemic action in the human body of the thyroid extract, nuclein, etc., to prove that glands containing lymph structures in animals do produce a substance resembling a toxin in action.

The function of the tonsil may be excited by exposure to wet and cold, a chill of the surface of the body causing local hyperæmia and vascular engorgement. This cause would account for the predisposition of some people to the disease. Whether this form of tonsillitis is contagious, and if so, whether from the presence of some microorganism or from the toxin produced from the tonsillitis itself, requires further investigation.

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*Read before the Milwaukee Medical Society.

When I first wrote this paper I overlooked any cause but that of an infectious nature, so much was I interested in that form of tonsillitis. But a follicular tonsillitis may be caused by any irritation, such as the inhalation of obnoxious smoke and gases or fluids, though even in these cases I think the coöperation of some germ is necessary.

The most common cause, however, is the presence of some pathogenic germ.

While in most diseases a definite microorganism has been found as a causal factor, in follicular tonsillitis the bacteriological results have proved varied. Among the organisms found are the streptococcus, the Loefler bacillus, the pneumococci, etc., besides other microorganisms that reside normally in the mouth. I believe that any of these organisms and many others are capable of causing a follicular tonsillitis. The symptoms of exudation are caused by the function of the tonsil being excited by the infection, no matter what particular germ endeavors to gain a foothold and develop its toxin.

I would call your attention to the frequency with which tonsillitis complicates almost all the infectious diseases, notably scarlet fever, measles, epidemic influenza, etc. Its relation to diphtheria I wish to discuss more fully. It also complicates rheumatism, but to that disease it bears another relation.

From the symptoms of a disease we can often ascertain the probable point of infection and the methods by which the poison is being eliminated. In measles and epidemic influenza, by the catarrhal symptoms; in scarlet fever and diphtheria, by the sore throat; in typhoid fever, by the diarrhœa.

Here I wish to call your attention to the analogy of the tonsil to Peyer's gland, which it greatly resembles in structure. In malaria we have a direct infection into the blood by the mosquito bite, which also conveys the poison of yellow fever. Bubonic plague has a tonsillar form, but the main source of infection is by the bite of the flea.

The involvement of the spleen in many infectious diseases shows that it bears some relation to the elimination of their various poisons.

I wish to note the fact that in those diseases in which the infection is directly into the blood, or through the intestinal canal, the spleen is more liable to be affected than in those diseases which gain entrance to the respiratory tract; for example, malaria and typhoid fever.

The varied rash of, for instance, scarlet fever, measles, and smallpox is evidence that the toxins of these diseases are essentially different, and that the skin is assisting in their elimination.

If the anatomy and function of each tissue, and the relation each specialized cell or gemmule bears to a supposed toxin that is either the natural waste product of the body itself or some deleterious matter that has gained entrance from the outside, are held clearly in one's mind, a great flood of light is thrown upon the etiology of disease.

The skin may become diseased in eliminating waste products by, for instance, urticaria. The inner walls of the blood vessels may become hardened by the continued presence in the blood of the poison of alcohol or syphilis, causing endarteritis. The endarteritis of old age may likewise be due to the long-continued resistance of cells to the body's natural waste products that the blood is carrying to some excretory organ.

In the Medical Record of December 14, 1901, there is a valuable epitome of the subject of rheumatism as a cause and effect in inflammation of the throat. I will quote from it:

"Fowler has published twenty cases of acute rheumatism ushered in by acute tonsillitis. Lenox Brown says the rheumatic diathesis is always present in these cases of relapsing acute tonsillitis. Wagner finds the same germ in rheumatic affections, in the tonsils, joints, and other parts of the body, and holds that the angina is the first manifestation in most of the cases. Graedel says the tonsil is the local point of infection from which the cocci or germs invade the other parts of the body.

"In a recent article by St. Clair Thompson on 'Rheumatic Fever in Throat Affections' occurs the following: 'In his Milroy lectures Newsholme expresses his views that it is probable in rheumatic fever the specific germ enters the system at the tonsils or some other part of the nasopharynx.'

"Packard thinks the tonsils act as barriers to such infections. He says during or after tonsillitis complications with typical acute articular rheumatism may appear. He considers rheumatism an infectious disease, dependent upon a variety of bacteria, and the phenomena of the disease to be due to toxic absorption. He says that it is probable that the toxin causing rheumatism may be produced by an attenuated microorganism, and the frequent entrance of the microorganism by the throat may explain the occurrence of acute articular rheumatism instead of ordinary septicæmia or pyæmia. The present state of our knowledge on the relation of tonsillar affections to rheumatism might be summarized as follows: (1) It is undoubted that a certain number of cases of acute rheumatism are preceded by an angina in a proportion varying from 30 to 80 per cent.; (2) Both rheumatism and angina have many etiological points in common—season of year, cold, wet, fatigue, depression, vitiated air, etc.; (3) The connection of angina and rheumatism, though undoubted in a number of cases, is not yet clearly established; (4) The tonsil may be the port of entry of the rheumatic virus, although the naked-eye appearance of the throat gives no indication of its being affected; (5) The particular affection of the throat which is associated with rheumatism is not yet established. Apparently it is not peritonsillar abscess (quinsy); (6) Peritonsillar inflammation does not appear to be arrested by the administration of anti-rheumatic remedies. Many cases of parenchymatous and lacunar tonsillitis, on the contrary, are considerably benefited by the administration of salicin or salicylate of sodium. That this action proves the rheumatic nature of the disease cannot yet be accepted; (7) The question requires further research in two directions: One in differentiating the various forms of angina, and settling the one which is associated with rheumatism; the other in further research to discover the true nature of rheumatism."

I incline rather to the theory of Packard that different microorganisms are capable of causing rheumatism. But I do not believe that the relation of tonsillitis to it is either that of cause or effect, but that the tonsillitis is produced by the same germs the faulty or imperfect elimination of whose toxins causes the rheumatism.

When toxins are not properly eliminated they produce unpleasant symptoms, according to the part in which they are retained. These toxins may be the waste products of the foods ingested or the toxins of microorganisms. In the blood they may cause headache and migraine; in the muscles and in the joints, what we call rheumatism; about the nerves, neuralgia. Rheumatism is affected by the ingestion of proteid matter, and by atmospheric changes interfering with the proper elimination of the skin.

In an infectious tonsillitis the cause is evidently some germ. The activity of any pathogenic germ may be destroyed by the secretions of the mouth, or by bacteriolytic action of the lymph corpuscles in the various adenoid structures at the entrance of the respiratory tract, without causing much inflammation. I think it is possible for pathogenic germs in invading the body by way of the tonsil so to overexcite its function as to produce a follicular tonsillitis, the severity and extent of which depend upon the virulence of the infection, and the ability of the lymph corpuscles in the tonsil to overcome the infection by exerting their bacteriolytic or antitoxic action.

Thus, I believe that often a person escapes the infection of the original disease by having a follicular tonsillitis. If nature fails to cope with the disease, we may have either a mixed infection, the tonsillitis complicating the disease, or, if the infection enters the body at some other point than the tonsil, the typical disease without the tonsillitis.

I believe the lymph corpuscles in the tissue of the tonsil produce some substance which has a bacteriolytic or antitoxic action, and is, in a measure, an antitoxin. This theory is but along the line of recent developments in the pathology of infection. The study of tetanus has shown that an emulsion of nerve tissue in normal salt solution is in a measure antitetanic.

Roux and Boul believe that the cells of the body are phagocytic, and are capable of destroying not only the bacteria, but also their toxins. The theories of Metchnikoff are well known. Ehrlich is the great advocate of the chemical theory.

Russell of the University of Wisconsin has recently shown that the waste substances thrown off by the life processes of germs form, when in solutions, poisons, which destroy the germs that produce them.

The study of venoms has also thrown light on the study of the interactions of cells and toxins. Various secretions of the body have been found antitoxic to venoms.

That the germs of many infectious diseases can set up a follicular tonsillitis in persons exposed to the original disease, whether they are immune to it or not, is of frequent observation. Cases where one or more members of a family have scarlet fever and others have sore throats, or a tonsillitis, are quite common.

For example, in a family of five persons, consisting of the father, mother, and three children, aged fifteen, twelve, and ten, respectively, during an epidemic of scarlet fever, the father had a slight sore throat, the mother and oldest child a typical follicular tonsillitis, and the two younger children typical scarlet fever, complicated with follicular tonsillitis. They had never, any of them, had scarlet fever before.

Recently a case came under my observation in which laryngeal diphtheria was overlooked, partly because three other members of the same family were suffering at the same time with follicular tonsillitis. In this case, in which the trachea was filled down to the bifurcation with a membrane, there was no sign of trouble in the tonsils, showing the infection originated in the larynx.

Various authors classify tonsillitis differently, some giving a separate etiology for each variety, namely, tonsillitis, follicular tonsillitis, tonsillar abscess, pseudomembranous angina, etc. I believe the etiology of all to be the same, the different forms being due to the virulence of the infection and the kind of tissue involved; but we must have, except in those cases which are aborted in their very inception, the characteristic exudation from the crypts of the tonsil.

A membrane having a texture, or one that is adherent and cannot be removed by a swab, the tissue beneath bleeding when it is removed forcibly, is diphtheritic. Diphtheria does not always commence on the tonsil, but a follicular tonsillitis never commences anywhere else.

The adherent membrane of diphtheria can be demonstrated microscopically to be a network of fibrin, which takes the place of the epithelium covering the mucosa. Most authorities regard it as a product of the epithelium. It does sometimes extend to various depths into the lacunæ of the tonsil and into the excretory ducts of the mucous glands; but the great point is that, though it may extend into the lacunæ, it never exudes from them in the manner of a follicular tonsillitis. It is apt to spread rapidly to the palate, uvula, and wall of the pharynx; it is grayish, and often becomes hard and fibrous. It is difficult to get a good description of diphtheria in a recent author so much has the disease become confounded with follicular tonsillitis.

The Klebs-Loefler bacillus is the microorganism which causes diphtheria and produces the adherent membrane. This bacillus is, however, sometimes found in the human throat when the subject is evidently not suffering from diphtheria. This fact, however fortunate it may be for the subject, throws a doubt upon what would otherwise be undisputed evidence of diphtheria. Haebner reports twenty cases in which the bacillus was found in the mouth and throat of children who presented no symptoms, either general or local. The bacilli often remained for weeks, in one case for two and one-half months, yet in some cases were so virulent, when cultivated and inoculated into animals, that they caused the death of the same in twenty-four hours. The very fact that they disappear at all would show that there is some process going on that is antagonistic to their growth.

It appears from the study of the investigations of Fraenkel, Roux and Yersin, A. de Simoni, and others, that the Klebs-Loefler bacillus is found in different degrees of virulency, and that its virulence can be modified by cultivation.

We all know that another toxin, that of cowpox, is found in varied degrees of virulency, and that very few of the products are equal to that taken directly from the human body. I have found from experience that the boasted light results of certain products are due to their weakness, and that they would often fail when a more potent vaccine would be successful. If this is true of cowpox, it is quite plausible to suppose that the Klebs-Loefler bacillus may be found at times non-virulent, and, if able to produce any toxin at all, it would be so weakened as to be overcome by the normal secretions of the mouth and throat. That the Klebs-Loefler bacillus causes the development of a membrane which has certain characteristics which never vary would seem more plausible than that it should have variable ones, such as sometimes having a texture and again not, being adherent in one case and in another not.

We know that when the bacillus is grown artificially it assumes certain charactersitics which are diagnostic.

There is no doubt in my mind that the Klebs-Loefler bacillus is often present in cases of follicular tonsillitis, and that if more bacteriological examinations were made it would be more often demonstrated.

In writing of herpetic tonsillitis, E. J. Moure of Bourdeaux says: "The only diagnosis of importance or especial difficulty is that between the disease under consideration and diphtheritic tonsillitis. Bacteriologists say that all that is necessary is to cultivate a small piece of the false membrane in order to obtain indubitable results in twenty-four hours. Without wishing to deny that a certain number of cases of diphtheria may have been taken for tonsillitis, I believe that it is, up to the present time at least, impossible for the clinician to accept all the deductions of the bacteriologist, for it has been shown that the Klebs-Loefler bacillus exists in many parts of the buccal cavity of healthy individuals. It is necessary, therefore, to take into account the clinical facts and to be able to associate them with the results of the bacteriological examination."

In 1889 and 1890, Roux and Yersin isolated a diphtheritic toxin, which developed symptoms identical with the Klebs-Loefler bacillus. Probably this toxin must always be formed, whether the bacillus finds its culture media in the human throat or whether it is cultivated artificially for the inoculation of animals, before we can have the characteristic symptoms of diphtheria.

Is it fanciful to suppose that the lymph corpuscles develop a toxin that is antagonistic to the formation of diphtheritic toxin, yet in their activity to resist infection cause a follicular tonsillitis? This may account for the presence of the Klebs-Loefler bacillus in cases in which the clinical symptoms are evidently those of follicular tonsillitis. That no specific microbe is found rather goes to prove my theory that the tonsil has something to do with the production of the toxin —or antitoxin, I might call it. It is evident from the course and symptoms of the disease, and the fact that it is directly infectious itself, that the toxin is identical in all cases of tonsillitis, although it is caused by various organisms.

It is well to note here that one attack of scarlet fever or measles usually protects the body against a subsequent infection of the same disease. The fact that this is not so in tonsillitis shows that the diseases are radically different in their nature. I have seen it attack each member of a family year after year for many years, but recently, from better understanding the contagious nature of the disease, I have been more often able to confine it to a single person.

I do not wish to say that diphtheria could not develop from a simple follicular tonsillitis, but I think those cases must be rare indeed. I can give evidence of five hundred cases in which it did not. When there is diphtheria it is probably present from the very beginning. I do not believe that it can develop without producing characteristic clinical symptoms, and that it is not virulent unless it does.

I will relate one unfortunate case which illustrates some of these points:

CASE I.—A family of five persons, whom I had treated for follicular tonsillitis at least once a year for six years previously, were having their usual experience with the disease. The cases were all light, except that of the father, who had a bad peritonsillar abscess, which he had frequently had as a complication before. A young man of thirty, of remarkably fine physique, was visiting at the house, and he also contracted the sore throat. He had been subject to tonsillitis since a child. He consulted his physician, who took a swab from his throat and had a bacteriological examination made. The young man had sat up the greater part of two nights with the father, who was unable to sleep, and suffered a good deal with his bad quinsy. The Klebs-Loefler bacillus was found by the health department. The young man had been invited to stay at the house, as the family felt responsible in a way for his sore throat. So he went home to get his things, and returned to the house about four o'clock. His physician visited him at five o'clock, bringing with him the results of the bacteriological examination, and then injected, with every antiseptic precaution, 1,500 units of a standard antitoxin into the region of the abdomen. In a minute the young man was seized with a choking feeling about the throat and a desire to defecate. He was then immediately seized with convulsions, and died in ten minutes. I was unable to reach the house in time to see him alive.

The post-mortem examination was very unsatisfactory, except that every organ was found to be in a healthy condition. The other physicians present evidently thought he died of diphtheritic poison, and, from motives of delicacy, I was unable to suggest any other cause of death. I should like to have seen the tonsils, on which the only evidence of the disease shortly before death were a few discrete patches. Of course, the doctor, from the present knowledge of bacteriology, was perfectly justified in giving the antitoxin. But I, in the future, as I have always done in the past, will place a great deal of dependence upon clinical symptoms,

I hesitated in reporting the case, fearing that by including it in this paper I might arouse the suspicion that I was prejudiced against the use of antitoxin. I believe it to be one of the most valuable remedies that has yet been discovered, and that its discovery along scientific lines of investigation and its successful use show great promise for serum therapy. But I wish the fact that it is a potent remedy, and not a harmless drug to be recklessly administered, to be well known. I fear that the alarming symptoms and fatal results that sometimes follow its use have not been sufficiently reported.

Some observations that I have made since writing the above lead me to suspect that the hæmolytic effect of carbolic acid or some other coal-tar product, used as a preservative of the antitoxin, or accidentally left in the syringe after cleaning, may account for some alarming symptoms following the use of antitoxin.

I believe antitoxin is given ten times in follicular tonsillitis where it is given once in diphtheria.

I have given it five times in cases in which children have been exposed to supposed diphtheria, and in which the cases had been reported and quarantined as such. Four of these patients developed follicular tonsillitis.

CASE II.—The F. children, aged six and four, played with a child who was sick with a sore throat. The following day the physician attending the sick child, from a bacteriological examination, pronounced the case diphtheria. I injected 500 units of antitoxin into the gluteal region of both children; a day later the younger child developed a typical case of follicular tonsillitis.

CASE III.—The E. children, aged seven and five, played in bed with a child who, on the following day, was pronounced to have diphtheria. I injected the antitoxin, but both children came down with severe cases of follicular tonsillitis. An aunt in the family also had tonsillitis, which was complicated by a peritonsillar abscess. The E. children have since both had scarlet fever, the lighter case complicated by tonsillitis; the severer case was uncomplicated, except that the scarlet fever intensified a pre-existing nephritis, which almost proved fatal.

CASE IV.—Three M. children played with a child who had diphtheria, but as the two older children had had diphtheria, I injected the youngest alone, One of the older children developed a follicular tonsillitis.

I will not try to enumerate the number of cases of tonsillitis in which similar former attacks, according to the patient's story, were diagnosed as diphtheria. I surely cannot be alone in my experience.

I have seen almost no diphtheria in ten years of practice, yet there is hardly a nurse whom I have questioned, if she has had a year or two of experience, who has not seen several. One nurse in particular gave me the histories of six cases with whom she had been isolated, and which were the total number she had seen. In but four of these cases was there any evident patch, and in those it was easily removed by a swab. To three of the patients antitoxin was given, but all the cases were very mild. Such evidence seems to point to the fact that many cases are diagnosed as diphtheria which follow the clinical symptoms of follicular tonsillitis.

Although follicular tonsillitis is primarily an affection of the tonsil alone, we may have a great many complications from the extension of the inflammation to the surrounding tissue.

Abscess of the tonsil itself, peritonsillar abscess, and otitis media are quite common. The mouth germs and salivary glands may become infected, giving all the symptoms of salivation.

Severe septic inflammation and œdema of the throat may follow a tonsillitis. From extension to the respiratory tract, we may have laryngitis, bronchitis, etc. In eliminating the poison, the kidney may become the seat of an inflammation. That it frequently complicates scarlet fever, epidemic influenza, I have mentioned, but in these cases it is not the original disease. I have never seen a case of follicular tonsillitis develop the clinical symptoms of diphtheria.

The only other bacilli capable of producing a membrane similar to that of the Klebs-Loefler bacilli are some of the pyogenic cocci.

When the streptococcus pyogenes is the cause of the follicular tonsillitis the diagnosis from diphtheria is extremely difficult, as the appearance of the membrane formed is almost identical with that of diphtheria.

The streptococcus pyogenes is the constant attendant of the so-called diphtheritic scarlatina. If the rash is slight, or absent, as it is sometimes in atypical scarlet fever, one is very apt to be misled in diagnosis. The membrane is somewhat adherent, and seems to have texture, but it can be removed by a swab, and the texture is more apparent than real. It may become quite adherent later, while if seen early enough, it is quite easily removed.

It is in these cases that a bacteriological examination is of great aid in making a differential diagnosis. I have such a case at present under observation, and the extreme difficulty of diagnosis is well shown in the difference of opinion of my consultants.

I will not detain you with a description of the course and symptoms of the disease. I have mentioned the main symptom which, if present, is diagnostic. The systemic symptoms are those of infection of the body by some poison. It is worthy of note that the fever is high in proportion to the bodily depression, and that the patient often feels worse before the exudation is much in evidence. That one tonsil often escapes infection, and that disease can be avoided by preventive local treatment, is interesting.

As to treatment, I think we should go on the theory that nature is trying to eliminate a poison. Locally, the exudate should be removed as soon as it is found, best with a dry swab, but the peroxide spray is very effective, and is more convenient for the patient to use.

Some antiseptic wash or spray may be used, but I have generally found the peroxide sufficient. The patients are usually constipated, and calomel is best given at once.

The drug I have found of the most value, probably because it is such a good eliminant, is the salicylate of sodium. Aconite and belladonna are useful.

The headache and pain in the back and limbs are quickly removed by the coal-tar products. The various complications require their different treatments. I have no experience with nuclein and other gland extracts in the treatment of tonsillitis, but I think, theoretically, they should be of service.

On the whole, I know of no disease which is so satisfactory to treat and which is so amenable to proper treatment.

The severity of the disease seems to depend somewhat on the length of time since a previous infection, showing that a variable period of immunity is caused by one attack.

In writing this paper I do not wish in any way to decry the great value of bacteriological examinations, but rather to urge their use even on non-clinical cases. I have recently found them of great value in confirming a negative diagnosis when the history of the case seemed to point almost conclusively to diphtheritic infection. This case being in an institution where a large number of children were exposed, the question of diagnosis was of the utmost importance. In very mild cases of diphtheria the patches may be so small as to be difficult to distinguish from the exudative plugs of tonsillitis; and if I found a patch in which there was any question of its adherence or texture, I would call it diphtheria, even though the Klebs-Loefler bacillus could not be demonstrated, for the not finding of the bacillus in cases of clinical diphtheria is due to faulty technique.

But I do wish to point out the fact that the clinical symptoms of follicular tonsillitis are radically different from those of diphtheria, and that the presence of the Klebs-Loefler bacillus in a non-virulent form is not conclusive evidence that the case is diphtheria. Landowzy, in the results of 860 cases examined bacteriologically, concluded that it was impossible to diagnose clinically many throat affections from diphtheria. In this conclusion, I take it, he was confounded by the presence of a Klebs-Loefler bacillus in many minor throat affections.

My views on the value of antitoxin I have given. I think it is a fact to be greatly lamented that, notwithstanding all the clinical evidence of its great value in diphtheria, there are still to be found physicians to oppose its use. I do not claim that it does any harm if given in follicular tonsillitis, but what I am after is the truth, and if its value as a remedy has been overrated by including in the statistics cases of follicular tonsillitis, I should like this fact to be known.

I do not wish to underrate the importance of the removal of hypertrophied and diseased tonsillar tissue. But great judgment should be used in all cases, and if the hypertrophy is caused by overwork, due to diseased nasal mucous membrane, that should be treated first. No more tonsillar tissue should be removed than is necessary. It might not be out of place to say here, that while the removal of the tonsil will prevent the recurrence of tonsillitis, in so far as the crypts are entirely removed and the follicles that cause the characteristic symptoms are gone, yet, in my experience, it will not protect the body against subsequent attacks of sore throat, or any of the infectious diseases that gain access to the body by way of the tonsil.

In closing, I will recapitulate a few points I have endeavored to present:

1. That follicular tonsillitis is not caused by a single microbe, but that many well-known micro-organisms are capable of causing it.

2. That the symptoms of tonsillitis are partly caused by an exaggeration of its function.
3. That under the stimulus of infection the lymph corpuscles in the adenoid structure of the tonsil produce an antitoxin that is antagonistic to invading germs.
4. That the characteristic symptom is an exudate having no texture and non-adherent.
5. That the presence of the Klebs-Loefler bacillus is not positive evidence that the disease is not a simple follicular tonsillitis.
6. Lastly, that there seems to be some relation between follicular tonsillitis and the infectious diseases which is not yet properly understood; that whatever the function of the tonsil, it seems in disease to endeavor by its activity to assist nature in eliminating infection.

I know that in this paper I have digressed considerably from the subject, but I hope you will pardon me if, having taken follicular tonsillitis as my topic, I have endeavored to show in disease that the doctrine of the survival of the fittest is carried down to the smallest cell and most minute microorganism; how every microorganism is ever looking for a place to propagate its kind without reference to the damage it does; how each individual cell endeavors to resist its own annihilation; how groups of cells may become organs specialized to resist infection.

That the tonsil, placed at a vulnerable point, should become injured in resisting infection; that the kidney in eliminating poison should have its function impaired by nephritis; that the blood should leak out into a muscle or joint some of the toxin it is endeavoring to carry to one of the excretory glands, are evidences only of nature's grand system of defense.

A CASE OF PRESENILE OR ANGIOSCLEROTIC GANGRENE PRECIPITATED BY INFLUENZA.

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The rather exceptional involvement of an upper extremity and the favorable result of a conservative operative procedure, combined with the administration of large doses of potassium iodide, are the conditions which have made this case worthy of report.

The history is as follows: Mrs. C., aged thirty-eight years, housewife, native American. The father died of enlargement of the heart and dropsy at the age of fifty-seven, and the mother at sixty-two from a stroke of paralysis; the maternal grandfather died from phthisis. One brother has paresis. The patient has had no children. For the past seven or eight years she has suffered from a steadily growing uterine fibroma, necessitating, in 1896, an induced abortion. She has had no other abortion or miscarriage. Her habits are excellent, and there is absolutely no history of specific trouble.

During the fall of 1900 neuralgic pains of a transient character were experienced in the right arm and forearm. In December the finger tips of both hands, especially the right, frequently felt hot, "as if they had been burned." January 8, 1901, patient had an attack of influenza of moderate severity, temperature reaching 102°, and a bronchitis of the larger tubes existing. Unfortunately, no bacteriological examination was made of the sputum. This lasted about one week. January 17, all of the fingers felt "frost-bitten and tingled," especially the fourth and fifth of the right hand. The pain grew steadily worse and localized itself in the latter fingers and the ulnar side of the palm. January 19, forty-eight hours later, the conditions were as follows: The fingers of the right hand were uniformly swollen, slightly reddened about the joints and tender, the palmar surfaces of the last phalanges of the fourth and fifth fingers presented each a small purplish area, exquisitely tender. There were also a few bluish flecks on the ulnar side of the palm, which later disappeared. The patient was delirious with pain, which was partially controlled by one grain of morphine hypodermatically.

Physical Examination.—A small, fairly well-nourished woman, with pallid skin and mucous membranes. Mouth temperature 101°. Examination of the lungs was negative. The heart was of normal size; there were systolic murmurs at the second left space and apex, the latter being transmitted a short distance to the left. (The apical murmur eventually disappeared.) The pulse was of medium size, fair tension, and intermitting every fifth beat; the radials were soft, and pulsation was felt in both ulnar arteries. Examination of the abdomen was negative, except for uterine tumor reaching to umbilicus. The pupils were equal and reacted to light and accommodation. The patellar reflexes were normal. Urianalysis was negative in its results on this and repeated future examinations. The blood showed no leucocytosis; a count of the red cells was not made; hæmoglobin, 65 per cent. (due to excessive loss of blood at each menstrual period).

Subsequent History.—The purplish spots, before mentioned, became areas of dry gangrene, which spread rapidly until the terminal phalanx of the fourth, and the terminal and half of the middle phalanx of the fifth fingers were involved. The remaining portions of the involved fingers and also the other fingers of that hand remained swollen, tender, and very painful, necessitating the subcutaneous administration of about one grain of morphine sulphate daily. The only local applications giving relief were baths of ice-cold, weak solutions of carbolic acid. An irregular temperature running up to 101°–102° toward night was present; on some days the patient was free from fever, the local condition being, apparently, the only explanation of this. Meantime the line of demarcation had formed, and on February 22 the involved phalanges were amputated. The wound healed by first intention and the patient was put on five grains of potassium iodide *t. i. d.*, and hot dry sand baths locally. She gained weight and the pain became much less. In May it returned with renewed vigor in the stumps and the ulnar side of the palm, both of which became swollen and reddened, showing a number of small purplish flecks. On May 22, the stumps, together with the fourth and fifth metacarpal bones, were removed, chiefly on the account of extreme pain, and because it seemed impossible to save that portion of the hand. The wound healed per primam. Microscopical examination of these parts showed that the gangrene was caused by localized arteriosclerosis. Two weeks later the pain returned in the remaining fingers with marked severity. Large doses of potassium iodide and small doses of the protiodide of mercury were then given, and in a few days the pain abated. For two months the condition in the hand was quiescent, and the nails, which during the entire illness had shown no growth, began to grow again. Then there was a slight recurrence of pain which was overcome, following a recent suggestion of Buchner, by the application of bandages saturated in 95 per cent. alcohol, to the hand and forearm. This was continued every day for some weeks; the iodide being still kept up.

At the present time, eight months after the second operation, the pain appears at very infrequent intervals, and is very slight in character. The fingers have resumed their normal size and appearance, the stiffness which persisted for weeks has disappeared, and the hand is used freely and effectively.

The very complete pathological report for which I am indebted to the courtesy of Professor James Ewing, is as follows: "The tissues examined included the entire cross sections of the terminal phalanges amputated at the first operation and tissues from the various portions in the metacarpal area, removed at the second operation.

"In the terminal phalanges the conditions found were briefly: (1) Advanced pan arteritis, with complete occlusion of the large vessels; (2) Advanced chronic productive interstitial neuritis, resulting in nearly complete sclerosis of many nerve trunks. In addition to the fibrosing process there was extensive infiltration of the tissues with round cells, rather diffusely in the subcutaneous areas, and grouped especially in the sheaths of bloodvessels and nerve trunks. The lobules of fat tissue were extensively infiltrated with round cells.

"In the metacarpal region there were the same changes, but less marked. A section of the artery of the deep palmar arch showed the vessel to be the seat of extensive endarteritis, while its lumen was nearly occluded by a rather recent, partly organized thrombus. The media of the vessel was replaced by a tissue composed of many round cells and new bloodvessels. The intima was much thickened by a cellular growth. The infiltration by round cells of all sheaths of bloodvessels and of epineurium and of perineurium was extreme, while many fat lobules and bundles of muscle fibers showed similar infiltration, often in miliary foci. In some places the collections of round cells showed evidences of beginning necrosis, but no miliary tubercles were discovered. The microscopical appearance, especially the limitation of the process to sheaths of bloodvessels, strangely resemble those seen in specific disease.

"A more acute and intense phase of the process existed about some large vessels beneath the skin of the metacarpal region, which were almost completely destroyed by infiltration with mononuclear and polynuclear cells, partly necrotic. In these areas the condition was practically that of miliary abscess."

The examination of four cross sections of the digital arteries showed two nodular thickenings of the intima projecting well into the lumen and confined to a portion of its circumference. How far these nodes extended in the longitudinal axis of the vessel, and whether they occurred where branches were given off, could naturally not be determined from so few sections.

It is to be noted that the process, as far as could be ascertained, was strictly localized. The radial artery which was very readily accessible to the palpating finger, was perfectly soft, the pulsations in the ulnar artery could be felt, and there were no evidences of arterial disease elsewhere. This marked circumscription of the diseased area, and absence of involvement not only of the chief afferent artery, but of arterial disease in other regions, would seem to place a distinctive mark on this case of angiosclerotic gangrene; for, on reviewing the literature of spontaneous gangrene, I find the great majority of cases show an involvement of the main arterial trunk, in the shape of an obliterating arteritis, which is evinced during life by thickening and feebleness or absence of the pulse. Therefore, the apparent absence of disease in the main artery puts our case in a separate class, whose surgical treatment is decidedly different from that of the usual form.

The term presenile or angiosclerotic gangrene includes those cases of spontaneous gangrene arising in young or middle-aged persons from localized arterial disease, as opposed to cases due to senility, diabetes or to neuropathic causes. The primary etiology of this group of cases is still somewhat obscure, a divergence of opinion existing as to whether the causes of generalized arteriosclerosis are also valid here.

The secondary or local causes have been carefully considered by especially v. Winiwarter, v. Zoege-Manteuffel and, of late, Bunge. V. Winiwarter, the first to make thorough investigations, ascribed the gangrene to an obliterating endarteritis, which, of itself, was sufficient to cut off the blood supply without the intervention of a thrombus. V. Zoege-Manteuffel says: "The arteriosclerosis has existed in the patient for some time. It is accentuated through injury of a chemical, thermic or vasomotoric in character. The intima grows, but cannot of itself lead to a closure of the vessel, the blood current preventing this. On the contrary, some cells of the intima are loosened, roughness of the wall ensues, on which coagulation thromboses form, and are organized."

Bunge in his last article advances a somewhat different theory, as follows: "On the basis of a sclerosis of the artery there arise circumscribed sclerotic thickenings of the intima, which narrow, usually in many places, the vessel lumen. These stenoses develop generally at the places where branches are given off, and so form an obstacle to the development of a collateral circulation, thus endangering the life of the part supplied. Behind these stenoses thrombi form, thus cutting off the circulation entirely."

Among the cases he most minutely describes in support of his theory is one, Case III, whose pathological findings present, in addition to the above-described lesions, certain other changes in the media and adventitia, quite similar to those found in our case. These changes, taken in connection with lesions in other organs, induced Bunge to make a tentative diagnosis of syphilis in his case.

Thus it is seen that the microscopical examination of our case, while corroborating the views of v. Zoege-Manteuffel, was not extensive enough to permit of an expression as to the correctness of Bunge's theory.

The attack of influenza undoubtedly afforded an impulse sufficient to precipitate the thrombosis in arteries, which, from the nature of the lesions found, had been damaged long before. Eichhorst, in a recent article, has collected reports of nineteen cases of gangrene following influenza, and many cases following other infectious diseases. The involvement of the vessels' sheaths, the extensive neuritis, both unusual in ordinary presenile gangrene, and the excellent results following the exhibition of iodide and mercury, certainly suggest a specific origin for the trouble.

Of the symptoms, the neuralgic pains, preceding by some months the attack, and the absence of intermittent claudication, are to be remarked. The cause of the agonizing pain, present at intervals for weeks, is possibly to be explained as follows: On each occasion the patient would exclaim that the fingers felt "as if they would burst." Then with the acme of pain they would become more swollen and purplish red in spots, the circulation apparently experiencing a transient disturbance. The increased pressure thus exercised by the congested bloodvessels on the nerve filaments, already inflamed, would appear to explain this most distressing feature of the case.

A few words concerning the treatment, both medical and surgical. Following the first operation, small doses of potassium iodide and locally hot, dry sand baths were given with a view to influencing the peripheral circulation. This had no effect, probably on account of the advanced disease of the remaining portion of the ulnar area, which was accordingly removed at the second operation. Then the large doses of iodide (gr. xx daily) and the small doses of mercury were given, with the gratifying result before mentioned.

The blood pressure at this time, as estimated by Gaertner's tonometer, showed 101.5 mm. of mercury for the affected right hand and 115 mm. for the healthy left hand, thus showing that the digital arteries of the right hand were sufficiently diseased to produce a local decrease in pressure.

Following a recent suggestion of Buchner, bandages saturated in 95 per cent. alcohol were applied to the hand and forearm for thirty minutes, and the blood pressure then taken. The effect was shown in a local increase of pressure amounting to 10 mm. of mercury, thus demonstrating absolutely the remarkable action of external applications of alcohol on the local blood pressure. The propulsion of more blood through the diseased area must certainly aid materially in re-establishing normal conditions. This treatment was accordingly steadily persisted in. After six weeks of the treatment the blood pressure in the affected area varies between 108 and 115 mm. of mercury, which, compared with the former pressure of 101 mm., shows a most decided improvement.

As regards the surgical treatment. The textbooks and literature advocate, almost without exception, a high operation in spontaneous gangrene, that is, an amputation some distance above the line of demarcation. The disadvantage of the low operation lies in the disposition of the flaps to slough and start a new process of gangrene at the line of incision. Von Wiedenmann advises a low operation in all cases, with the proviso that if the main artery is completely or partly occluded, or if the flaps bleed but little, to do a high operation. Certainly, in cases like ours, with a circumscribed lesion, and healthy or comparatively healthy main artery, the low operation is much to be preferred. The first operation (removing the gangrenous phalanges) did not end, as we hoped, the surgical interference. Although the flaps bled but very little, they healed by primary union. The severe pain and evidences of marked circulatory disturbances in the ulnar area decided the second operation. We now had a portion of the right hand left, the preservation of which was naturally of extreme importance to the patient. The appearance of the hand and the decreased blood pressure showed that the entire area of disease had not been removed, and it was now our task to improve this poor circulation. This, I think, was done very effectively by the above-mentioned medical treatment.

The good condition of the patient at present, eight months after the last operation, is a very favorable comment on the advantages of conservative treatment in this particular class of cases, and a happy outcome to a most interesting case.

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DISCOVERIES IN PATHOLOGY.

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PATHOLOGICAL structures are secondary formations. Sometimes they are exceedingly changed and varied, and again they may show great resemblance to the original tissue. They can never perform the natural physiological functions, yet they are human tissues, and there is a great and fascinating beauty about these new formations. Under the microscope they show marvelous combinations, and are wonderful in their anatomical make-up.

Once in studying a profoundly diseased ovary, with a power of 400, there was presented a picture of almost dazzling brightness: Long-branching protoplasmic bodies of exceedingly delicate and exquisite organization, winding in all directions, and in most graceful curves. It made a fairyland of beauty. It was a forest of wonderful structures. But the ovary! In it was found no normal tissue. Large portions were transformed into this peculiar growth, which was filled with coarse granules, hæmatoblasts, and other life material, proving its innate powers and, possibly, its destructive tendencies.

All such changes necessarily give rise to great suffering and to serious constitutional disturbances. There can be no great pathological change of tissue without abnormal conditions of the system, and always great light can be thrown on these changes and new formations by considering the clinical history of the individual. The microscope reveals the pathological change, clinical history gives the life reflection, and makes the momentous reverberations of the almost tragic records. Without the clinical history, there can never be as clear an understanding of any great pathological process or formation.

The patient in whose ovaries this growth was said that for fifteen years she had suffered distress in the pelvis, and that she had been refused admission into two hospitals. I told the patient I would receive her into my private hospital, and give her any treatment or perform any operation that might be necessary for her welfare and recovery. The next day, June 18, 1885, she entered; thirty-five years old, single. The ovaries gave evidence of profound disease and serious pathological conditions. I saw they never could be restored to health, could never again perform their physiological functions, and would be only a source of increasing distress, doing more and more injury to the system, and the only right course was their removal.

After removal, the organs were prepared by the best methods for microscopical investigation. But this growth, that could apparently spread and destroy every tissue of the ovary, what was its nature? I thought at first it was carcinoma. The master of the laboratory pronounced it "sarcoma," and afterwards "sarcoma, or endothelioma." It was evidently formed by the breaking down of normal tissue, and from these primal or medullary elements any new growth may be evolved. The formation finally received the name of endothelioma, from its supposed resemblance to the lining endothelia of the peritoneum and of the blood and lymph vessels.

On March 30, 1887, a mother brought her daughter to me, pale, emaciated, and apparently with tuberculous consumption. I did not then imagine I was going to have another revelation of this peculiar disease. The patient said she suffered with constant and distressing pain on both sides of the pelvis, that she had been married some years, and had no children. This patient had been treated by many excellent physicians, both locally and constitutionally. I also commenced a course of treatment, but was soon compelled to inform the patient and her husband that the organs never could be restored to a normal condition, or made capable of normal functions, and that there was no way of relief but by their removal.[1]

These ovaries proved to be mines of pathological wealth; rich fields for investigation. There was this growth in an advanced stage of development extending to the periphery, and in the spaces other pathological formations. There was not one spot of normal tissue in either ovary.

The patient made a rapid recovery from the operation, and her sister, who had the same trouble, without an operation, soon died.

I presented before the New York Pathological Society the ovaries and tubes, and a number of mounted microscopical sections of both organs. I continued studying this peculiar growth by different powers of the microscope, and during the summer of 1887 could see that the coarse granules of these protoplasmic bodies were shaping themselves into blood corpuscles and bloodvessels. This was a wonderful revelation. It was the formation of a blood cyst, a hæmatoma. Again and again I traced out these pathological changes, made repeated drawings of the same, and presented the subject before the same society, December 12, 1888.

A hæmatoma of the ovary is not a hemorrhage. It is a growth, a pathological formation, evolved from an endothelioma.

I soon found that endothelioma was a frequent disease, and had well-marked symptoms. In many instances I have diagnosed it on first examination, and the diagnosis was subsequently verified by the microscope. From the examination and investigation of many cases, it was more and more proved and demonstrated that this disease was destructive to the general health and life of the patient; so much so that I began to think it was malignant, and, at that time, said: "When we look at this rapidly growing formation, the great mass of granules, the impression forces itself upon us that it may be malignant. Cancer epithelia do not multiply more rapidly, or destroy the tissues more surely, or seem more threatening or monstrous, in their appearance and growth."

Near akin to endothelioma is a formation known as gyroma, large, convoluted masses, sometimes extending through the entire length of the ovary and filling much of its area. They are composed of fine anatomical structures, and present a most interesting study for investigation.

The first time I recognized this formation was in 1887, when I was making microscopical researches in certain diseased ovaries, and on September 14, 1887, I presented the same before the New York Pathological Society as formations of dense fibrous connective tissue or fibromata. The patient was feeble, emaciated, chachectic, and had all the appearances of phthisis; but I could eliminate disease from every organ except the ovaries, and these I found in a state of profound disease, one being enlarged to the size of an orange and bound down by firm adhesions. This proved to be a blood cyst, and ruptured on removal. The patient made an excellent recovery, was relieved of pain, gained flesh and strength, looked well, all appearance of phthisis disappeared, and she was able to resume her ordinary duties.

We see from the above case how this mysterious disease destroys the health and comfort, and produces most profound constitutional derangements.

The second patient in whom I found this peculiar formation, gyroma, consulted me August, 1888. In November of that year, while studying the pathological specimens removed from this patient, there were seen these immense fibromatous formations, or, as we afterwards called them, anomalous menstrual bodies, and which I now designate gyroma. I presented the specimens before the New York Pathological Society December 12, 1888, and made the following statement: "The right ovary was much enlarged, and most of it was occupied by a fibroid growth or tumor, while in other portions there were a number of small nodular fibromata, in the neighborhood of which the bloodvessels were much enlarged." I then remarked: "The subject of normal and abnormal menstrual bodies is an unexplored field. It presents points not only of great scientific interest, but of momentous importance. It reveals the cause of the exhausting and untold suffering which many women endure year by year, often developing other and more serious troubles, and finally carrying many to the grave."

Gyroma is not only a cause of suffering, but a cause of constantly increasing distress and trouble. In 1887 I recognized that in gyromatous formations nerve fibers were often imprisoned and compressed, and thereby became a source of pain and great suffering. I mentioned this in an article in the *American Journal of Obstetrics*[2] and then said: "It is the first time, so far as I know, that nerve fibers have been traced in these formations."

In the same article I called attention to the pathological condition of diseased bloodvessels in the ovary. The various diseases of these bloodvessels and the serious pathological changes presented by the arteries have for years been subjects of great interest and study to me. In a paper at this time,[3] I tell of a patient who came to me in 1885, an abscess in the left ovary and pyo-salpingitis of the tubes, I found the endothelia of the arteries and the muscle coat both entirely reduced to inflammatory corpuscles. This would at once destroy all functional capability of these arteries; and who can tell what might be the disastrous results? Another case mentioned in the same paper, a patient who had pyo-salpingitis, I found the arteries of the left ovary in a state of waxy degeneration. Another patient, with abscess of the left ovary and chronic salpingitis, the middle coat of the arteries were in waxy degeneration, the calibers very much narrowed, and in some instances entirely closed. Others showed artheritis and endarteritis obliterans, with consequent formation of fibrous connective tissue.

Mixomatous Degeneration of the Ovary.—Mixomatous tissue is the earliest formation in normal embryonic development. It consists of a reticulum of living matter; so, in itself, it is almost infinite in its capabilities and possibilities. In its anatomical structure it resembles malignant growths, and shows a great similarity to sarcoma and myxo-sarcoma Besides, patients who have this form of degeneration seem in their constitutional conditions as seriously disturbed as if they had malignant disease; each one gives evidence of great distress and local pain.

All the vital structures of the ovary may be displaced and destroyed by this remarkable form of degeneration. It seems to have a withering effect upon every anatomical element.

On March 25, 1896, I presented before the New York Pathological Society this form of degeneration of the ovary, and microscopical sections showing the same. The transactions of the society, as they appeared in the MEDICAL RECORD, September 5, 1896, say: "A new form of degeneration of the ovary, by which most of the organ was changed to myxomatous tissue. Out of over eighty pairs of diseased ovaries examined, there have been found four pairs showing this degeneration. This condition was associated clinically with marked deterioration of the general health."

Professor Waldeyer wrote me May 18, 1896: "I have never seen a myxomatous degeneration of the ovary; perhaps it has hitherto not been seen by any one."

Diseased Ova.—The great subject of diseased ova was first unfolded to me in 1885. A patient came from Maine to consult me in regard to a fibroid tumor of the uterus. Dr. Chas. Carroll Lee was present at the operation. The ovaries were three times their normal size, and projecting from each was a cyst, size of a hen's egg. It was in those ovaries that I recognized for the first time diseased ova. I do not know of any one ever before having mentioned the fact of the human ova being diseased. Many of these little organizations were reduced to medullary corpuscles, their entire anatomical structure destroyed. As I continued my researches, studying the pathological conditions of the ovaries of my patients, I had repeated occasion to note that the ova were abnormal and exhibited many forms of degeneration. Dr. G. E. Herman of London wrote me, "You are digging new ground." It was, indeed, a sad find, and a new cause of sterility in women. It presented also a most important field for investigation.

No doubt one day the diseases of the ova, their marvelous forms of degeneration and destruction, will be considered one of the most important chapters in the pathology of the ovary. The ova are not only highly organized, but they are masses of living matter, and for them the ovary really seems to exist.

One of the most remarkable diseases of the ova is colloid degeneration. This peculiar form of degenertion seems to have the power of making complete destruction of these fine and beautiful organizations. Sometimes only a dot or fold of colloid substance is left; then there would be fields with not one ovum; then again fields in which masses of ova are almost destroyed by this degeneration, all presenting a most picturesque appearance of ruin and desolation. While in sections of the ovary I have counted 140, 160, and 192 ova, but when there is colloid degeneration, many sections placed under the microscope there will be extended fields and not one ovum.

Ovarian Cysts.—One of the first observations I made in studying pathological ovaries was the intense inflammation invariably seen around a cyst. In June, 1889, when I was about finishing my microscopical investigations in colloid degeneration of the ova, the thought was forced upon me. I could see again and again the intense inflammation in the cyst wall, and in every instance when the cyst wall was thus inflamed, it was separating, crumbling, and the parts passing into the cyst fluid. Inflammation is the beginning and the origin of ovarian cysts—the only condition that can produce a cyst of any kind. The more intense the inflammation, the more rapid the growth of the cyst.[4]

The Origin and Formation of Myo-fibroma of the Uterus.—I have proved that fibroid tumors of the uterus are the outgrowths of, and caused by a diseased condition of the uterus.[5]

The Fallopian Tubes.—Many months I have spent in trying to look into the anatomical structure, normal and pathological, of these organs. I have demonstrated that there are six layers of muscle in the normal tube wall, instead of three, as is usually given. By this abundant supply of muscles, the tubes are enabled to perform their various and complicated functions.

The mucosa lining the tubes form numerous folds, almost infinite in number, thus giving a vast extent of surface, upon which are millions of cilia; each one of marvellous formation, containing living matter, and capable of vital functions more important than we can imagine or realize. These cilia are in incessant motion, helping constantly to carry the burden of the little ova to the uterus. Also by the continued motion of the cilia, a constant current is produced which tends to sweep out impurities that might find their way through and from the uterus into the peritoneal cavity. This requires free muscular action. In 1887 I traced out this wonderful net-work of fine muscle fibers in the mucosa.[6]

I have repeatedly seen all the immense and complicated apparatus of the tube wall breaking down into inflammatory corpuscles, and, to a great extent, transformed into granular protoplasm. Sometimes not a muscle bundle, or fiber, left in the whole wall, only broken remnants scattered in a sea of inflammatory corpuscles; the intense inflammation destroying all normal tissue. I have also had cases, in which not only the whole muscular structure of the tube wall was destroyed, but in the wall many miliary abscesses. Can a tube so diseased, its anatomical structure so changed, and destroyed, and the tube already filled with pus, be made to perform its normal functions? The muscles and the mucosa are gone; they will no more appear. We may draw off the pus, but the pus will come again. The tissues are pus producing when normal tissue is gone. Impossible for such a tube to perform its natural functions.

Cancer.—In 1893, in studying a case of "Carcinoma on the floor of the pelvis,[7] I saw clearly that the inflammatory corpuscles were changing to cancer epithelia. This I demonstrated repeatedly. It was a wonderful revelation; and, as far as I know, had never been recognized or mentioned.

Also, by a power of 700, I saw that the lymph vessels were carrying the cancer epithelia.

This, by the clear light of the microscope, was repeatedly proved, by powers of 600, and 1,000. Yet Virchow says:[8] "The infection is directly transmitted by means of the morbid juices, from the original seat of the disease, without the intervention of vessels or nerves."

But the microscope plainly shows that the lymph vessels are carrying the infection. They are carrying the epithelia, with all they contain, "from the original seat of infection."

The eminent John Marshall of London speaks of "The acid juices of cancer, and the mode in which they penetrate into the vacuities of living tissues." F. A. Purcall says: "Cancer cells show amœboid movements, and can thus travel independently in tissue spaces."

But do not both the "acid juices" and "the amœboid cells" travel with, or by means of, the epithelia in the lymph vessels? They thus can go to every part of the system, "penetrate delicate membranes," and "the vacuities of living tissues."

We see the lymph vessels, crowded and packed with cancer epithelia. They are carrying their burden of malignancy and death. They are even giving to the vessels themselves their deadly poison. The endothelia are in active proliferation; and the deadly disease is extending to the surrounding tissues.

Sir James Paget talks of "micro-parasites." But, whatever may be the germs or microbes, it is the cancer epithelia that are doing the fatal work. Dr. G. F. Shrady said, in the MEDICAL RECORD, November 23, 1891, "Bacteriology had not succeeded in incriminating any microorganisms as the causative agent of carcinoma."

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REPORT OF FIVE CASES OF ULCER OF THE ŒSOPHAGUS, DIAGNOSED AS PULMONARY TUBERCULOSIS.

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VERY meager indeed is the literature on ulcer of the œsophagus. Textbooks, as a rule, devote but a fraction of a page to this disease which in my experience has proven by far more frequent than ulcer of the stomach. Indeed, regarding pathology, the entire œsophagus has been treated with a sort of contempt. The symptoms of œsophagitis—pain between the shoulder-blades or pain behind and along the sternum—are eagerly interpreted by that highly poetic, mystic, and euphonious phrase "reflex pain," rather than assigning to such pains the true but prosaic cause of irritation or inflammation of the œsophagus. Reflexes and sympatheticism have still a firm hold on our science, and a good many days will pass before those mythical expressions, synonyms of ignorance, will pass yonder, out of reach of lofty medicine. That ulcer of the œsophagus has not been detected every time it existed is due to the fact that the symptoms are so easily mistaken. The hemorrhages issuing from such ulcers and making their way to the external world through the mouth, are only too easily mistaken for pulmonary hemorrhages. In fact, my attention was called to the existence of an ulcer rather accidentally. Since the œsophagus lies almost entirely within the thorax, the usual symptoms, diagnostic of a pathological condition of any organ, are here, I might say nearly always, referred to the lungs, less frequently to the heart; and we are always sure to find something troublesome—real or imaginary—with the lungs. The characteristic symptoms of ulcer are pain and hemorrhage. In ulcer of the œsophagus the first is complained of, and the latter is either not seen or misinterpreted. If the blood from such a hemorrhage of an œsophageal ulcer runs down into the stomach it is only too easily lost sight of, but if it comes up and is emptied through the mouth, the chances for misinterpretation are great indeed. The hemorrhage for which it is most likely taken is hemorrhage from the lungs, the mistake made in two of my own cases. A hemorrhage coming from an ulcer of the œsophagus is bright red. There is no reason why the blood from such an ulcer, which comes directly without first going into the stomach, should be any different than bright red in color, and hence we can easily see the cause for mistake. The practical question is, How can we differentiate one from the other? The answer to this is, By the use of the stomach tube. Our procedure in a case of hemorrhage issuing from the mouth should be first symptomatic, that is, stop the hemorrhage, give the patient sufficient rest to recuperate; then after the lapse of a reasonable number of days attempt to make an absolutely positive diagnosis, holding in abeyance any positive assertions to the patient until such time. An absolutely positive diagnosis is not only of the greatest importance to the physician, but even more so to the patient. It is one thing for the patient to know that it was only an ulcer of the œsophagus, and it is quite another for an individual to believe himself to be consumptive. The high moral obligation of the physician in such cases is well understood by every practitioner. We certainly must not lose sight of the fact that outside of ulcers, the bursting of varicose veins in the œsophagus might claim its due share in the etiology of hemorrhages from the œsophagus.

In ulcer of the œsophagus, the stomach, tube causes irritation and consequent circular contraction of the œsophagus, for which reason the stomach tube cannot be passed. This irritative contraction of the œsophagus is also caused by the cicatrix after the healing of the ulcer. Of course, one must be sure of his dexterity in handling the stomach tube or the diagnosis of ulcer of the œsophagus will be made as often as one attempts to invade the sanctity of the gullet. To one who but occasionally uses the stomach tube an impossibility to propel the tube into the stomach must not always be construed as meaning a contraction of the œsophageal wall due to ulcer.

The differential diagnosis will be well appreciated when the physical examination of the lungs proves negative. But, when there is a history of cough with expectoration, when râles are heard, and such a hemorrhage occurs, the duty of the physician is a hundred times augmented to be sure of the diagnosis. There is no reason why an ulcer of the œsophagus could not be present together with an innocent bronchitis. How easily can one be mistaken in such a contingency! Neither must the concurrence of a hemorrhage, coming through the mouth, with the presence of tubercle bacilli in the sputum, be looked upon as a hemorrhage necessarily coming from the lungs. Indeed, this very concurrence happened in my first case. The patient, a man forty-one years of age, coughed and expectorated, and the Board of Health, corroborating my own investigation, reported but very few bacilli found. The physical examination of the chest proved no consolidation or cavity, although plenty of râles, but the stomach tube elicited spastic contraction of the œsophagus, allowing the tube to progress only after a lapse of a half-minute or so. This spastic contraction happened both times when aspirating the fasting stomach, and when aspirating one hour after the test meal. The patient was a confirmed alcoholic, and the hemorrhages were due to alcoholic ulcer of the œsophagus. The patient came to me February 16, 1901. Four and a half months before he was seized with a hemorrhage while walking on the street. The hemorrhages repeated for four weeks, a little blood coming every day. Admits having had three or four whiskies a day, and quite a quantity of beer at each meal which usually was well spiced.

The history of the second case is: A woman forty-five years of age, with alcoholic past, visited me June 5, 1901, and gave the following history: Four weeks ago she had brought up clotted blood, accompanied by a dry, hacking cough. This lasted one day and passed off. Nine days ago she again was raising clotted blood for twenty-four hours. This was preceded by a burning sensation behind and along the sternum; diagnosis, ulcer of the œsophagus.

The third case was that of a woman, thirty-six years old, who had had nephritis and an abortion at the sixth week of pregnancy; she was moderately addicted to alcohol. The patient had excruciating burning pain, and pointed to the upper part of the manubrium sterni as the seat of her trouble. She could take nothing per os the first few days, even water gave her severe pain, for which reason she took none. Hemorrhages, bright red looking, came frequently the first few days, then less frequent. She died four weeks after complaining of the severe burning with her last breath.

The fourth case was that of a man, thirty-four years old, a fruit peddler, a native of Hungary. He was about 5 feet 7 inches tall, well built, strong, but not fat. He came to me December 11 last and complained of pain in the lumbosacral region. Especially was his pain pronounced on getting up from his seat, the bowels were hard. He complained of nothing else. Examination of his chest was negative. The abdominal examination was as follows: The right kidney was not felt, but the left was prolapsed in the first degree. The spleen was enlarged, extending above to the eighth rib and reaching one and a half inches below the free border of the ribs. There was slight resistance and slight evidence of pain at McBurney's point; the patellar reflexes were slightly exaggerated; the pupils responded to light and accommodation; the Romberg symptom was absent; the urine was negative. When I attempted to pass the tube into his fasting stomach, it encountered resistance soon after it passed the pharynx. The resistance lasted about a minute after which the tube proceeded into the stomach. The same occurred when I tried to aspirate the chyme one hour after the test meal. Prompted by this occurrence, I inquired for any possible previous condition referable to his chest, when the following history was elicited: Two years ago he had hemorrhages from his mouth which kept up for three days. He received the usual treatment in such cases and was subsequently sent to Colorado, where he stayed six months. Feeling better, he returned to New York. He had one other attack of hemorrhage since his return. Now, this patient was free from any lung trouble and the present healthy condition of his lung would certainly exclude a diseased condition having existed prior to his going to Colorado, or the cure there ought to be classed among the miraculous. His hemorrhages never came from his lungs, they came from an ulcer of the œsophagus. As to a probable cause, or at least a contributing cause, possibly the examination of his stomach contents may give us some clue. One hour after the test meal I aspirated 35 c.c. of chyme, coarse with some floury layer, and pungent odor. The microscopical examination showed short and long bacilli, curved bacilli, bead bacilli (mold), prismatic crystals (single sections of the oidium albicans) and gonidiæ. The chemical examination proved the case as one of organacidia gastrica, namely there was free HCl 24, organic acids 38 (presumably more), general acidity 82, no acid phosphates were present. This case had been treated as one of pulmonary tuberculosis of which there was no evidence. It was a case of ulcus œsophagi.

What a great consolation is it to the patient to know that he is not tuberculous, at least as far as his lungs are concerned! These four cases I have seen within a period of ten months. The fifth case was observed during a consultation. The patient had a dry cough and had had hemorrhages. He was seen in consultation by a prominent physician who could find nothing in the chest. Eight years ago the patient was treated by a well-known authority for stricture of the œsophagus, thus making the diagnosis of ulcer of the œsophagus more certain.

Backed by the experience of these cases, I believe I am justified in my assertion that ulcer of the œsophagus is a comparatively frequent disease; that the physician must be very careful before he pronounces a hemorrhage, bright red in appearance and issuing from the mouth, as a hemorrhage coming from the lungs; that the physician must never positively assume a hemorrhage to come from the lungs even if there are râles or other pulmonary symptoms, that in every case of such a hemorrhage the œsophagus must be very diligently searched by a competent man, and that the responsibility of the physician is much too great to allow of any laxity in the premises. That nasopharyngeal hemorrhages will be likewise kept in one's mind at such an occasion goes without saying.

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Creatinin Excretion.—D. L. Edsall made a series of observations on the urine in a case of family periodic paralysis to determine whether there was any evidence of acid intoxication. From a tabulated statement it appears that the creatinin excretion, which should normally be from 0.7 to 1.4 grams, was very greatly reduced, the amounts on several occasions being so extremely small as to be almost indeterminable. During the second attack, and immediately after the first and third attacks, the amount rose decidedly, the quantity found after the first and second attacks approaching the normal. The low figures in each instance preceded the onset of the attacks by several days, and the reduction in excretion was, therefore, not due to the attacks. The relation to the periods of paralysis was very striking. The prolonged period of freedom from paralysis between the second and third attacks, and the rise in creatinin excretion during this period seemed at first to show that in this instance, at least, the relation of the creatinin excretion to the attacks was not so close as the other figures would indicate. The author believes that the only conclusion justified by the results obtained is that there was a disturbance of metabolism in this disease, which preceded the attacks, and which ceased with the onset of the actual attack or directly after the attack; and it seems highly probable that this disturbance of metabolism was the cause of the onset of the attacks. Since creatinin is closely related to muscular metabolism, and its excretion showed the peculiar relation that it did to the attacks, and since the disease itself in its main clinical features was one affecting the muscles so prominently, it seems probable also that the essential feature in the disturbance of metabolism that apparently causes the attacks was an alteration in the chemical processes in the muscles themselves.—*Transactions of the Philadelphia Pathological Society.*

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE SUBJECT OF EATING.

DISTINGUISHED authorities are as wide apart as the poles in their views as to what constitutes in quality and quantity a diet calculated to keep a person in sound health. Some declare—the most assertive among the number being Dr. Haig—that the only rational diet for a person is that which produces uric acid to the least extent. Others extol a wholly vegetable diet, while still others aver that without meat the individual is certain to lose vital energy, and to become listless, flaccid, and effeminate.

A writer of an editorial in the English *Polyclinic*, Jonathan Hutchinson's new journal, holds opinions by no means in harmony with those expressed by Sir William Thompson in his recent much-talked-of work on diet. The latter is a staunch believer in a vegetable diet.

The writer in the *Polyclinic* commences his article by quoting a saying of a Russian officer, and makes this the text for a dissertation on eating.

It appears that Captain Younghusband, a British army officer, came in contact with a certain commandant of a Siberian outpost.

The Russian colonel, by name Sokolowski, remarked to Captain Younghusband, "Je mange énormemént," at a dinner at which the Englishman was present. Six bottles of wine and beer were supplied to each guest, and course after course of the most substantial dishes were served up; yet, according to Captain Younghusband, the Russian officers, who lead a rough outdoor existence, were bursting with rude health.

Many eminent men have been abstemious to a degree, and just as many probably have been gourmands, and a not inconsiderable number have been wholly careless of what they eat or drink.

The *Polyclinic* editorial points out that Cardinal Manning was a typical ascetic; so much so, indeed, that Disraeli in "Lothair" puts into the mouth of one of his characters—supposed to be intended for the great Roman Catholic divine—on being pressed by his hostess to indulge in some of the good things proffered him, these words: "Thanks, your grace, I neither eat nor drink." Nevertheless, Manning far exceeded the span of life allotted to man.

Sir Andrew Clark was another conspicuous example of a small eater, who got through an immense amount of work; and history, both in America and the Old World, is thickly studded of great men who were gross feeders and heavy drinkers—witness Bismarck—and of those who partook of food but sparingly, and used alcohol not at all.

How, then, are we to reconcile these apparently glaringly, inconsistent facts?

The *Polyclinic* editorial, in summing up the matter, makes use of the following language:

"Speaking for those who enjoy good appetites and sound digestions, a large class, among which, by systematic cultivation, the consumption of food might be much increased. Ought such cultivation to be encouraged or the reverse? No doubt but that many might retain health, with a much more restricted allowance than they are accustomed to. Would they be the better for this restriction? How about the Weir Mitchell treatment and that adopted at Nordrach? At the latter place an attendant stands over the patient, and compels him to finish what is put before him.

"Are there many among those who account themselves healthy, who would become more secure from disease if some sort of compulsion of this kind were enforced upon them as a preventive measure? Do any dangers attend the habitual consumption of more food than is absolutely necessary, provided it be of good quality? Is mere excess in itself prejudicial, or does the overplus pass harmlessly away? The answer to these questions must, of course, depend much upon the habits of the individual. If great demands are to be made upon the system, whether physical or mental, then the supply should be liberal. It should also be varied. For anything we know to the contrary, it may be very desirable to supply to the tissues the elements of nutrition in varied forms.

"It may be that different tissues of the body exercise some sort of selection, as regards what they make use of for repair and waste. This may be of especial importance in reference to the nervous system. Small quantities of articles of diet, reputed to be only nervine stimulants, may possibly be real nutrients when not injudiciously used. That such an end should be served it is probably essential that they should be supplemented by plenty of ordinary food. Tea, coffee, and tobacco hurt no one who eats well, and the same is, with an added caution, true of wine."

The MEDICAL RECORD has always contended that it is impossible to lay down any hard and fast rule of eating or drinking for a body of people. The personal factor must be in every case taken into consideration—in truth, it commands the situation. What suits one person may be harmful to another, and if the individual be possessed of ordinary common sense, he will not be long before he finds out what food or drink agrees with him, and regulate his diet accordingly.

A dyspeptic who eats to excess, or partakes of food which disagrees with him, will, in the nature of things, suffer; and, if he be wise, will alter his mode of life.

There are, of course, diseases which are aggravated by an injudicious diet, and in such cases the physician's advice as to character and quantity of food should be strictly followed; but with the person in robust health, it would be unnecessary and even absurd to live by routine.

Change is the salt of life, and the aphorism may be applied with equal force to food. Persons who are slaves to their stomach will find in time that that organ is a hard master, and will regret that they ever put themselves under its rule.

In these days, fads dominate a large number of people to the exclusion of hard sense, all theories are ridden to death, and among them those concerning food and drink.

With regard to eating and drinking, the happy medium will be found the wisest course.

MOSQUITOS AND DENGUE.

"Insects as conveyers of disease," a phrase which, but a few years ago, would have carried little meaning to the scientist or medical man, and which, as a statement of fact, would have been pooh-poohed as the vision of an illusionary, is now looked upon as quite an ordinary assertion.

It is well known now that insects are a very important factor in disseminating disease, and it is recognized that their scope in this field has been much underestimated.

The classical studies of the English and Italian investigators, with regard to malaria and mosquitos, and the equally successful researches of the American army surgeons, in tracing the connection of low fever with the mosquito, have spurred scientific men everywhere to emulate these epoch-making discoveries.

In the Medical Record, February 8, Dr. Harris Graham, Professor of Pathology, American College, Beyrouth, Syria, contributes an exceptionally interesting article, in which he gives the results of investigations he has made concerning the part played by the mosquito in conveying dengue.

Dengue is a widespread disease, and the literature respecting it is consequently by no means scanty, but up to the time of the epidemic, which swept along the Syrian Coast in 1889, it was believed to be a purely miasmatic infection. Since the occurrence of this epidemic, however, many who have given the matter careful consideration, hold that it is essentially contagious.

The fact that dengue does not spread to any extent when carried away from certain low-lying lands struck Dr. Graham as being something more than a coincidence, and he determined to probe the matter.

His opportunity came in the late summer of 1901, when Beyrouth was visited by an epidemic of dengue.

Beyrouth is situated in a valley, is almost surrounded by mountains, and its vicinity is somewhat thickly covered with mulberry trees. Mosquitos, of the culex forms, are abundantly prevalent.

Dr. Graham's first experiments were in isolating well persons in rooms tenanted by those suffering from the disease, and from which mosquitos were entirely excluded.

The result of several such experiments, although in a sense negative, nevertheless showed that the dengue did not seem to be contagious, when mosquitos were carefully kept out of the house.

The next series of experiments undertaken were in direct inoculation, the disease was conveyed by the agency of infected mosquitos to three healthy young men, the fourth who allowed himself to be bitten, being apparently immune, having had a severe attack of dengue sometime previously.

In order to eliminate, as far as possible, all elements of chance, and to prove that contagion could not have come from any source otherwise than from mosquitos, some still more searching experiments were conducted by Dr. Graham, who would thus appear to be fully warranted in recording the following conclusions:

That the first class of experiments proves that, failing mosquitos, the dengue is not a contagious disease; and the second class evidences in direct inoculation that certain forms of culex may carry the disease from one person to another.

After having convinced himself that the mosquito was the means of conveying the disease, Dr. Graham proceeded to search for the cause in the blood of infected persons, and succeeded in discovering an amœboid form in certain of the red blood corpuscles, which was present in all the cases examined.

This parasite resembles, in many ways, the plasmodium malaria, but its cycle of production or formation in the human blood is so much longer than that of the malarial parasite that the changes in its life phase come more slowly and are more difficult to follow.

In Dr. Graham's original article the parasite is described at length, and several illustrations are given of the appearance it presents, viewed through a microscope.

At the end of his article the Beyrouth professor sums up his views as follows:

"It may not be absolutely proven that this hæmatozoon is the cause of dengue, but its constant presence in the red blood corpuscles during the fever, its resemblance to the parasite of the Texas cattle-fever, its likeness in manner of growth and mode of propagation (by the mosquito) to the malaria parasite, all point in the same direction, and lead us to believe, by analogy, if by no other way, that in this parasite we have the cause of dengue. The impression produced upon one's mind, after carefully reading Dr. Graham's paper, is that he has, indeed, discovered that mosquitos are—if not the only—at any rate a prominent agency in originating and disseminating the dengue.

In the light thrown upon malaria and yellow-fever by recent researches, this view is eminently reasonable and practical, and the negative and positive proofs brought forward by Dr. Graham in support of his theory are no less convincing than those furnished by the investigators of malaria and yellow fever.

No doubt further evidence must be forthcoming before the credit of the discovery is generally allowed to Dr. Graham, but his account seems so lucid, that difficulties need not be apprehended in this respect.

As to the value of the reputed discovery, it is impossible to hold two opinions, if it be finally confirmed by further investigations, then the course of procedure is plain, extirpate the mosquito and dengue will disappear.

Efforts to rid inhabited countries of the disease-bearing mosquito will doubtless be pursued with increased energy, as a result of the news from Beyrouth.

A REMARKABLE SANITARY VICTORY.

One of the most successful campaigns ever conducted by a military man is that recently waged in Havana by Major W. C. Gorgas of the Medical Corps of the U. S. Army. The enemy routed had been strongly intrenched in his fastness for one hundred and forty years, and his defeat has been marked by a great saving of life instead of loss of it. Yellow fever has been endemic in Havana since 1762, and for at least half a century hardly a month has passed without one or more deaths from the disease. Five months have now gone by without a single known case of yellow fever in the city. The argument in favor of the mosquito theory of the propagation of yellow fever, drawn from the history of this campaign in Havana, is a very strong one. It is thus stated by Major Gorgas in his report dated January 9: "1901 is the only year in which any attention has been paid to mosquitos in connection with yellow fever. In the two preceding years of American occupation, 1899 and 1900, every means known to science, and which money could command, backed by unlimited military authority, was used to destroy fomites, on the theory that fomites were the means of propagating yellow fever. In 1901 the same efforts were directed to the destruction of mosquitos, on the theory that the mosquito is the only means of propagating this disease, and the hygiene of yellow fever was carried out from this point of view, the effort to destroy fomites having been entirely laid aside. These are the facts in the case, and I leave the department commander to draw his own conclusions therefrom."

In his next report, which has just been issued, he continues the argument. The figures show, he says, that the hygienic conditions in Havana in 1899 were better than ever before, yet there were three hundred and ten deaths from yellow fever in 1900. At the beginning of 1901 the prospects in regard to yellow fever were bad. There was a large non-immune population. Cases had occurred in all parts of the town. In January there were twenty-four cases and seven deaths, in February five deaths. Then Governor-General Wood determined that no precaution should be spared. He ordered that mosquitos should be destroyed, and this work was begun on the 1st of March. The decrease in yellow fever morbity began at once, although that was precisely the time when the number of cases and deaths would be expected normally to increase. It certainly is an argument which will tax the ingenuity of the opponents of the mosquito theory to overcome.

Co-operation of Railroads in Combating Smallpox.

Dr. Reynolds, the energetic and efficient Health Officer of Chicago, has recently enlisted the aid of the officers of the railways entering that city in his fight against smallpox. The incentive to this action was the discovery that in an area of 600,000 square miles around Chicago, with a population of about twenty-five millions, smallpox had increased over 900 per cent. in the past year. That is to say, between December 28, 1900, and January 24, 1901, there were only 1,070 smallpox cases reported in this territory, while during the similar period ended January 24, 1902, there were 10,820 cases reported—an increase of 911 per cent.

Dr. Reynolds, after a careful investigation, came to the conclusion that the situation was not being intelligently dealt with, and that a further spread of the disease, which seemed very probable, would not only prejudice public health, but also work injury to the commercial interests of the country by the eventual panic and institution of "shotgun quarantines." He therefore proposed to the representatives of the railroads centering in Chicago that concerted action be taken to stamp out the disease. The plan contemplated wholesale vaccination and revaccination in every infected locality; the provision and maintenance of suitable isolation hospitals where necessary; thorough disinfection of smallpox premises and belongings; strict inspection of all persons offering to travel from infected localities, and refusal to carry those who do not comply with the requirements. Special attention will be paid to the condition of employees in manufacturing establishments—particularly those of textile fabrics—and the railways will set the example by still more rigorously making recent vaccination a condition of further employment. Competent vaccinators and supplies of pure, tested vaccine lymph will be furnished gratis in all proper cases. The work along such railway line will be under the direct charge of the medical director or chief surgeon of the company, and a central office will be maintained in the city for the receipt of reports, requisitions, etc., from those engaged in the campaign. Dr. Reynolds has volunteered to take charge of the central office. The plan has already been inaugurated by the vaccination of the railroad employees, and it is confidently hoped that the results of the concerted action of so many officials over such a large area of territory will soon be manifest in a lessening smallpox morbidity.

To Pension the Widow of Acting Assistant Surgeon Lazear.

The work in Cuba of the army yellow fever commission was recently brought officially before Congress in connection with the introduction of a bill to pension the widow of the late Contract Surgeon Jesse W. Lazear, U. S. Army, who died from yellow fever, communicated by the bite of an infected mosquito, to which, in the interests of humanity and medical science, he had voluntarily exposed himself. As contract surgeon, though sharing every peril equally with commissioned officers, are not entitled to benefit under the general pension laws, a special bill was introduced in the case of Dr. Lazear, and the Military Committee of the House agreed to recommend that a pension be granted his widow of seventeen dollars per month. This action is apparently all that a supposedly generous country proposes to take for the family of a man who freely offered up his life in the winning of one of the greatest discoveries of medical history; a discovery the money value of which to the United States alone—from the saving of life, the opening up of unrestricted traffic with yellow fever ports, the abolition of shotgun and other quarantines, and freedom from delay and costly disinfective processes—amounts to a sum computed only in hundreds of million dollars yearly. Dr. Lazear had a right to expect that his life sacrifice would not be passed over almost unnoticed, and that the country he hoped to benefit would ensure that his wife was at least spared the extremes of privation and want. The medical profession has reason to resent the grudging handing out of a seventeen-dollar-a-month pension as the value of self-sought martyrdom to the cause of humanity; particularly since not a Congressional session goes by without numerous private pension bills, each carrying several times the pittance regarded as quite sufficient in this case, being pushed through in favor of persons who have not a tithe of the just claim which Dr. Lazear's widow has upon the favorable consideration of Congress. Had Dr. Lazear fallen at the head of troops engaged in the destruction of life and property, many would have been eager to champion his cause and honor his memory as a hero; but it is unfortunately true that the work of saving life and relieving suffering is, by the general public, slowly appreciated and soon forgotten. The unassuming heroism, self-sacrifice, and devotion of the physician, in his effort to improve the welfare and increase the happiness of his fellowmen, are more commonly belittled or ignored by the very persons for whose benefit he labored. Nothing that Congress could do would ever repay the widow of Dr. Lazear for the loss of the husband and breadwinner, but it was at least possible to have granted her a pension sufficient to procure the bare necessities of life. The failure of Congress to do this will not be regarded with approval by the medical profession of this country.

Dr. Lazear's case also calls attention to the fact that the surviving members of the yellow fever board, who shared with him the labor and peril of the work of investigation, and one of whom nearly succumbed to a self-inflicted yellow-fever infection subsequent to the death of Dr. Lazear, would, in any European country, have received reward, honors, and preferment at the hands of Government. That their work has been officially almost ignored proves the truth of the saying that republics are ungrateful, and illustrates the fact that in this country the only reward for the leaders in medical progress, who freely give their labors in the cause of humanity, consists in professional reputation and a consciousness of good work well performed. Still, we cannot but think that these are scarcely sufficient for such a tremendous benefaction to the human race as has resulted from the labors of the army yellow fever commission.

PROPOSED DETAIL OF SURGEON GENERAL OF THE ARMY.

Senator Proctor has recently introduced a bill providing that hereafter the position of Surgeon General of the Army shall be filled by detail, for a period of four years, of a medical officer of the Army, who, at the conclusion of such period of detail or redetail, shall return to the position and grade in the Medical Corps which he would have held had he not been so detailed. Up to the present time, appointments to the position of Surgeon General of the Army have given a tenure of office during the remainder of the active service of the incumbent. The majority of medical officers are opposed to Senator Proctor's bill, believing that it not only diminishes the importance of the position and decreases its influence, but also will have a bad effect in a political sense. Up to the present time, the Surgeon General has been free to act for what he considered to be for the best interests of the Medical Department of the Army, entirely apart from political considerations, and there was no way by which his tenure of office could be jeopardized by a refusal to govern his actions according to political influences. The affairs of the Medical Department were, therefore, entirely outside the control of political meddlers. Should Senator Proctor's bill become a law, it would be a Surgeon General of most strong character who, in the future, as a candidate for reappointment, would not be more or less influenced by considerations as to the effect which his administrative acts would have upon the politicians, upon whose wishes the question of such reappointment would be largely decided by the President. With a four years' tour of duty, also, not only would it be difficult for the Surgeon General to outline any extended plan of improvement for the future with the expectation of seeing it accomplished, or to entertain a policy opposed to that of the Secretary of War, but he would scarcely be in a position to exact compliance with what appeared to him to be for the best interests of the service from medical officers, over whom he was temporarily in control, but under whom he might himself have to serve as a subordinate should he fail of reappointment as Surgeon General. For these reasons, Senator Proctor's bill, undoubtedly, pleases the politicians, but it does not at all appeal to those who have the interests of the Army Medical Department at heart.

INSURANCE AGAINST DISEASE.

The population of Great Britain, and of London in particular, have during the past few years, developed an extraordinary propensity to insure against almost every possible untoward occurrence. This new custom can hardly be described as a fad, because the habit is largely dictated by sound common sense.

An immense sum of money was paid out by the large insurance companies upon the death of the Queen, and a very large number of policies, at a high premium, have been taken upon King Edward's life until the Coronation is past.

There has been—since the epidemic of smallpox in London assumed alarming proportions—a great rush to insure against the dangers to health and life which might accrue from contracting the disease.

The New York *Sun*, February 9, referring to the matter, says that insurance firms which usually sign only 80 to 100 policies a day have recently found their output average 600 policies.

The rate of insurance varies from half a crown (62 cents) per £100 ($500) for vaccinated persons, and 40 pence (80 cents) for unvaccinated persons to 15 shillings ($3.75) and 21 shillings ($5.25) per £100 ($500) for certain districts in the East End of London. Some insurance firms are sending circulars to their policy holders, offering to insure them against smallpox for 4 shillings ($1) per £100 ($500).

The British, notwithstanding reports to the contrary, still seem to be imbued with keen commercial instincts, and do not appear inclined to allow mere sentiment to overcome their inborn thrifty habits.

Although it is a novel departure to gamble against disease, the innovation has in its favor the fact that it is founded upon sound business principles.

SUICIDES IN UNITED STATES DURING 1901.

The Chicago *Tribune* a short time ago published an article commenting upon the statistics of violent deaths in this country in 1901.

Suicide of all forms of violent death shows the greatest increase. The total number for the year 1901 was 7,245, as compared with 6,755 in 1900, and 5,340 in 1899. Of this total 5 850 were males, and 1,395 females, which shows the same proportion of nearly five males to one female for several years past. Physicians head the list among professional men, the record standing: Physicians, 33; attorneys, 10; clergymen, 10; bankers, 6; journalists, 6; college professors, 1. The causes of self-murder were tabulated as follows: Despondency, 2,980; unknown, 1,643; insanity, 674; ill-health, 618, domestic infelicity, 541; liquor, 439; disappointed love, 283; business losses, 67.

Poison continues to be the most common agency in committing suicide; 3,106 killed themselves with poison; 2,476 by shooting; 614 by hanging; 513 by drowning; 356 by cutting their throats, and the remainder by various eccentric ways.

The statistics given above as to cause are but roughly drawn up; if a close analysis were made as to motives the results would be highly instructive from a psychological standpoint. The steady increase of the suicide habit is undoubtedly to some extent due to the ease with which poison may be procured. This fact is clearly demonstrated by the record of cases in a series of years commencing with 1890, and adds a ghastly emphasis to the contention that the sale of poison should be much more strictly regulated than is at present the case.

Liquor Reform in Russia.

Russia, when she undertakes any reform movement, uses no half-way measures. The radical methods of the immense empire, when it is deemed fitting to attack some question important to the welfare of the people, or of the government, is rendered possible by the absolute power vested in the ruler of the country. The autocrat of all the Russias, when he wishes a thing done, but says the word and the vast political machinery is put in motion to effect his purpose. The public press and meetings are powerless, both, if considered troublesome, are suppressed. Accordingly, the experiment initiated in Russia some time ago, to abolish saloons, has been watched with great interest by temperance reformers in all countries.

The objects that the Government hoped to attain by taking control of the liquor traffic were:

(1.) To draw into its own treasury the profits derived from the manufacture and sale of intoxicants.

(2.) To substitute pure liquor for the adulterated and inferior compounds often sold by private dealers.

(3.) To break up the saloon habit, and lessen the temptation to drink, by forcing consumers to carry their vodka home.

(4.) To discourage intemperance by opening tea-shops, people's houses, libraries, summer gardens and cheap theaters, where the common people might find diversion and entertainment without liquor.

Mr. George Kennan, in *Outlook*, January 11, discusses the matter, as to how far in practice these praiseworthly objects have been realized.

From a financial point of view, the reform has been successful, while in its attempt to substitute pure liquor of good quality for the chief and sophisticated stuff sold in the kabaks, the Government has met with gratifying, but not complete, success.

The attempt, however, to break up the saloon habit, and lessen the temptation to drink, by forcing customers to buy their vodka in sealed packages from the Government and take it home, instead of drinking it on the premises, must be regarded, in Mr. Kennan's opinion, as a failure.

The result, from all reports, seems to have been a great and alarming increase of street drunkenness and disorder. The peasant buys his vodka and drinks it in the open street, the consequence being that there has been an immense increase of intoxication and riot in the streets, while the city hospitals are overcrowded, as an outcome of taking in peasants who have become ill from exposure to cold or rain from lying dead-drunk out-of-doors.

The establishment by the Government of peoples' houses, libraries, reading rooms, etc., as substitutes for the closed kabaks, has been reasonably successful, and, doubtless, would have been more so, had it not been for the bureaucratic methods of management.

Officialism is so rampant in Russia, that the control of the above-mentioned institutions has been placed in the hands of Government officials whose only thoughts are to feather their own nests.

The Russian medical journal, *Sputnik Zdarovia*, sums up the whole question concisely and well when it says: "If the Russian peasant is to be prevented from drowning thought and memory in the lethal flood of drink, he must first be made strong and healthy; he must be raised, physically and mentally, to a higher level, the material and economic conditions of his life must be improved; his earnings must be increased; and he must be relieved from a chronic state of famine."

Nevertheless, it must not be forgotten that the experiment in Russia has not yet been tried sufficiently long to pass any definite opinion with regard to its success or otherwise.

The drink question is one that is alarming farseeing men in every country of the world, and it is the strong opinion of such that vigorous steps must be taken to diminish the evil effects of alcohol.

Therefore Russia has set a good example to nations who regard themselves on a far higher plane of civilization than the colossus of the north.

Examination for Candidates for Assistant Surgeon U. S. A.

The examination of candidates for appointment as assistant surgeons in the army will be resumed by the Army Medical Examining Board in Washington, on Monday, April 7, next, and will continue so long as there are applicants to be examined. There are now sixty-three vacancies in the Medical Corps, with the certainty of three more from retirements for age, and probably an additional number from casualty, in the early future. It is understood that at present there are less than fifty applications for examination on file at the War Department. From figures given in the report of the Surgeon General for 1901, based upon the number of appointments made from the applications received during the previous decade, it cannot be anticipated that more than six or seven of the present applicants will be found qualified by the examining board, and will be recommended for appointment; so that after the examination of every medical man who can be induced to present himself before the coming examining board, there will probably still exist about sixty vacancies in the Medical Corps, or a number equal to about 20 per cent. of its entire authorized strength.

Prior to the passage of the army reorganization act in February, 1901, the Army Medical Corps always had an abundance of well-qualified candidates for commissions from which to make selection. As has already been stated in these columns, present deplorable conditions are directly due to the provisions of the army reorganization act above referred to, by which the status of the medical officer was so degraded, when compared with previously existing conditions of rank, pay, and promotion, enjoyed for many years, as to destroy the attractiveness of the military service to young medical men of the character and qualifications desired. Even with several hundred medical officers of volunteers and contract surgeons now serving with troops, and presumably finding a military life congenial, very few are apparently willing to enter the regular service with a view of making it their life work, with its present unpromising outlook as to pay and promotion. The class of men which the Army Medical Corps desires cannot be secured by the emoluments for continued service offered under the law of February, 1901; and many young physicians who are attracted by the Government service are turning away from the army to enter the Medical Department of the Navy or Marine Hospital, where, as they grow older in the service, they will receive much more in the way of pay and allowances than they could hope to obtain by an equal period in the army. Under present conditions, it cannot be disguised that the outlook for the future efficiency of the Army Medical Department is highly unpromising. The situation is one which calls for the earnest consideration of the profession and its active interest in the institution of measures for relief.

American Naval Sailors and Their Right to Refuse Minor Operations.

The Navy Department, by Acting Secretary Darling, has recently decided that an enlisted man in the Navy or Marine Corps has no right to refuse to submit to a surgical operation, if it be not serious, but declines to lay down any rule for cases involving the loss of a limb, or in which a man's life might be endangered.

The Secretary recommends the exercise of persuasion and diplomacy on the patient in serious cases, but in minor cases he decides that the man who refuses to be operated upon is guilty of disobedience to orders, and may be court-martialed and punished.

The case recently decided by the Acting Secretary was that of a marine private, serving on the *Monadnock* in Chinese waters. The ship's surgeon wished to remove a foreign growth which unfitted the marine for duty, but failed to gain his consent to the operation. The recalcitrant marine was reported to Rear-Admiral Louis Kempff, who took the patient's stand and refused to allow the surgeon to operate. An appeal was then taken to the Navy Department, when the Bureau of Medicine and Surgery gave out as its opinion that most cases of this description could be adjusted by the use of tact and persuasion in attempting to induce the patient to submit to an operation, but held that when a minor operation only was necessary, the patient should be required to submit or be punished. Acting Secretary Darling upholds these views.

Admiral Kempff was right in refusing to allow the marine to be operated upon against his will, and in championing the cause of the enlisted man to exercise his inalienable birthright of free will. Undoubtedly, in perhaps the great majority of such cases the surgeon is the best judge as to whether an operation would be beneficial or not, and the patient would be wiser to leave the matter to his discretion, but although, of course, discipline must be maintained, the principle must not be carried to the point of not permitting a man to be the master of his own body.

Sanitary Matters in Cuba.

General Leonard Wood, the military governor of Cuba, has recently authorized the establishment of schools for nurses, in connection with Cuban hospitals, having power to issue diplomas to graduates showing fitness for the practice of their profession. These training schools are classed as State institutions, and will be under the immediate supervision of the department of charities. In the order establishing these schools it is stated that their purpose is, first, to further the best interests of the nursing profession by establishing and maintaining a universal standard for instruction, and providing students with the proper means of education in the practical care of the sick; second, to secure for students, upon graduation, a degree or title which will be a protection in practising their profession, and be a recognized means of securing employment, third, to provide hospitals and institutions in the island with skilled service in the nursing department and a proper number of graded assistants, "thus conferring a benefit to the mass of suffering humanity."

The professional training of General Wood, with his long experience as a medical officer of the army, has rendered him particularly interested in matters of a medical nature, and has stood him in good stead in dealing with Cuban sanitary problems—which have been certainly not the least in importance among those arising during the work of reconstruction, and which have been solved by him with such conspicuous ability and success. It was, undoubtedly, the presence of General Wood as the executive head of affairs in Cuba which rendered possible the brilliant results obtained by the commission of army medical officers appointed to investigate into the causes and prevention of yellow fever—results which could scarcely have been obtained under a less broad-minded and scientifically appreciative administration. In the consideration of the results obtained by this commission, the fact that it received the steadfast moral and official support of General Wood, and was enabled to carry on its experiments to a successful conclusion because of the generous appropriations made by him from the insular funds of Cuba, should always be given their share of credit. It is, undoubtedly, a fact that General Wood has been particularly fortunate in meeting with opportunity, and in having his professional knowledge fortified by unlimited executive powers, but it is none the less true that, with the evacuation of Cuba by our troops in May next, he will have done more toward the general sanitary well-being of a people than has ever been accomplished by any other medical man, whatever his name or generation. His successes will form an unfading chapter in the achievements of American medicine, to which, rather than to the military service, they must be attributed.

The Banana as a Food.

A writer in the current number of *Longman's Magazine* waxes enthusiastic over the possibilities of the banana as a food, and suggests that those living in temperate climes should avail themselves of its nutritive properties.

The banana is to the dwellers in tropical lands, and especially to the South Sea Islanders, what oatmeal is to the Scotch peasant. The contributor to *Longman's* states that the banana as a form of nourishment can claim first place among vegetable products that are food for mankind, for it is twenty-five times as nutritive as the ordinary white bread eaten in this country, and forty-five times as nutritive as the potato.

Moreover, it satisfies that other essential condition of a breadstuff—namely, the possibility of an easy and abundant production.

The suggestion of its advocate is that the banana, like wheat, should be dried and ground down into flour. Mills might be erected where it is grown, or within easy reach, and then, at the suitable time, the fruit could be gathered and dried, and transformed into flour. Banana bread has been voted excellent, is now made in Chicago, and might just as well be made in any other place, could the flour be obtained reasonably.

There would seem every reason in favor of the banana fruit being widely utilized as a food. In these days, when pessimists and even scientific men are warning us that the world's supply of wheat may in the not far distant future become insufficient, the act would be a wise one to cultivate and to procure the nutritive breadstuff which the banana so bountifully provides.

A New Local Anæsthetic.

The *Lancet* in a recent number writes of a new local anæsthetic procured from a plant named "gasu-basu," a native of India, the active principle of which is an alkaloid. The English journal says that experiments were made with a salt obtained by treating the alkaloid with hydrochloric acid. The salt has been named nervocidine. In weak solutions it produced a marked local anæsthesia of the cornea of warmblooded animals. Two drops of 1-20 per cent. solution applied to the human conjunctiva produced a burning sensation, accompanied by lachrymation, and followed, after twenty minutes, by anæsthesia of the cornea, lasting for five hours. After seven hours the cornea regained its normal condition. A 1-10 per cent. solution of nervocidine brushed over the mucous membrane of the cheek caused local anæsthesia of the brushed surface, and of the tongue, accompanied by loss of the sensation of taste and the perception of touch, but without loss of the perception of heat and cold. Subcutaneous injections of the drug have not, as yet, been successful in producing local anæsthesia in animals. The general action of nervocidine on the system was that of a toxic which, by paralyzing the motor centers of the nervous system and of the peripheric nerves, caused death. All the experiments up to the present undertaken proved that nervocidine was a powerful local anæsthetic possessing a great advantage over cocaine, in that it produced a much more sustained action, for the effect of a ½ or 1-5 per cent. solution might last for two or three days. The new anæsthetic, however, has its drawbacks, such as the local irritation to which it gives rise, the slow production of a state of anæsthesia (from ten to twenty minutes being required), and a liability to cause nausea, vomiting, salivation, and other symptoms of general poisoning.

A local anæsthetic, whose properties last for such a length of time as that described above, might be of the utmost value to surgeons, and especially to ophthalmologists. There can be no doubt that more will be heard of nervocidine, when it will be easier to pass a competent judgment upon it.

Pathological Society of Philadelphia.—At a stated meeting held February 13, Dr. W. M. L. Coplin made an "Exhibition of Tube-casts Showing the Microchemic Reactions for Mucin Fat and Histologic Elements." Among the stains used were muchematein, Sudan III. and safranin. Dr. M. Howard Fussell exhibited a specimen of "Primary Carcinoma of the Head of the Pancreas with Gall-stones." The patient was a woman fifty-three years old, who had made no complaint and had never exhibited jaundice until within a short time before death, which followed operation for the relief of evacuation of fluid that had been detected in the abdominal cavity. In addition to the neoplasm of the pancreas and a large number of calculi in the gall-bladder the cystic duct was found occluded by stones, and evidences of peritonitis were present. Dr. Joseph McFarland reported "A Case of Bothriocephalus Latus" in a young Russian who at long intervals during a period of many years passed large segments, although never able to secure expulsion of the head of the parasite. He did not exhibit the characteristic anæmia. Dr. Robert N. Willson also referred to a case of like parasitism occurring in a Russian woman, who too passed long segments, and from whom after much treatment the head was expelled at the hands of an irregular practitioner. Dr. J. F. Schamberg presented "A Report of an Autopsy on a Leper, with Exhibition of Specimens." The patient had been a native white woman, seventy-three years old, who was not known ever to have been exposed to the risk of infection with leprosy. The lesions were of the tubercular type, without anæsthesia, but there was a chloasma-like area on the right temporal region. Death resulted from uræmia, and histologic and bacteriologic examination disclosed typical lesions and bacilli of leprosy. Dr. Ellis E. W. Given exhibited "An Exencephalic Monster with Bilateral Harelip and Cleft Palate."

News of the Week.

Volunteer Surgeons in the Phillippines.—The Secretary of War has requested that Congress continue in service for an additional year, until June 30, 1903, the fifty surgeons of volunteers, with the rank of major, and the one hundred and fifty assistant surgeons of volunteers, with the rank of captain, authorized for duty in the Philippine Islands.

American Laryngological and Otological Society.—A meeting of the Eastern section of this society will be held at the New York Academy of Medicine, 17 West Forty-third Street, on Saturday, March 1, 1902, at 11 o'clock A. M.

Recovery of Dr. Charles H. May.—The many friends of Dr. Charles H. May will be glad to learn that he has fully recovered from his recent severe illness, and that he has resumed practice.

Banquet in Honor of Dr. Gregory.—The medical profession of St. Louis, under the auspices of the St. Louis Medical Society, will give a testimonial banquet to Dr. E. H. Gregory, who for fifty years has been an active teacher of medicine, probably longer than any other man living. The banquet will be held at the Planters House Thursday evening, April 17. A large number of guests will be invited, including all the ex-presidents of the American Medical Association, out of compliment to Dr. Gregory, who was president of the Association in 1887. A committee, composed of Drs. F. J. Lutz, N. B. Carson, C. H. Hughes, J. P. Bryson, W. B. Outten, and H. W. Loeb, has the matter in charge.

Philadelphia County Medical Society, North Branch.—At a stated meeting, held February 20, Mr. John W. Hill, consulting engineer of the Water Department of Philadelphia, presented a communication on the "Results of a Year's Experience with the Filtration of Philadelphia's Water." He pointed out that Philadelphia has at present about the worst water supply with reference to sewage contamination of any large city of the world. The experimental results have shown, however, that it will be possible by means of the filtration plant that is in progress of construction, and, it is expected, will be completed in the course of two and a half years, to provide a clear and pure water supply, and thereby bring about a great reduction in the amount of disease and in the number of deaths due to the use of contaminated water.

The Late Professor Paul F. Munde.—At a regular meeting of the Alumni Association of Mt. Sinai Hospital the following minute was entered:

"Death has taken our beloved teacher, friend, and helper, Dr. Paul F. Munde, in the fulness of his fame and power. His universal kindness, his never-failing courtesy, his generosity, and, above all, his loyalty, rendered him dear to every member of the Mount Sinai Alumni Association. We shall never forget the lessons learned at his hand and enforced by his precept. We are better physicians and better men for having lived in close contact with him. In the sorrow that we personally feel, we extend to the family our sympathy most heartfelt and sincere, realizing, however, that it is impossible 'to gild a grief with words.'"

Dr. Samuel M. Brickner, Dr. Albert A. Berg, Dr. Charles Goodman, Dr. Martin M. Ware, Committee.

Yellow Fever Quarantine.—The Sanitary Congress just held in Havana has accepted in its entirety the mosquito theory of the spread of yellow fever. Resolutions were offered that efficient prophylaxis consists in the destruction of all infected specimens of *Stegomyia fasciata*, and that quarantine regulations should be established in accord with this doctrine. The latter clause was, however, rejected as a result of the protests of representations from the Gulf States, who are almost unanimous in their refusal to regard the mosquito as the sole conveyor of the yellow-fever poison. Dr. Porter of Florida was one of the most urgent opponents of the quarantine resolution, and supported his arguments with those of Dr. Suchon recently published in the MEDICAL RECORD. Among the members of the Congress were delegates from the United States, Mexico, Costa Rica, Uruguay, Paraguay, Nicaragua, Colombia, Santo Domingo, Argentine, and Cuba.

The New York State Hospitals.—The ninth annual report of the State Charities Aid Association was issued a few days ago. The publication consists largely of reports from the thirty-five visitors of the association on the eleven State hospitals. The visitors are practically unanimous in stating that the State hospitals for the insane have been well managed by the boards of managers lately legislated out of existence. While they praise the conduct of the hospitals, they criticize the congestion of the institutions, the report stating that each hospital is at present accommodating from 100 to 500 more patients than it has room for. The opinion is expressed that reduction in the expense of maintaining the insane has already reached a minimum, the average per capita cost for the year ending October 1 being forty-six cents a day.

The Battle Creek, Mich., Sanitarium was seriously injured by fire on February 18, the main building and the hospital being destroyed. Although there were many patients in the institution and the fire occurred very early in the morning, no lives were lost.

The Mt. Sinai Alumni Association.—The regular annual dinner and reunion of the Association of the Alumni of Mt. Sinai Hospital was held at the "Arena" in this city on February 14, Dr. E. J. Ware presiding, and among those who delivered addresses were Mr. Isaac Wallach, president of Mt. Sinai Hospital; Drs. A. Jacobi, A. G. Gerster, E. Gruening, A. Meyer, B. Sachs, and Mr. L. Wiley.

The following officers were unanimously elected for the ensuing year: *President*, Dr. Samuel M. Brickner; *Vice-president*, Dr. Albert A. Berg; *Secretary*, Dr. Charles Goodman; *Treasurer*, Dr. Martin W. Ware.

Dr. Tryon and Sailors' Snug Harbor.—On February 16 Drs. Kinnicutt, Janeway, Bryant, Andrew H. Smith, and Derby, of the Consulting Board of the Sailors' Snug Harbor, visited Staten Island and inspected the improvements made by Dr. Tryon in the sanitary and medical conditions of the institution.

Acting with the hearty co-operation of Governor Delehanty, Dr. Tryon has introduced an admirable system of registration and record of all inmates of the Snug Harbor. The wards of the hospital have been renovated; everywhere the most modern plumbing has been introduced, and the institution stands to-day a model for other nations to copy. A new surgical operating room is yet to be built, and the trustees of the Harbor are to be congratulated that in all the changes that have been made, they have enjoyed the wise direction of Admiral Tryon.

The Harvard Medical School.—It was announced a week ago that there remained but $200,000 to be raised in order to fulfil the condition necessary to secure the $1,000,000 gift from Mr. Rockefeller. Among the contributions recently received is one of $100,000 from Mr. James Stillman of this city, which will endow a new professorship of comparative anatomy. Another gift of $75,000 will be used to endow a clinical professorship of some subject not yet announced.

Quarantine for the Unvaccinated.—A vaccination bill, which was recently reported favorably in the New York State Senate, increases the powers of the local health authorities and allows a local Board of Health to quarantine for fourteen days a person who refuses to be vaccinated.

Civil-Service Examinations for the Pathological Institute.—Examinations will be held in this city on March 15 of candidates for the following positions on the staff of the Pathological Institute: Associate in chemistry, salary, $1,800; associate in clinical psychiatry, salary, $1,200; chief associate in neuropathology, salary, $1,800.

Cadavers Saved from Fire.—During a fire in a hospital attached to a medical school in Chicago recently, the firemen, who groped their way through the dense smoke, heroically carried out six dead bodies. The bodies had just been received for dissection, and were lying partly clothed, on the floor, and the firemen thought they were patients or attendants who had been asphyxiated by the smoke and gas.

Strike of Medical Students.—Nine medical students at the University of Iowa were recently suspended for disorderly conduct, and eighty-three of their sympathizing classmates have gone on a strike and threaten to leave the college unless the suspended men are reinstated.

A Worsted Anti.—A stubborn antivaccinationist in Boston was recently saved in spite of himself. He refused to submit to vaccination and was accordingly fined five dollars; then he refused to pay the fine and was sent to jail for ten days. As soon as he was locked up, the jail physician vaccinated him, as the law authorizes the health authorities to vaccinate prisoners whether they like it or not. And so this "conscientious objector," as the antivaccinationists are euphemistically called in England, was well vaccinated, but still had ten days to stay in jail for refusing to be vaccinated. It is to be hoped the victim has a sense of humor to alleviate the pains of martyrdom.

A Jewish Hospital in Brooklyn.—A meeting was recently held in Brooklyn to advocate the erection of a hospital for Hebrews in that borough. The call for the meeting was issued by the Jewish Hospital Society, and several thousand dollars were pledged to the building fund. It is proposed to raise $100,000 before starting building operations.

Lawyer and Doctor.—Dr. William Oliver Moore of this city was admitted to the bar as an attorney and counsellor at law of the State of New York on the 17th inst. He expects to continue his medical practice, and at the same time interest himself in medicolegal matters.

Harlem Hospital, New York.—Dr. Herman Jarecky has been appointed Visiting Otologist to the Harlem Hospital.

Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases.—Dr. S. Weir Mitchell has resigned the position of visiting physician, which he had held for thirty years, and has been elected Consulting Physician. Dr. John Madison Taylor has resigned the position of Assistant Physician, which he had held for twenty years. Dr. John K. Mitchell, formerly Assistant Physician, has been elected Visiting Physician in succession to Dr. Weir Mitchell.

Dr. Roswell Park, on February 19, delivered an address on "University Life in Medieval Times" before the Charles K. Mills Neurological Society and the University of Pennsylvania Medical Society, and was afterward tendered a reception.

Philadelphia Polyclinic and College for Graduates in Medicine.—Dr. David D. Stewart has resigned as Professor of Diseases of the Stomach and Intestines, and Dr. Joseph Sailer has been elected his successor.

Chicago Academy of Medicine.—At its annual meeting, February 14, 1902, Drs. W. L. Baum, W. A. Evans, J. G. Kiernan, H. N. Moyer, and E. S. Talbot were elected directors. Dr. W. L. Baum was elected president of the directors, and Dr. J. G. Kiernan secretary, who thereby becomes secretary and treasurer of the Academy.

Dr. Russell's Disclaimer.—Dr. James Edwin Russell, of 1032 Bedford avenue, Brooklyn, N. Y., asks us to publish the following: "Dr. Russell regrets the necessity that compels him to refute recent newspaper statements associating his name with certain preposterous propositions, and desires to inform his friends, clientele, and colleagues that he brands the same absolutely and unqualifiedly false —the only foundation, in fact, for the sensational publications being a private letter under a nom de plume in reply to one addressed to the correspondence department of the Brooklyn *Daily Eagle*."

University of Pennsylvania.—A contract has been entered into by the Trustees of the University of Pennsylvania for the erection, at a cost, including equipment, of $600,000, on the south side of Hamilton Walk, of new medical laboratories, which it is intended shall be the largest and most complete in the United States. The laboratories will occupy the site of the present buildings of the veterinary department, which are soon to be razed. The style of architecture of the structure will be Jacobean, matching in outline features the dormitory structures, which are close by. The building will have a length of 340 feet and an extreme depth of 245 feet. Half way between the eastern and western ends, at the rear, a hexagonal structure will be erected containing two amphitheatres, each with a seating capacity of 400 persons. The building will be two stories in height and fireproof. It will be admirably supplied with natural light. The front of the building will be devoted to small rooms for special medical work and special research. At each end of the main building will be a demonstration room with a seating capacity of about 200.

Philadelphia Pediatric Society.—At a stated meeting held February 11, 1902, Dr. J. H. W. Rhein exhibited a case of "spasmodic tie in a child two years old." Some weeks following a mild attack of diphtheria twitching of some of the muscles of one side of the face developed. Examination disclosed a tight prepuce, removal of which was followed by disappearance of the twitching. Dr. E. H. Siter exhibited "A Case of Tuberculous Peritonitis; Operation with Recovery." The patient was a girl of about nine, who presented symptoms of appendicitis for the relief of which she was operated upon. Peritoneal tuberculosis with effusion was found, and after thorough exposure to air and light the abdominal cavity was irrigated and closed. Dr. Charles W. Burr exhibited "a case of idiopathic muscular Atrophy." The disease was of the pseudo-hypertrophic type, and occurred in a boy about seven years old. The calves were enlarged and indurated, while the remainder of the body generally was emaciated. The progress of the disorder was unusually rapid. A brother suffered from a similar disorder. Dr. Burr exhibited also "a case of spina bifida." The patient was a girl twelve years old, whose antecedent history was not known, but who presented teeth characteristic of congenital syphilis. The lower extremities were paralyzed, and the reflexes in these parts were exaggerated, and control of the sphincters was wanting. A large mass was present in the sacral region, yielding a sense of tense fluctuation, together with resistance of a solid body. Dr. Alfred Stengel presented a communication entitled "Rheumatism in Childhood." He pointed out the tendency to recurrence on the part of rheumatism in early life, its greater resistance to salicylates than in adult life, and the more character of the general as distinguished from the local symptoms, the endocardium and the pericardium suffering more commonly than the joints. He referred also to the occurrence of rheumatoid arthritis in early life. Dr. J. F. Schamberg read a paper entitled "An Outbreak of Chicken-pox Among Convalescents from Smallpox, with Remarks upon the Relationship of the Two Diseases." He showed that the overwhelming consensus of opinion was in favor of the duality of the diseases, and that the conception of their identity was based upon either unfamiliarity with chickenpox or some fault in observation.

The Brooklyn Medical Society.—At the annual meeting of this society, held in January, the following officers were elected: *President*, Dr. William H. Haynes; *Vice-President*, Dr. Malcolm E. Parrott; *Recording Secretary*, Dr. Hugh Rogers; *Corresponding Secretary*, Dr. Alfred Bell; *Treasurer*, Dr. Albert H. Brundage; *Librarian*, Dr. Lewis E. Meeker.

An Isolation Hospital in Greenwich.—Mr. Robert M. Bruce of Greenwich, Conn., is to build a hospital for infectious diseases, which, when completed, he will present to the town. The hospital will consist of a number of separate one-story pavilions on a fifteen-acre plot of ground.

Generous Bequests.—By the will of the late J. Alfred Kay, a law-book publisher of Philadelphia, residuary bequests are made as follows: Pennsylvania Hospital, Germantown Hospital, University Hospital, Jefferson Hospital, Orthopedic Hospital, Polyclinic Hospital, $5,000 each, for the endowment of free beds; St. Agnes' Hospital, St. Joseph's Hospital, Jewish Hospital, Hahnemann Hospital, Presbyterian Hospital, Philadelphia Dispensary, German Hospital, Gynecean Hospital, Howard Hospital, Medico-Chirurgical Hospital, Children's Hospital, $1,000 each.

The William Pepper Society of the Medical Department of the University of Pennsylvania held its annual dinner on February 13. Speeches were made by Drs. Alfred Hengel, Charles K. Mills, DeForest Willard, Alexander C. Abbott and Hobart A. Hare.

Modification of Smallpox Quarantine in Philadelphia.—On the recommendation of a commission of five medical experts, the Department of Public Safety of the City of Philadelphia, houses from which patients suffering from smallpox are removed to the Municipal Hospital, will be quarantined only for a length of time sufficient to practise thorough fumigation and vaccination or revaccination of the other inmates. If the patient be not removed to the Municipal Hospital, quarantine of five or six weeks will be maintained. Other inmates of the house will be released from quarantine on being vaccinated or revaccinated, or presenting satisfactory evidence of recent successful vaccination.

The Philadelphia Neurological Society.—A stated meeting will be held in the Hall of the College of Physicians of Philadelphia, on Tuesday, February 25th, 1902, at 8:15 P. M.

Dr. Adolf Meyer, Director of the Pathological Institute for the New York State Hospitals, will, by invitation, deliver an address entitled "Conditions for Psychiatric Research." Members of the profession are cordially invited to attend. After the address a reception will be tendered Dr. Meyer at the University Club.

Jefferson Hospital to Be Rebuilt.—Plans have been completed for erecting on the site of the old college building, now used as an annex, a new hospital for Jefferson Medical College. The new structure will harmonize with the new college building, and it will be seven stories in height. It will contain the J. M. Daleosta Clinical Laboratory and Amphitheatre, a gift to the college from its alumni and friends of the late Dr. DeCosta. The capacity of the new hospital will be 275 beds as compared with 125 in the old. The old building will be replaced by a new maternity and nurses' home.

Dr. J. A. Baird of Dunlo, Pa., in an effort to save two women from death, slipped on the rails and fell, and was run over by the cars and killed. He was fifty-two years old.

Professor W. O. Atwater of Wesleyan University, the food and dietary expert, has been summoned to Havana for conference with Cuban officials relative to the dietary standards to be required in the rations allowed to public institutions, under the Board of Charities now being organized by the newly-elected Cuban Government.

Gifts to Hospitals.—Mrs. J. H. Burtis has offered to the Memorial Hospital for Women and Children $5,000 on condition that the existing debt of $15,000 be paid off. Mrs. H. N. L. Sherman has given $25,000 to the Post-Graduate Hospital for the establishment of a ward for women and children suffering from nervous diseases. The ward is to contain fourteen beds, five of which will be supported in perpetuity by this gift. The new ward will be called the Hope Ward.

Obituary Notes.—Dr. Levi Cooper Lane died at his home in San Francisco on February 19, at the age of sixty-nine years. He was a graduate in arts of Union College, Schenectady, N. Y., and in medicine of the Jefferson Medical College, Philadelphia, in 1851. He spent some time in post-graduate medical study abroad, obtaining membership in the Royal College of Surgeons, and had lived and practised many years in San Francisco. He was prominently identified with the cause of medical education in his adopted city, having been connected with Cooper Medical College and the Lane Hospital. For several years past an annual course of lectures founded by him, called the Lane Lectures, has been delivered at the Cooper Medical College by well-known British medical men.

Dr. George Zabriskie Hunter died at Glen Ellen, Cal., on February 16, at the age of fifty-four years. He was born in this city in 1848 and was graduated from the New York University Medical School in 1872. He served as surgeon several years on steamers of the Pacific Mail Line, but gave up sea life when he began to suffer from rheumatism and took up his residence in California.

Dr. Louis Lewis of Philadelphia died at St. Vincent's Hospital in this city on February 18, after an operation at the age of sixty-three years. He was born in England and received his license to practice from the University of London and the Royal College of Surgeons. He served for a time on the medical staff of the British Army, but left the service and came to this country in 1883. He was at various times editor of the *Medical World*, the *Medical Council*, and the *Medical Times and Register*.

Dr. Halpern Albert, a dentist of this city, died on February 18, at the age of seventy years. He was born in Paris, but came to this country at the age of twenty years.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

THE KING F.R.C.P.—THE PRINCE F.R.S.—PARLIAMENTARY —THE EPIDEMIC—DEBATE ON VACCINATION—OBESITY —THE NEW DIRECTOR GENERAL A. M. S.—OBITUARY.

London, February 7, 1902.

The King has consented to remain a Fellow of the Royal College of Physicians.

The Prince of Wales attended the meeting of the Royal Society on Thursday, and was formally admitted to the Fellowship, to which he was elected in 1893. His qualification is being a Prince of the Blood Royal. Having signed the roll immediately under the signature of his father, the King, His Royal Highness listened to a lecture by Sir Wm. Crookes on the "Stratification of Hydrogen: Radioactivity and the Electro Theory," and to observations by Lords Kelvin and Rayleigh.

The Prince then expressed pleasure at admission, and said that, as elected eight years ago, he really ought to apologize for not having attended sooner. But he was proud to add his name "to those on your illustrious roll, which has been inscribed by nearly every sovereign since the reign of Charles II., and by all the most illustrious men of science since—such, I may mention, as Wren, Newton, Davy, Faraday, Darwin, and many others." He then thanked Sir Wm. Crookes for his interesting lecture, and congratulated him "on his power of treating such an abstruse subject—for I must say that the title rather alarmed me [laughter]—so as to make it enjoyable and attractive to those who, like myself, unfortunately cannot lay claim to much scientific knowledge. But while fully recognizing how far beyond my reach this knowledge lies, I can assure you of my hearty sympathy with that scientific study and research which now, more than ever, has become so important and essential in our national life."

You may be sure the speech was received with hearty applause, and that a very large number of Fellows were present to hear it.

In Parliament there have been a number of questions asked which more or less concern medical matters. One of these referred to the Medical Council's action in Dr. Randall's case. The reply given was that the Act defined the Council's powers, and the Government had no need to consult the law officers about it. The papers which had tried to get up a cry that "the poor man's doctor" was to be eliminated by the Council have done Dr. Randall an ill turn.

Our trouble with smallpox does not diminish. Yesterday it was aggravated by invasion from your side. The steamship *Kansas*, from Boston, brought eighteen cases to Liverpool. They were taken to the isolation hospital. The vessel, a large cattle boat of the Warren Line, is being disinfected, and other measures taken by the active sanitary authorities of Liverpool. Some other American cattlemen have developed the disease in a lodging house, and the inmates have been promptly isolated.

In London the epidemic has continued with the usual variations from day to day. This day week the notifications numbered eighty-two. They have varied since from seventy-five on Saturday to twenty-seven yesterday. There are between 1,100 and 1,200 cases now in the hospitals. Many are confluent, and, of course, there are frequent deaths. The remote position renders the supplies an arduous undertaking. One day a difficulty was reported in respect to funeral arrangements, but it was afterward stated that everything was well managed.

The discussion on modern methods of vaccination, which was begun at the Medico-Chirurgical Society, in December, and referred to in my letter of the 14th of that month, has at length been concluded. A debate carried on for three evenings, at intervals of two and four weeks, by speakers announced in advance, is naturally devoid of the spontaneity expected in discussions, and partakes rather of the nature of a series of essays on the set subject. Christmas having intervened, the discussion on Dr. Copeman's paper, read on December 10, was adjourned until January 14, when he repeated that part of his demonstration which dealt with the transference of smallpox through monkeys and calves, and the vaccination of children with lymph so obtained. These experiments, you will remember, satisfied him that vaccinia is really an attenuated form of variola.

Professor Sims Woodhead then resumed the discussion. He fully confirmed Dr. Copeman's observation on the effects of the addition of glycerin to lymph. He considered if a lymph showed many sport-bearing organisms, it had not been properly collected. He did not believe that the glycerin diminished the potency of the virus for three or four weeks, but after that time there was a decrease of the activity. Nor did he believe that more local inflammation was caused by glycerinated lymph—most of the local effect was produced by extraneous organisms—showing imperfect preparation.

Dr. T. D. Acland followed, and discussed at considerable length the origin of lymph, its preparation and use. He advocated the supply of standardized lymph by the Government to all practitioners, thinking it possible that Calmette and Guerin's method overcomes the difficulties of standardizing. Glycerine had long been used to dilate lymph, but it was reserved for Dr. Copeman's researches to show that this was not a mere harmless diluent, but was capable of producing a sterile lymph. He urged that there ought to be established a minimum standard of efficient vaccination, and referred to the figures of the Royal Commission of 1896, which show, in 7,000 cases, a mortality from variola of 6.2 among patients with one mark as against 3.2 among those with four. He referred to treatment with serum from a vaccinated calf, but admitted that the work done in this direction was not conclusive.

Professor Haccius of Geneva said that during a scarcity of good lymph, in 1892, he succeeded in transmitting variola to the calf, and after passing the virus through seven calves, inoculated a child, with the result that typical vesicles formed. Stumph had confirmed this. Chauveau had objected, and inoculated a cow and then a child, with the result that the child had variola. Professor Haccius held that this was a direct transference of variola to the child, the cow being merely a stage in the transference. He thought that vaccinia and variola would be proved to be identical, but it was generally known that some cases of variola could not be transmitted to the calf.

The discussion was then adjourned again until January 28, when it was resumed by Dr. Sidney Coupland, who held that the Act of 1898 had proved beneficial by making glycerinated lymph obligatory, and so diminishing bad effects, the infective organisms being removed. He thought the Government should have control over all lymph employed. With the purified lymph there might be so little scarring that the number of scars rather than their area or depth must be looked to as the sign of efficiency. It was certain that those who had more scars were more protected. About one in four persons vaccinated in infancy would contract smallpox on exposure to the infection when grown up. In children under ten years old, the liability was only one in twelve, but in the unvaccinated it was two in every three. Recently vaccinated persons were more completely protected than those who had been done for a long time. Revaccination conferred practical immunity. Exceptions would be due to the lymph having become partially inert. But even smallpox itself did not confer absolute permanent immunity, second attacks of the disease being known to occur.

Dr. A. E. Cope gave details of the method he carried out as a public vaccinator: Cleansing the arm with spirit of carbolic lotion, boiled water, a pledget of woodwool; after the operation, delay until some erythema appeared, and then covering the scratches with a boric pad, to be renewed in a week. He preferred a platinum lancet with a hand iridium point, as it can be heated in flame, and did not look dull or dirty after it. Revaccination would succeed at about fourteen years of age, and was then less likely to give rise to a sore arm than if delayed until later life.

Some questions were put by other speakers, and then Dr. Copeman replied on the whole discussion on his paper. He maintained that the glycerin inhibited and gradually eliminated all the non-sporing organisms, and they are the pathogenic ones. The same degree of vaccination was needed by the child as the adult, and vesiculation is less severe in the child, for the same amount of lymph introduced. No method of standardization had been discovered; the only test was the clinical effect. No doubt some persons had had smallpox twice and a few even three times. The glycerinated lymph destroyed less cutaneous tissue than was formerly common. Every one should be revaccinated. In proof of the immunity obtained, he said he had twice been accidentally inoculated from confluent smallpox without any ill effect. He did not think the new lymph less potent than the old. The epithelium in which the vaccine organisms were supposed to reside was included in the calf pulp employed in preparing the lymph, while in the old plan only the clear liquid from the vesicles was used.

At the Medical Society we have had a discussion on obesity. It was begun by Sir T. Lauder Brunton, who remarked that the accumulation of fat took place chiefly in the subcutaneous tissue, in the omentum, and around the heart and kidneys. Obesity began when the amount of fat became inconvenient. The cause was the ingestion of more fat-making food than could be burnt off; the treatment, therefore, is limitation of both the quantity and quality of the food, and increase of combustion of the body by increasing the circulation. To accomplish the latter, muscular exercise is the best plan, and if from any cause the patient cannot take this, massage should be tried, as it can increase the circulation through the muscles threefold, and this promotes tissue change. But massage alone is not enough, and should only be considered as a preliminary to active exercise. Food must also be lessened. This could be done more easily by fluids and solids being taken separately. Too often food is washed down by fluids which might otherwise be left. Dry toast and biscuits were less easily swallowed, and so a less amount ingested. If diet and exercise fail, the Salisbury plan could be tried, but it produced excessive nitrogenous waste products, giving rise to poisonous effects unless perfectly eliminated. Thyroid extract produces tissue waste, but soon sets up nervousness, tremor, and tachycardia.

Dr. Burney Yeo said obesity from dietetic error was easy to remedy, but hereditary cases, or those due to a vice of metabolism, were not much benefited by withdrawing carbohydrates. Treatment should be begun early. A man of forty who showed a tendency to lay on fat should leave off sugar and eat less bread and potatoes. Alcohol, too, produced obesity. Water must not be too much restricted, as it is necessary to carry off the waste products. He doubted if internal secretion was as important as generally supposed, and suggested that the effect of castration was rather due to the loss of sexual emotions. Thyroid should only be given after other treatment failed. The Salisbury treatment was risky in elderly people.

Dr. Schott of Nauheim confined his remarks to fatty heart. It was formerly common to use purgative waters so as to cause rapid reduction of weight. This was dangerous in anæmic or elderly patients. If fat was lost rapidly, it was not only in the subcutaneous tissue, but in the brain, nerves, and muscles. Reduction should, therefore, be gradual. Cool effervescing baths were better for the obese than Turkish. The exclusive diet of milk or dry rolls were only hunger cures.

Dr. R. Hutchinson favored thyroid treatment, as it oxidized the fat in the body, though it also oxidized albuminoids, and so greatly increased excretory products. He said limitation of fluid did not experimentally diminish weight, so the result must be due to less food being partaken of.

Mr. Keetley thought, in some cases, fat on the abdomen might be removed by operation.

Dr. Luff said Salisbury treatment must not be employed when there was renal disease or cardiac weakness; nor should thyroid in such cases. No fluid with meals was a good rule.

The President, Dr. Allchin, said, though excess of food was a common cause, some persons would get fat on very little, while others who fed largely kept thin. The nervous system had some influence. Mentally deficient children were often very fat, as also do cases of "adiposa dolorosa." On the contrary, patients with anorexia nervosa wasted out of proportion to the decreased food taken. He thought that in obesity there was some perversion of metabolism.

Surgeon-General Taylor, the new Director General of the Army Medical Department, is now in full work, and on the 31st ult. distributed the prizes at Netley, and addressed the officers who had received commissions.

Dr. Lunkester of Leicester died on the 30th ult., aged seventy-six years; Dr. Coppin, on the 31st, at Plumstead, in his ninetieth year; Dr. Stowers of Clapham, on February 3, aged eighty-seven years. Closely connected with the profession was Mr. Martindale, author of the "Extra-Pharmacopœia," a past president of the Pharmaceutical Society, and teacher of pharmacy at University College. He died suddenly on February 2, aged sixty-one years. He was greatly respected by a very large number of professional acquaintances.

THE PRECIPITATION OF PROTEIDS CAUSING THROMBOSES IN DIABETES.

To the Editor of the Medical Record:

Sir: Will you do me the kindness to correct in an early issue of the Medical Record a reported error in the discussion on "Diabetes" at the January meeting of the Medical Association of the County of New York, which appeared in the issue of the Medical Record of February 15, 1902. I was evidently guilty of a *lapsus linguæ* when I stated that Dr. E. Libman of New York had discovered that "when the percentage of glucose was the same as in diabetic blood, that is from 0.2 to 0.4 per cent., the bacteria grown on such media precipitated the *peptones*. This might indicate that bacteria abounding in the blood might precipitate the peptones and account for the occurrence of thrombosis and furunculosis." I should have said proteid instead of peptone. Dr. A. Lambert was quite right in making the criticism, which I tried to correct then, but which your reporter did not apparently hear. As the report now stands a manifest injustice is done, for which my slip of the tongue is to blame, to the important discovery of Dr. E. Libman that some bacteria have the property in certain percentages of glucose of throwing down a proteid precipitate from serum. If this could be demonstrated to occur in the living body it might be of great significance in explaining certain thromboses and some forms of local infections in diabetics.

N. E. Brill, M.D.

48 West Seventy-sixth Street, New York.

OUR PARIS LETTER.

(From Our Special Correspondent.)

The Operation on the Hindoo Twins.

Paris, February 14, 1902.

The operation on the Hindoo twins, which has just been performed in Paris by Dr. Doyen, has caused a great deal of comment, on account of the circumstances attending it, and the discussion between physicians which has resulted therefrom. One of the internes of the Hopital Trousseau, to which the Hindoo twins were taken at first, gave me the requisite information as to what took place in that institution. The woman who has had charge of the twins at the Barnum and Bailey show was obliged to consult a physician at the Trousseau Hospital (Dr. Guinon), on account of the health of Doodica, who has shown signs of failing health. According to the lay papers, who are able to publish an account of the disease, both sisters are suffering from a beginning of tuberculosis of the lungs, and Doodica, moreover, has shown signs of tuberculous peritonitis.

Professor Kirmisson, who is professor of clinical surgery for children, was consulted, and he recommended an operation, which, however, he refused to undertake unless he had a written statement from the Barnum and Bailey agent, or from the foster-mother, giving him the requisite permission. This was not immediately forthcoming, and at last the woman previously mentioned said she would give the permission provided she could attend the operation and have a cinematographic copy of the operation.

This Dr. Kirmisson very properly refused, and the twins were thereupon taken to Dr. Doyen's clinique, where the operation was done on Sunday afternoon. This lasted exactly twenty minutes, according to the *Echo de Paris*, a journal which gives what is presumed to be Dr. Doyen's description.

The sisters were placed on a sterilized cloth and subjected to narcosis. Dr. Doyen placed himself on the right, and cut the skin above the connecting ligament. Then a certain amount of cartilage was incised with a lancet, and two small veins tied. The peritoneum was then cut, and the hepatic band, which is found in such cases, was exposed. A few adhesions were found on Doodica's side, who was suffering from tuberculous peritonitis. The hepatic bridge was 7 cm. long and 4 cm. in diameter, and seemed very vascular. Dr. Doyen used here his double-lever forceps, which gives a pressure of 2,000 kilograms. Two ligatures *en chaîne* were sufficient for Radica and were made with catgut. The pedicle, which was very short, was then seized and cut, and on Doodica's side three arteries were immediately seized with pincers and ligated. Two ligatures *en chaîne* were then carried out, and the skin on the back part was cut through. The abdominal opening was then sewn up, only a small aperture for a lint drainage being allowed.

The whole performance was photographed with a cinematograph. The operation only lasted ten minutes. According to Dr. Fort, this operation has only been carried out once, in Brazil by Dr. Chapost-Provost. The night after the operation, Doodica's temperature fell to 36° R., while Radica's went up to 38.5°, with a pulse rate of 120. On Tuesday, however, the temperature of Radica had become 37.6° R., and her pulse 110; Doodica's temperature was 37.2° R., and her pulse 96. One of the twins died a few days after the operation. The other is now doing well and will probably recover.

Since the operation, Dr. Doyen and the Trousseau Hospital authorities have had a controversy. Dr. Doyen had made the statement that the girls had been worried by curious students, so Dr. Guinon emphatically denied this statement. Dr. Doyen thereupon made matters worse by writing to the press that they had reached his establishment covered with vermin, very filthy and their mouths filled with thrush. He was obliged to leave them alone for two days, so frightened were they at the prospect of another examination.

CATS AS CARRIERS OF DISEASE.

To the Editor of the Medical Record:

Sir: Your comments (p. 220) on the connection of cats with the diphtheria epidemic at Knowlton, Canada, induce me to state that, in 1883 (prior to the discovery of the Klebs-Löffler bacillus), I had an experience which has caused me ever since to banish cats from rooms occupied by diphtheria patients.

Two farmer's children, suffering with diphtheria, had a favorite cat, which was with them much of the time for the first week of their illness. On the fifth or sixth day of their sickness I was asked to see the six-year-old daughter of their next neighbor, who lived about one-fourth mile from them. I found her with a well-marked case of diphtheria. They stated positively that there had been no communication between the two houses, as the little girl had had an attack of diphtheria when she was about two years old, and, being their only child, they had avoided every case of sore throat since then.

On my visit next day *I found the girl fondling the boys' cat*, and learned that, when well, the children were constant playmates, and that the cat was as much at home at one house as the other.

The next day the cat seemed sick, and died that night. I made a post-mortem examination, and, judging from the condition of mouth and throat (which were lined with false membranes), decided that the cat had died of diphtheria, and had been the means of spreading the disease from the boys to the girl.

Three other cats on the first farm died with all the throat symptoms of diphtheria.

One of the boys died; the other recovered, as did also the girl.

Those who have the means of making bacteriological tests should give this subject careful study.

H. S. Jewett, M.D.

Dayton, Ohio

HYPODERMOCLYSIS IN TUBERCULOSIS.

To the Editor of the Medical Record:

Sir: In our frantic efforts to discover a specific for pulmonary tuberculosis we have almost wholly overlooked the administration of decinormal salt solution by hypodermoclysis. This remedy, if not a specific, is at least a most valuable addition to our resources in dealing with cases of mixed infection. It is cheap, always at hand, and easily administered.

I am using it in five cases characterized by fever, night sweats, severe cough, profuse expectoration, hemorrhage, loss of weight and general prostration. The results so far have exceeded my expectations. In every case the temperature was reduced to normal, and, by repeating the injections once a week, a nearly nominal temperature has been maintained, night sweats have been greatly relieved, the action of the heart strengthened, the appetite improved, a general abatement of the more troublesome symptoms, and a feeling of well-being induced. It is too soon to speak of its curative effects, but it does add greatly to the comfort of the patient, keeping him in a condition in which he is more likely to respond to other remedial measures. From two to four ounces, slowly injected, at a temperature of 102° F., causes very little pain, and under the influence of light massage and wet cloths, applied as hot as can be borne, absorption takes place quickly, leaving only a slight soreness, which usually disappears in the course of twenty-four hours. The site selected for the injection is the ilio-lumbar region, as advised by Kemp.*

I make no claim to originality, but write with the hope that other physicians may be encouraged to give this method a trial and report the results obtained.

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* "Entero-clysis, Hypodermoclysis and Infection," Kemp, page 150.

Huxley on Darwin.—To any one who studies the signs of the times, the emergence of the philosophy of evolution, in the attitude of claimants to the throne of the world of thought, from the limbo of hated and, as many hoped, forgotten things, is the most portentous event of the Nineteenth century. But the most effective weapons of the modern champions of evolution were forged by Darwin; and the "Origin of Species" has enlisted a formidable band of combatants, trained in the severe school of physical science, whose ears might have long remained deaf to the speculations of *à priori* philosophers.

Progress of Medical Science.

The Boston Medical and Surgical Journal, Feb. 20, 1902.

On the Value of Modern Methods of Diagnosis and Treatment in Gastro-Intestinal Diseases.—Richard F. Chase says that these modern methods aid one greatly in the diagnosis and treatment of gastric disorders, but thus far they have not enabled us to diagnose or cure all gastric diseases. For the details and technique of the methods he refers the reader to the many works on the subject, but reports two cases illustrating their value. In the first case there was a low acidity, a large amount of mucus, and a large but not dilated stomach. In the second case the most notable features were, a secretion of gastric juice as late as nineteen hours after the last meal, and with an acidity nearly as high as is usually found one hour after a test meal; an abnormally high acidity after the test meal; and a moderately dilated stomach. The author asks how, except by these modern methods, could these conditions have been ascertained, and whether the knowledge of them is not absolutely necessary to rational treatment.

The Treatment of Eclampsia by Stroganoff's Method.—F. S. Newell describes this treatment in brief as follows: The administration of oxygen during the convulsions; the use of morphine and chloral to control the convulsions; the free use of cardiac stimulants when the heart action weakens; prompt delivery when the convulsions do not yield to treatment; a milk diet, and the avoidance of all methods of treatment which tend to depress the patient. The conclusions deduced by the author from his experiments are: (1) In post-partum eclampsia the use of morphine and chloral in combination seems to have a distinctly beneficial action in controlling the convulsions; (2) In ante-partum eclampsia the treatment is less efficient, but the course of the disease seems to be altered for the better in the majority of cases; (3) Although the treatment has not given as good results in the author's cases as in those of Stroganoff, a further trial is indicated, since the results have not been any worse than under any other method, and there may have been errors in the application of the method which can be remedied.

Journal of the American Medical Association, Feb. 22 1902.

Report of a Typhoid Epidemic at the Iowa State Agricultural College.—W. E. Harriman gives the report of the epidemic. The total number of cases was sixty-five, of these twenty-three went to their homes, leaving forty-two to be cared for, thirty-three males and nine females. Of this number only two died. No unusual features were presented either in the clinical course of the cases or in the treatment which was carried along the modern lines. The outbreak was pretty definitely traceable to infected milk.

The Identification of Criminals Through the Fundus of the Eye.—M. F. Weymann contends that anyone can at any time, with certainty, be identified by the anatomical conformation of the fundus oculi; in fact, the disposition of the arteria centralis retinæ and its branches alone would be sufficient for the purpose. Absolute identification can be obtained by a drawing (exact as a photographic reproduction or nearly so) of the papilla and a surrounding retinal circle distant from the scleral ring by two papillary diameters. So great is the multiplicity of the anatomical relations of the vascular twigs that he has never been able to find even two fellow organs exactly alike. The points to be considered are:—(1) The method of division (dichotomous or otherwise); (2) The exact point of division; (3) The exact angle of the vessels with the primary meridians; (4) The exact distance of one divisional point from the other; (5) The relative size of the divided twigs; (6) The angle of division; (7) The course of the twigs (straight, curved, etc.); (8) The exact distance, everywhere and at every point, between venous and arterial branches (parallelism, convergence or divergence, twining, etc.).

Median Perineal Prostatectomy; Total Removal of the Prostate Gland.—Six cases are reported by A. H. Ferguson. He thus enumerates the advantages of the operation:—(1) It is the most direct route to the prostate; (2) Injury to the bladder is avoided; (3) The operation can be quite easily performed. Even where the gland has been repeatedly inflamed it is not so hard to remove it from below as from above; (4) It is an advantage to remove the gland piece by piece, for the surgeon can work through a small opening without bruising the surrounding parts; (5) Hemorrhage is avoided so long as one is careful to work within the capsule. The hemorrhage in suprapubic prostatectomy or in the combined method is often very alarming. Sepsis and intoxication from pus and fetid urine coming in contact with the prevesical tissues and wounded and raw surfaces within the bladder are sources of great danger in the suprapubic operation; (6) Perineal drainage is more complete; (7) The danger from septicæmia is not at all prominent after perineal prostatectomy, whereas more or less absorption of septic material is the rule in the suprapubic operation; (8) There is less danger of uræmia. The operation consuming less time, and the short anæsthesia affects the kidneys less; and, there being a minimum opportunity for sepsis, there is less work for the kidneys to perform; (9) The perineal operation is accompanied by far less shock than the author has noticed following suprapubic prostatectomy.

New York Medical Journal, February 22, 1902.

General Anæsthesia and its Administration in Throat Surgery.—M. L. Maduro comments on the fact that in throat surgery we often have the administration of the anæsthetic interfered with by enlarged tonsils, adenoids, etc., and calls attention to the following practical points in the use of nitrous oxide gas:—(1) It should be carefully ascertained that the valves of the gas apparatus fit accurately, thereby establishing the certainty of a rapid exit of atmospheric air from the lungs; (2) A certain amount of re-breathing of nitrous oxide should be allowed at the end of its inhalation, in order that a longer gas, and a shorter ether anæsthesia can be obtained; (3) The transition to ether should be accompanied by a rather free amount of admixture of air through the various inlets in the apparatus without removing its face-piece; (4) Lastly, the head of the patient should be well drawn back, and forward pressure made on the jaws, at the time of the transition to ether, so that the air-way may be increased to its utmost.

A Critical Review of Some of the Recent Literature of Tuberculosis.—J. Wright discusses some of the theories concerning tuberculosis that have been entertained in time past, and states what he believes to be the convictions of the majority of physicians at the present time. He rather decries the drastic measures of some of our health boards, and believes that there are other factors in tuberculosis than the mere presence of the bacillus. He does not believe it possible to produce any material effects on the mortality of the disease by isolation or any other measure it is possible for the State to enforce. The thing to do is to strengthen the individual index of resistance, and this is to be done by better lodging for the poor, shorter hours of work, more public parks, prohibition of child labor, etc. He believes that the changes in these respects for the last fifty years are responsible, or rather account, for the lessened death rate of the malady. As regards the present discussion relative to the human bacillus and that infecting cattle, he does not think that we can draw any positive conclusions, for the results of various experimenters are conflicting. All we can do is to continue our observations, and in the meanwhile desist from too dogmatic statements.

The "Poultice Method" of Healing Cutaneous and Subcutaneous Abscess Cavities.—M. B. Hutchins' method is simply to apply over the opening of the abscess a poultice of flax-seed meal, made with three-per-cent. carbolic, instead of plain water. A thin cloth or gauze layer can be put next to the opening. The three per cent. of carbolic acid really becomes about one per cent. in the mixture, and is hence very weakly germicidal. Absolutely nothing is put in the abscess cavity, it simply being emptied of pus by pressure—through a small opening—if not already open. The poultices are changed as often as cleanliness or their getting dry requires. The wet poultice affords constant drainage and absorbs the discharge. The moisture in the poultice and the constant flow of discharge prevent premature union of the mouth of the cavity. There is no painful packing in of gauze strips and retardation of healing by the presence of the foreign substance—gauze. There is no reinfection in dressing and there is a saving of from 75 to 80 per cent. in time of healing. When incision is necessary it may be small, instead of "free" and long. The pressure of the poultice aids in the coaptation of the walls, and the rapid removal of discharge clears the way for natural reparative processes. The successful use of rubber adhesive plaster on some occasions shows the effect of simple warmth and moisture in facilitating healing from the bottom.

American Medicine, February 22, 1902.

The Indications for Perineal Section in Stricture.—G. Frank Lydston declares that the most imperative indication for perineal section is traumatic stricture. Early operation, particularly in traumatic stricture, is likely to be followed by permanently good results. As a general proposition, the writer believes that it is wise in every case of indubitable traumatic stricture, in which complete relief from symptoms cannot be obtained by the sound, to perform a thorough operation by perineal section, and if the adventitious tissue be at all extensive, to excise it. It is not necessary that the stricture be extensive in order to demand perineal section. Strictures complicated by fistulas or severe cystitis demand perineal section. By this operation alone it is possible to thoroughly remove the obstruction and drain the infected deep urethra, prostate, and bladder. Surgically, impermeable stricture is by no means so infrequent as many believe. Under these conditions, perineal section without a guide may be necessary. As to the success of perineal section—with a thorough operation, involving division of all fibroid tissue, both on the floor and the roof of the canal, and when necessary, the excision of encircling rings and nodules of fibroid tissue, the operation is a perfect success, as regards permanent cure, in a large proportion of cases, granted that the after treatment is conducted intelligently. Sounds should not be used too assiduously in the after treatment.

The Etiology of Yellow Fever.—Walter Reed and James Carroll give an account of some recent experiments in yellow fever. For purposes of inoculation, they used three kinds of material: (*a*) Unheated and partially defibrinated blood; (*b*) Partially defibrinated blood which had been heated to a temperature of 55° C. for ten minutes, and (*c*) Diluted blood-serum which had been filtered through a Berkefeld filter. Since three nonimmunes received without any disturbance to health double the quantity of *heated* and partially defibrinated blood that sufficed when *unheated* to cause an attack of yellow fever, it follows that the specific agent present in the blood in yellow fever is destroyed or at least greatly attenuated by a temperature of 55° C. maintained for ten minutes. Of the three nonimmunes who received a subcutaneous injection of filtered blood-serum, two developed an attack of yellow fever. The serum had been slowly filtered, and as soon after as possible the filter was resterilized by steam and tested as to its effectiveness in preventing the passage of bacteria. For this a recent bouillon culture of *staphylococcus pyogenes aureus* was used, of which 50 c.c. were passed through the filter. The filtrate thus obtained was transferred in quantities of 10 c.c. to each of two flasks containing 200 c.c. of sterile bouillon, which were incubated at 37° C. for four days, and thereafter kept at room temperature for ten days longer, at the end of which time no growth had occurred. So this filter was reliable. The production of yellow fever by the injection of blood-serum that had previously been passed through a filter capable of removing all test bacteria is a matter of extreme importance. The occurrence of the disease under such circumstances, and within the usual period of incubation, might be explained in one of two ways: first, upon the supposition that the serum filtrate contains a toxin of considerable potency; or, second, that the specific agent of yellow fever is of such minute size as to pass readily through the pores of a Berkefeld filter.

Against the view that a toxin is present in the serum filtrate, the writers invite attention to the innocuousness of the partially defibrinated blood when heated to 55° C., for ten minutes. This has been shown by negative results in three cases which they report. Here the toxin, which must have been present in just the same quantity as in the serum filtrate obtained from this blood, appears to have been completely destroyed by the temperature above mentioned. Now, although certain bacteria are destroyed by this temperature, as yet there is no bacterial toxin known that is rendered inert by such a low degree of heat continued for so short a time. According to Kitasato, the tetanus toxin, which so far has proved to be the most sensitive, requires a temperature of 60° C. for twenty minutes, or 55° C. for one and one-half hours in order to destroy its activity. In one case which is reported in this paper, the results were negative after an injection of serum filtrate, but a mild attack of yellow fever followed a subcutaneous injection of blood drawn from the venous circulation of a yellow-fever patient early in the fourth day of the disease. The writers, therefore, feel justified in expressing the opinion that the infection in this case must be attributed to the injection of the blood, rather than to that of the filtered serum. And further, that the blood of this patient contained the specific agent of yellow fever, which had, therefore, passed through the filter along with the filtrate with which this latter individual had been inoculated.

Medical News, February 22, 1902.

Some Notes on the Prophylactic Screen in the Treatment of Tuberculous Conditions of the Larynx and Pharynx.—Stephen W. Wells describes this screen: It consists of a sliding iron upright set in a weighted base; at the upper end of the upright is attached a metal frame holding a glass plate which can easily be removed and cleaned. The frame is attached to the upright, so that when in use the right arm is but one-third the length of the left arm. This arrangement allows considerable freedom in handling the instruments on the right, while the left hand is passed under the screen, thus easily controlling the laryngoscope. Experiments have been made with the scrapings of the side of the glass facing the patient, and tubercle bacilli were found to be frequently present. This screen has the advantage of being adjustable to any height; it can be easily placed in position, it does not interfere with the view of the larynx; it relieves the patient to feel that he cannot cough into the physician's face; and it thoroughly protects the physician. It has been found to possess no disadvantages in the author's experience.

The Pathology and Etiology of Prostatic Hypertrophy: Suprapubic Drainage and Myomectomy Considered as Methods of Treatment and Cure.—Augustus Charles Bernays states that prostatic hypertrophy, when microscopically examined, is found to consist of an increase of the non-striated muscle cells and connective tissue which lie between the tubular glands. These latter are displaced by the hypertrophic muscle fibers, and in extreme cases are nearly absent. The etiology of this affection has not yet been cleared up. In old cases, palliative measures are sometimes preferable to radical ones. Drainage of the bladder by the suprapubic route is preferable to perineal drainage in cases of cystitis, because this method gives the sphincter apparatus more complete rest than the perineal buttonhole or fistula. In recent cases, when the patient's health has not been injured by the complications common to this affection, the dangers of myomectomy or perineal prostatectomy are minimal, and in these cases a radical and functionally satisfactory result can be achieved by myomectomy. Operation must be regarded as a palliative measure intended to enable the patient to evacuate his bladder more completely than before. It will probably fall into disuse as the technic of myomectomy or perineal prostatectomy is perfected. Bottini's operation is dangerous. Myomectomy done through a median perineal incision is the operation which promises the best results and is the operation of choice. It is applicable to the greatest number of cases in which permanent cure may be expected, the kidneys being physiologically sufficient and unimpaired. The perineal fistula will always close spontaneously after the perineal drainage is discontinued, and if enough mucosa has been left there will be no stricture.

Philadelphia Medical Journal, February 22, 1902.

The Treatment of Lateral Curvature.—James K. Young believes that any form of lateral curvature which may be benefited at all by treatment, is best treated by light gymnastic exercises. The introductory part consists of light exercises taken in the horizontal position lying on a table. Special attention is given to breathing exercises. Weak muscles are developed by exercises adapted to them individually or collectively. The weak muscles are slightly over-developed by first finding the best voluntary position which can be assumed by the patient and then taking all the exercises in that position. Special attention should be paid to the development of the lower extremities. The greatest care should be observed and the patient ought always to be under the observation of the surgeon. The treatment should be given daily for periods of from three to six months. Those exercises which are found to be the most useful should be used, supplementing them from time to time with others. The writer approves of daily massage after the exercises. This should consist of several different movements intended to improve the weaker muscles, to divert the blood from the spinal column, and to rest the patient after exercises. The exercises should be taken daily except Sundays and during the menstrual period. The exercises may be modified during the summer. Sometimes they may be discontinued at this season. These patients should not go to school, nor should they go out in society, as these duties interfere with the proper amount of rest. The morning of each day should be devoted to treatment, and at least two hours in the afternoon should be spent in the prone position. Late hours should be forbidden. All games which employ one side of the body more than the other are also to be forbidden.

On the Relationship Between Human and Bovine Tuberculosis.—J. G. Adami concludes that bovine tuberculosis is easily conveyed from cattle to cattle, and whatever the method, for they are various, this transmission from one animal of the bovine species to another is by far the commonest mode of infection in cattle. Human tuberculosis is transmissible to cattle. Mixtures of tubercle bacilli with other microorganisms (as in sputum) appear more infectious than pure cultures. Swine appear to be fairly easily infected with both human and bovine tubercle bacilli. Human tuberculosis in the majority of cases is conveyed from human being to human being by inhalation, more rarely by other methods. Everything points to the fact that in the main the bacilli causing infection in man are derived from previous cases of the disease in man. By sojourn in the human body and passage from man to man the human tubercle bacilli have acquired properties differing from those acquired by bacilli which have passed through cattle. These differences are not so marked as to permit us to conclude that we are dealing with distinct species. Bovine tuberculosis can be transmitted to man either through wounds or through the digestive tracts. By passage through cattle the tubercle bacillus gains increased virulence for cattle, but lessened virulence for man. Save in cases of wound infection there is a lack of evidence that bovine tubercle bacilli infect adult human beings. It is infants and children who are liable to be infected, and this through the agency of milk. The indications are that infection is brought about only by the use of milk of cattle which are very extensively diseased, more especially of those suffering from udder disease. Animals showing physical signs of tuberculosis and especially those with udder tuberculosis, should be condemned, and under no circumstances should their milk be used as food. When this disease is in a herd, Bang's method should be employed and the animals reacting to tuberculin separated from the healthy ones. Pasteurization of milk will lessen the danger of the transmission of tuberculosis from cattle to man.

The Lancet, February 15, 1902.

The Medicinal Use of the Pressor Substance of the Pituitary Body.—F. Golla calls attention to the recent work of Schafer and Vincent, who were able to demonstrate the existence of two substances in the infundibular part of the pituitary gland having distinct physiological properties, one of these producing a rise and the other a fall of blood-pressure. These two bodies they distinguished as the pressor and depressor substances. Of these they found that the pressor substance is soluble in salt solution and insoluble in alcohol and ether, whilst the depressor substance is soluble in all three. The active substances are not destroyed by boiling. For clinical purposes, the pressor substance, purified by repeated washing of the alcoholic precipitate with ether obtained from 80 gr. of the dried infundibulum, was dissolved in 30 ♏. of normal salt solution. The injection of 3 ♏. of this solution into the mucosa of the lower jaw, caused a local vasoconstriction; the mucosa remained blanched for about forty-five minutes, for a considerable area around the point of injection. On injecting 5 ♏. subcutaneously into the right forearm, there was a perceptible pallor of the finger nails for a few minutes. The pulse rate fell from 95 to 84, and the wave was appreciably fuller. A subcutaneous injection of 8 ♏. of the saline extract was given to a patient with advanced Addison's disease. The radial blood pressure was 120 mm.; the pulse rate 100. Two seconds after the injection, the patient complained of a sudden spasmodic contraction of the muscles of the arm and fingers. Immediately after injection the radial pulse almost disappeared, but this was found to be due to local muscular spasm. Previously to injection the patient had complained of feeling uncomfortably hot, and a couple of minutes afterwards he spontaneously remarked that "all the heat seemed to have gone inside." Two hours after the injection the pulse was 89 and much stronger and fuller. The patient still complained of feeling cold at the extremities. Three hours after the injection the blood pressure was 135 mm. There was marked diuresis during the twenty-four hours succeeding the injection; the urine was acid with a specific gravity of 1010. There was no glycosuria, an effect frequently noticed after suprarenal injection. Golla has taken considerable quantities of the pressor substance by the mouth, but has never seen any result, although the substance is unaltered by peptic digestion and is dialysable. The pressor substance would appear to be proteid in nature. The iodine found in the pituitary body is not apparently in combination with the pressor substance. Its cardiac, vascular, and diuretic action would indicate that it may prove to be of service in cases of heart disease.

The General Pathology of Tumors.—In the first and second Erasmus Wilson lectures, C. P. White classifies new growths and discusses the rudiments from which they arise. He then considers cell structure and cell division, and finally passes to the parasitic theory of causation. He enumerates the arguments in its favor as follows: (1) The apparent resemblance of carcinoma to infective diseases, such as tuberculosis; (2) The inoculability of malignant growths; (3) The analogy with the lesions produced in the rabbit's liver and elsewhere by the coccidium oviforme; (4) The topographical distribution of cancer. Concerning the objections to the theory, he says that we know of no disease characterized by definite anatomical lesions which is at the same time characterized by a definite extrinsic causal factor. Therefore, since tumors are characterized by their anatomical structure, we should not expect them to be due to definite extrinsic causal agents. In the next place, we know of no parasites which are capable of producing primarily a proliferation of cells. The proliferation of epithelial cells in coccidissis, he thinks, is not primary, and even if a parasite were capable of causing a primary proliferation it would not explain the occurrence of a carcinoma, since the essential lesion of carcinoma is not proliferation, but is penetration of the epithelial cells into the connective tissue. In the next place, the reaction of the organism against all known parasites, animal and vegetable, is of a defensive nature, and characterized by the phenomena of inflammation. The parasite first gives rise to injury or destruction of the tissues; this is followed by exudation of leucocytes, which remove the damaged tissue and, if possible, the parasite, and this, again, by proliferation of the surrounding tissue, which repairs the injury. In carcinoma proliferation takes place in a centrifugal direction; instead of a defensive reaction, there is produced an ever-increasing amount of epithelial tissue in which the parasite can grow and multiply. This is so opposed to the accepted laws of parasitism that one may be excused for doubting its possibility. Some have supposed that the parasite acts on the cell in somewhat the same way as a sperm cell acts on a germ cell and thus induces proliferation. This supposition is negatived by the fact that the parasite-containing cell does not undergo division. As regards metastatic growths, the author says they cannot be due simply to the presence of a parasite, for if they were we could not have a metastatic carcinoma in a position devoid of epithelium. We must therefore conclude that, besides the parasite, at least one epithelial cell must be transferred from the primary growth to form the mother cell of the secondary deposit, but this cell cannot be the cell in which the parasite is lodged, since the parasite-containing cells, at least in the case of the described parasites, do not proliferate, but undergo degeneration. Therefore we must imagine a parasite and a cell independently conveyed to the site of the metastatic growth. Again, this theory will not explain the frequency of malignant disease in the female organs of generation or the rarity of it in the lungs and small intestine. Nor does it explain why the acini of the breast are more frequently affected than the ducts. In the case of sarcoma it is even more unsatisfactory, since, except in the rare cases of sarcoma starting in a wound, we must suppose the parasites conveyed to the seat of the tumor by the blood, and if this were the case we should expect multiple primary growths to be common. It is equally impossible, White holds, to explain the occurrence of tissue tumors on the parasitic theory, although if they are due to extrinsic causal factors, these factors must necessarily be of a parasitic nature. It might be said that extrinsic factors are not necessary to explain simple tumors, but we cannot so separate cell and tissue tumors as to say that the former are due to intrinsic factors and the latter to extrinsic factors.

British Medical Journal, February 15, 1902.

The Disinfection of New Clothes.—Charles A. Cameron states various instances in which he is assured that the infection of scarlet fever was carried by new clothes. He noticed the outbreak of this disease repeatedly among the recruits of the Royal Irish Constabulary. After investigation, he discovered that the clothes of the recruits are made largely by women for the contractor. Suspecting that they were the carriers of the infection, he ordered that these clothes should be sterilized before they were received into the barracks. The sterilization began at the end of April, 1901, and from May 15, to the present writing, January, 1902, no further cases have occurred.

Treatment of Chronic Eczema.—Alfred Eddowes thinks that as our knowledge of bacteriology and pathological processes increases, the term eczema will be less often used or will be more often qualified. The object of all treatment is to bring back the diseased condition to a healthy and physiological state and keep it there. Special indications must be met, in each case. If injury is being done by scratching or friction of any sort, the part must be soothed and protected or treatment may be almost useless. Gentle pinching or pressing will often afford the relief of scratching without its injury. Eczema may have many associated causes and complications. General treatment is essential in many cases. Gray powder, calomel, decoction of aloes, citrates and carbonates, iron, quinine, and strychnine, and sometimes colchicum will meet almost all needs for internal medication. The regulation of diet is sometimes most necessary. In the case of children, meat juice or blood gravy, for sucklings, and codliver oil or malt extract for older ones, will often do wonders, as will also now and then change of air and the administration of thyroid extract. For adults, sometimes a change of occupation is sometimes necessary, but this is rare.

On Diphtheria Antitoxin Eruptions.—Arthur Stanley reports observations made on a series of 500 cases of diphtheria. They were all treated with antitoxin. Skin eruptions appeared in about one-fourth of the cases. The period of onset was usually during the second week after the giving of the antitoxin. The eruption constitutes a distinct type. The typical eruption is a marginate erythema on the psoriasis regions, tending to run into arcs of a circle, lasting about three days and accompanied by slight *malaise*, and a rise in temperature of about 3°F. The margins are raised and turgid. The lesions begin in macules, become rings, increasing in diameter, until the adjacent rings coalesce and break the arc. The spread of the rash is most frequent from face and trunk to limbs, and from extensor to flexor surfaces. It lasts from two to five days, but may exist for only a few hours, when of a scarlatiniform nature. The occurrence of an antitoxin eruption during the course of a case of diphtheria did not appear to influence the prognosis seriously, though it must be admitted that any febrile disturbance of the heart would tend to have a harmful effect. No case in this series, however, was observed in which heart failure was precipitated by the occurrence of an antitoxin eruption.

Airborne Typhoid.—R. H. Quill reports an epidemic of typhoid which occurred in a large camp in the hills of the Island of Ceylon where the Boer prisoners of war were being kept. All water avenues through which typhoid fever could be conveyed to the military camp were efficiently guarded, and therefore a waterborne origin must be abandoned. But there was an epidemic of the fever raging among the prisoners of war, and guard huts surrounded the prisoners' lines and were close to them. This was unavoidable for military reasons. Those on sentry duty, in close contact not only with the prisoners, but with their latrines, urinals, and washhouses. The guards were exposed to the emanations arising from the latrines. Assuming that such emanations contain typhoid organisms, and also that typhoid infection can be airborne, the probability of the infection being borne in this way, appears to be well founded. Besides this, the soil of the enemies' camp gave peculiar facilities for the spread of the infection. It became very dusty after the camp had been established for a short time. The last point mentioned is the presence of almost a plague of flies in the camp of the enemy. These insects are well adapted for carrying infection, and there was nothing to prevent them from conveying the poison from one camp to the other. Although the writer believes that epidemics of typhoid fever are chiefly waterborne, in the present instance he believes it to have been airborne.

Münchener medicinische Wochenschrift, February 4, 1902.

Myelopathic Albumosuria.—T. R. Bradshaw has given this appellation to that form of albumosuria characterized by the presence of the so-called Bence-Jones' bodies in the urine. He opposes the statement of Jochmann and Schumm that this form of albumosuria can occur in osteomalacia, but believes it to be pathognomic of bone and marrow lesions, entirely dissimilar to those observed in this disease. The case reported by Jochmann and Schumm as one of osteomalacia, in which this form of albumosuria was present, is to be regarded as one of multiple myeloma, both from its clinical history and its autopsy findings.

Treatment of Pulmonary Hemorrhage by Subcutaneous Injections of Gelatin.—Ludwig Thieme is enthusiastic in regard to the value of this treatment for pulmonary hemorrhage. He reports its use in twelve cases, upon the results of which his opinions are based. This method should not be considered as a last resort in the treatment of this condition, but should be employed in all cases in which the hemorrhage is at all severe, even before other remedies have been tried and found wanting. In Thieme's experience no considerable local disturbance has been produced at the site of the inoculation. Sodium was always added to the gelatin solution before injection. The swelling following the inoculation was gently massaged and an aseptic dressing with iodoform gauze applied. Two cases in which these precautions were not observed showed more marked local disturbances than the others. As a rule, fever follows the inoculations. In some cases it lasts for four or five days, and the evening temperature may reach 40.3°–40.7° C. (104.5°–105.2° F.). All the inoculations were made into the outer surface of the thigh. One hundred cubic centimeters was the quantity uniformly introduced at one sitting.

Taxis in Incarcerated Hernias.—Otto Lanz is strongly opposed to the use of taxis in the treatment of incarcerated hernias. He believes that at the present day, in consideration of the great advancements in aseptic abdominal surgery, herniotomy is by far the most preferable procedure. The injury to the intestine and contiguous structures, brought about by taxis, even when this is successful, is often so extensive that serious consequences and frequently even death result therefrom. A case is recited in illustration of this fact. Also apparently successful taxis often effects reduction in mass without the incarcerated gut being freed, and it is important to comprehend that this result may be brought about with the employment of very little force. In these cases the symptoms, of course, persist, and a subsequent operation, which must be much more extensive than herniotomy, is rendered necessary. Taking into consideration all these facts, the author believes that in all cases of incarcerated hernia primary herniotomy is the best procedure. In every case the hernial sac should be opened before reduction and the condition of the intestine ascertained. Local anæsthesia is preferably employed, and for this a one per cent. cocaine or Schleich's solution should be used.

Treatment of Chronic Middle-Ear Catarrh by the Pneumatic Chamber.—Hamm reviews the methods of treatment commonly in vogue for chronic middle-ear catarrh with adhesions. All of these methods have for their aim the breaking down of the adhesions by mechanical means. All yield unsatisfactory results, and it is seldom that benefit is derived therefrom. He reports his results in the treatment of eight cases of this trouble by means of the pneumatic chamber. Of these, in three the hearing was materially and permanently benefited. In all there was temporary improvement. The author, himself, was one of those who received permanent benefit. The pressure employed in the pneumatic chamber or cabinet may be from ½ to 1½ atmospheres. One atmosphere seems to give the best results. The duration of each treatment should be an hour and a half. Of this time time 25 minutes is consumed in gradually increasing the air pressure and 40 minutes in gradually reducing it. Twenty-five to forty treatments are necessary in order to determine what result is to be obtained. The acuteness of hearing during the sittings varies in different cases. In some cases it is greatly accentuated, while in other cases it is reduced. If the benefit is permanent following the cessation of treatment a series of sittings should be given at yearly or half-yearly intervals in order that relapses may be averted. The most that can be said for this treatment at the present time is that it benefits a few cases which are not influenced by other methods.

Berliner klinische Wochenschrift, January 27, 1902.

Symptomatology and Therapy of Chronic Pulmonary Emphysema (Vagus Neurosis).—F. Riegel refers to the recent article by Zuelzer in regard to chronic pulmonary inflation (see abstract MEDICAL RECORD, January 18, 1902). The direct connection between pulmonary inflation and the vagus was first communicated by the author in conjunction with Edinger in 1882, as the result of experimental researches with respect to asthma. Since that time Riegel has uniformly administered atropine in chronic pulmonary emphysema, and also in all other conditions in which over-stimulation of the vagus was the causative factor in the production of symptoms.

Prognosis in Glaucoma.—Fritz Mendel reports the results obtained in the treatment of 258 glaucomatous eyes in 234 patients. In fifteen no operation was undertaken, and of these nine were treated by eserine. Instillations of physostigmine were used in eight cases with good result, so that operative treatment could be deferred. Iridectomy was performed 216 times. In eight of these cases the glaucoma was bilateral. One eye was entirely blind and the other partially so In these cases the operation upon the blind eye not only relieved the pain therein, but the condition in the other eye was materially improved. Sclerotomy was performed twelve times, and enucleation thirty-one times. In the various forms of glaucoma treated by iridectomy, the following results were obtained: In acute glaucoma 64.4 per cent. were cured, 17.8 per cent. greatly benefited, while 9 per cent. remained *in statu quo*. In chronic inflammatory glaucoma 25.7 per cent. were cured, 51.4 per cent. improved, and 17.1 per cent. not benefited. In simple glaucoma 4.6 per cent. were cured, 71.2 per cent. improved, and 19.5 per cent. not benefited. In cases complicated by secondary increase in tension 20.4 per cent. were cured, 29.6 per cent. improved, and 12.9 per cent. not benefited. Hereditary glaucoma was observed nine times. In two instances benefit in vision was obtained by this treatment. It is thus seen that iridectomy is the treatment *par excellence* for this disease.

Berliner klinische Wochenschrift, February 3, 1902.

Tympanites.—S. Talma says that tympanites hysterica is caused by a contraction of the diaphragm which is permanent in character, although it may be but slightly marked and demonstrable with difficulty on physical examination of the lungs. Partial tympanites, giving rise to a circumscribed tumor, may result from the same cause if there is added a partial transverse contraction of certain abdominal muscles and a laxity of others. The circumscribed abdominal phantom-tumor recently reported by Einhorn is to be considered of such genesis. Talma reports a somewhat similar case which is to be considered in the same class. These tumors may appear as part of the symptom-complex of hysteria or they may be the sole manifestations of this disease. The reason why certain cases of hysteria should show contractions only in the diaphragm and certain abdominal muscles is somewhat obscure, but it seems probable that these are produced reflexly as the result of stomach disturbances.

History of the Westphal-Piltz Pupil Reaction.—Meyerhof says that Westphal and Piltz are in no way to be considered as the discoverers of this pupil phenomenon. The fact that it is present in certain conditions and is of diagnostic importance has been previously mentioned by several other authors, such as Galassi in 1887, Wundt in 1880, Raggi in 1885, and Molli in 1883. The first, however, to describe the phenomenon was A. v. Graefe, in 1854. He not only mentioned its diagnostic importance, but advocated its therapeutical use in the treatment of immovable pupils. Graefe's idea was that this pupil movement is complementary to the movement of the obicularis muscle of the other eye. It still to-day seems certain that this view is correct. Several authors hold that the phenomenon is brought about as the result of pressure of the lid as it closes over the eye-ball. This view is disproved by the following facts:—(1) If the eye is closed but the lid held away from the eye-ball so that it exerts no pressure thereon, the phenomenon is easily produced; (2) Pressure with the finger directly upon the eye-ball fails to elicit the reaction; (3) Pressure upon the eye-ball does not cause congestion of the blood-vessels of the iris, as has been claimed; (4) Experimental researches have shown that congestion of the blood-vessels of the iris does not produce myosis.

An Artificial Œsophagus.—Siegfried Spiegel reviews the various methods of treating stricture of the œsophagus, and shows that in many cases the ordinary method of dilatation by sounds gives unsatisfactory results. The method of feeding directly through an artificial gastric opening is not well borne by most patients, and experience has shown that in most cases weight and strength are progressively lost when such feeding is resorted to. This is very largely due to the fact that the appetite is practically lost and the process of digestion is without the normal stimulation arising from mastication. The action of the saliva, which in a measure prepares the food for stomach digestion, is also entirely wanting. In order to overcome these failings the author has devised an artificial œsophagus. He exhibits several varieties which differ slightly in their mechanical construction. The essentials of the apparatus consist of a tube of sufficient length to reach from the upper portion of the œsophagus to the middle of the stomach, the distance being measured on the outside of the body. This tube is provided with an appliance which facilitates the passage of food downward, and also with a suitable contrivance at both ends for making it fast and continuous with the artificial apertures. Two permanent artificial openings are made, one in the upper portion of the œsophagus above the stricture and the other in the anterior wall of the stomach and abdomen. The superior extremity of the tube is made fast to the œsophageal and the inferior to the gastric opening, the body of the tube lying on the chest wall outside of the thorax. By the use of this artificial œsophagus the patient can masticate and swallow food in the ordinary manner. It can be worn continuously throughout the day and taken off before retiring if desired.

French Journals.

Discovery of the Plague Bacillus in the Proboscis of a Mosquito.—While La Bonnardière and Xanthropoulidès of Beyrouth were attending a patient, one of them was bitten on the cheek by a mosquito. They caught a mosquito in the room and, on examination, found that it was gorged with blood. In the proboscis were several microbes, which were clearly recognizable under the microscope as those of plague. There was no opportunity at the time of inoculating an animal with these.—*Le Bulletin Médical*, January 29, 1902.

Nephrotomy in Chronic Medical Nephritis.—Pousson calls attention to the cause of nephritis as being a disturbance in the circulation of the kidney. In the last three years he has operated on six patients with Bright's disease. At least one of these cases can be considered cured. This patient had serious symptoms of the disease, and medical treatment had produced no results. The writer operated, after which the quantity of the urine increased as well as the amount of urates and other salts. There now exists only a trace of albumin, and the various other elements of the urine are normal in quantity. Another patient had symptoms of subacute Bright's disease, with considerable œdema and grave cerebral symptoms. Unilateral nephrotomy was done. From the third or fourth day after the operation the œdema of the side operated on disappeared. At the end of twelve days it disappeared from the other side. Some albumin and casts are still found in the urine, but the relief is considerable.—*Journal de Médecine de Bordeaux*, February 2, 1902.

Lavage of the Intestine in the Child.—M. L. Babonneix states that some of the effects of this treatment are mechanical—a thorough cleansing of the intestinal mucosa. Others are physiological—a stimulation and regulation of the peristaltic movements of the intestine, and excitation of the secretion of the glands of the digestive tube, and especially of the liver. As to the indications for lavage of the intestine, they vary with circumstances. Many authorities extol it in cholera infantum, some do not. In acute febrile gastroenteritis, lavage of the intestine with cold water is indicated. It lowers the temperature of the body and diminishes intestinal fermentation. In cases in which the stools are extremely fetid, it is especially valuable. In those forms of chronic gastroenteritis in which the intestinal symptoms predominate, this treatment is most useful. The phenomena of intoxication are often markedly ameliorated. In older children the method is equally successful. Lavage is also indicated in intestinal occlusion. The only contra-indication to lavage of the intestine, as in the case of lavage of the stomach, is collapse.—*Gazette des Hôpitaux Civils et Militaires*, January 28, 1902.

Bony Ankylosis of the Temporo-Maxillary Articulation, Following Traumatism.—M. Gindus speaks of this affection as being most rare. It manifests itself generally between the ages of fifteen and twenty years. The ankylosis is generally unilateral, although cases of double ankylosis have been reported. Irreducible dislocations may give rise to this trouble; also fractures of the neck of the condyle, and especially fractures of the walls of the glenoid cavity. Traumatic arthritis may also be the starting point for this trouble. These are only a few of the causes of this serious affection. The prognosis of ankylosis of the jaw is grave, from the fact that it hinders or prevents mastication and renders normal digestion impossible. Nutrition is compromised and serious results follow. Numerous operative proceedings have been proposed by different authorities. The writer concludes that a serious traumatism of the tempero-maxillary articulation occurring at an early age is always followed by bony ankylosis. Ankylosis is favored by the proliferation of a very active periosteum. Surgical treatment is justifiable, the best method being the resection of the condyle, and, if necessary, the resection of the coronoid apophysis. The success of the result is proportional to the size of the piece of bone which is removed.—*Revue Médicale de la Suisse Romande*, January 20, 1902.

Some Observations on Epidural Injections.—A. Chipault sums up his personal experience with epidural injections as follows: As a method of producing surgical anæsthesia, it gives results too inconstant to justify its introduction into common practice. As a method of producing medical analgesia, it is worthy of a place in therapeutics. In neuralgia and in neuritis, it seems to possess an efficacy superior to most of the medicinal means employed. It is of the greatest service also in tuberculous and cancerous lesions of the vertebræ, especially when the inefficacy of the ordinary methods of treatment is considered. This epidural injection produces, sometimes from the very first, a lasting effect; more often, however, especially in the affections last mentioned, it has to be repeated, and while the first injection gives a fleeting or negative result, a second, and especially a third, produce relief which continues for a long time, and which sometimes is permanent. The solution which appears to be most practical is that of chlorhydrate of cocaine in the proportions of 1 to 100. Considered as a topical therapeutic method, its future seems very limited. It can be used only in lesions in the epidural space, excepting in cases of tuberculosis of the sacral or lumbosacral region, which are particularly resistant to the treatment by immobilization—so successful in tuberculosis of the upper parts of the vertebral column; in these lower lesions it is legitimate to give epidural injections of glycerin and iodoform. The epidural method has indications very different from those of the sub-arachnoid method.—*La Tribune Médicale*, February 5, 1902.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, Held February 10, 1902.

JOHN B. WALKER, M.D., CHAIRMAN.

Urinary Bladder in an Inguinal Hernia; Radical Operation Under Spinal Anæsthesia.—Dr. WILLY MEYER presented a man sixty years of age, who had entered the German Hospital the middle of last June on account of a large, right inguinal hernia. It had troubled him since 1888, and had at last become irreducible and so large as to prevent him from walking. Physical examination showed a very marked diffuse bronchitis, and because of this the radical operation was done under spinal anæsthesia. The analgesia was perfect. On opening the sac it was found to contain the greater portion of the omentum, and this was removed by ligating it in sections and amputating these. A peculiar mass was found situated on the inner side of the sac, which was thought to be a vesical hernia. The separation of the tissues was, therefore, conducted very carefully, but despite this, the mass was injured, and a gush of urine confirmed the suspicion that the bladder had been opened. The wound in it was closed with two rows of sutures, one row being of silver. A continuous suture was then inserted at the neck of the sac, an opening one and one-quarter inches in diameter being left for gauze drainage. A catheter was not left in. There was no reaction following the operation; and forty-eight hours later he was again anæsthetized by the same method. The analgesia this time was also perfect, and it enabled the operator to complete the operation by doing a regular Bassini operation. Recovery was uninterrupted, but the man was kept upon his back for six weeks in order to relieve the operative field from abdominal pressure. He was discharged in perfect condition, and was advised not to wear a truss. When next seen, in December, he stated that there had been a slight recurrence of the hernia in the lower portion of the wound, apparently induced by his coughing. This recurrence took place exactly where the vesical hernia had been pushed back. The patient was now wearing a truss, and was perfectly able to continue his occupation of carpenter. Dr. Meyer said that this case seemed to be of the combined form in which the bladder is situated, both intra- and extraperitoneally. According to statistics, this complication of inguinal hernia was found in about 1 per cent. of the cases. Perhaps no other operation demonstrated so well the possibilities of spinal analgesia. He had used tropacocain in fifty cases, and had been pleased with its action. Spinal analgesia should only be employed under strict indication.

Dr. H. LILIENTHAL said that ten years ago he had assisted Dr. A. G. Gerster in an operation on a case of hernia. A mass was found during the operation, which was taken to be a hydrocele and was opened deliberately. It proved to be the urinary bladder. The patient recovered without incident. In the next case of the kind that he had seen the patient was suffering agonizing pain, although the tumor had only been down a few hours. The man was able to pass urine, and was catheterized before the operation, but the tumor was found to be just as tense as before the use of the catheter. Suspecting that the bladder might be in the hernia, the operation was proceeded with cautiously, and the radical operation done. The bladder was found in the hernia. Recovery was uneventful. One of the internes of the hospital had recently operated upon a non-strangulated hernia, and had accidentally opened the bladder, which was found to be a part of the hernia. The rent was sewed up, and a Bassini operation done, and the patient recovered without any complications.

Dr. FRED KAMMERER said that, in the first case of this kind that he had encountered, he had failed to recognize the bladder. The organ was almost empty at the time it was opened. The rupture was sutured and a Bassini operation done, but the patient died of sepsis. In the second case the bladder was recognized, and there was no untoward result. Regarding cocainization of the spine, the speaker said that he had been among the first to use it extensively. In a former paper he had stated that this form of anæsthesia was only indicated when other methods were out of place, and he desired to reiterate this because spinal anæsthesia had been employed enthusiastically and indiscriminately for a long time, and had caused a revulsion of feeling, so that of late the method had been somewhat neglected. He had been surprised to note how well old and feeble persons stood spinal anæsthesia.

Dr. C. L. GIBSON said that he had seen a number of cases of hernia of the bladder, and for this reason had written a paper on the subject at one time. He thought he had seen the bladder in hernia operations about ten times, though a number of these cases were not really examples of hernia of the bladder, but rather of a displacement of this viscus, produced artificially by pulling it up during the manipulations incident to the operation.

Dr. A. A. BERG asked Dr. Meyer if he would consider a hernia operation one of the indications for spinal anæsthesia.

Dr. JOHN B. WALKER said that he had seen an operation for femoral hernia in a woman in which the bladder had come into the field and had been incised. The wound was sutured and drainage employed, and the patient made a good recovery. The same thing had occurred in a male during an operation for inguinal hernia, and recovery had been equally good.

Dr. WILLY MEYER said that there must have been a large diverticulum in his case, because the cavity was examined with a probe at the time, and the latter entered it for a considerable distance. A large quantity of urine escaped from the opening into the operation wound, and as the sac had not yet been closed, he was afraid to go on with the hernia operation lest the urine might have caused infection. The majority of surgeons had avoided using a catheter in these cases, and this seemed to be the better practice. In his opinion, a herniotomy would be an indication for spinal anæsthesia if there were any reason for not employing the more usual methods of inducing anæsthesia. He had made use of spinal analgesia in various bladder and prostate operations on old people, and with most satisfactory results. The spinal analgesia injection was frequently followed by chill and high fever, and as these symptoms occurred after some urethral operations, the true condition of the patient might be obscured for a time.

Carcinoma of the Stomach; Gastroenterostomy; Occlusion of Murphy Button.—Dr. A. V. MOSCHCOWITZ presented a man, sixty-six years of age, who had been admitted to the Mount Sinai Hospital on July 15, 1901. He had lost flesh rapidly, having fallen from 140 to 75 pounds, and complained of pain in the stomach and of frequent vomiting. On examination a movable tumor was found above and to the right of the umbilicus. The stomach was dilated, and its contents showed a total acidity of thirty, an absence of free hydrochloric acid, and the presence of butyric and lactic acid. On July 26 Dr. Gerster operated upon him, and because of his bad condition, local anæsthesia was employed. It had been intended to do a pylorectomy, but the man's condition was so feeble that a posterior gastroenterostomy was done and a Murphy button inserted. After the operation the patient did well up to August 13, or nineteen days after the operation, when he began to vomit without apparent reason, and went into collapse. The vomiting remained uncontrollable in spite of lavage and rectal alimentation. He was operated upon at once for the removal of the button, and the latter was found at the site of the anastomosis occluded with food. The button was removed, and the vomiting ceased at once. According to Dr. Reginald H. Fitz of Boston, statistics showed the operation of gastroenterostomy to be of no value, but this man had lived now for nearly eight months in practically perfect condition, despite the fact that death from starvation seemed imminent at the time of the first operation. His weight was now 142 pounds.

Dr. **Kammerer** spoke in favor of making as small an opening as possible, forcing in the segments of the button and fastening the latter, but avoiding the purse-string suture, which, he thought, caused a puckering and made pressure unevenly on the tissues. If a Murphy button pressed well against the walls of the two viscera, it should come away after six or seven days. In quite a number of gastroenterostomies he had never experienced any trouble after using this method.

Dr. **Walker** said that he had tried this plan and felt sure that it was easier and superior to the purse-string suture.

Dr. E. M. **Foote** said that the method advocated by Dr. Kammerer was no guarantee that the button would not stay in the stomach, as he could testify from personal experience. Mention was made of one case in which it had remained for months.

Dr. **Lilienthal** said that he would agree with Dr. Moschcowitz that Dr. Fitz was wrong in asserting that this operation of gastroenterostomy was one unworthy of surgery. The experience detailed by Dr. Fitz was certainly not that of most surgeons, and there was surely a place for this palliative operation.

Dr. **Meyer** said that he had done gastroenterostomy upwards of twenty times, and always made use of the purse-string suture after the method advocated by Murphy. So far, he had had no trouble. In one case the button dropped into the stomach, and its presence there was demonstrated by means of the *x*-rays. The man had been seen since, and was in good health, although the button was still in his stomach. Last year he had presented to this Section a patient upon whom he had used the elastic ligature, according to McGraw's method. This was a most valuable procedure, and he was sure those who gave it a trial would continue to use it in cases of both anterior and posterior gastroenterostomy in connection with the lower gastrointestinal tract. It was both a simple and safe method.

Dr. **Kammerer** said he did not mean to say that good results could not be obtained with the purse-string suture used by Murphy, that the method to which he had alluded, and for which he had expressed a decided preference, seemed better adapted for securing the necessary uniform necrosis. In the case referred to by Dr. Foote it was probable that the button was of faulty construction.

Dr. A. A. **Berg** remarked that in these cases the button should be a new one, and should be provided with a specially strong spring.

A Method of Preserving Gall-Bladder Specimens.—Dr. H. **Lilienthal** presented a gall-bladder and stone removed from a man of fifty-two about three weeks and a half ago. The patient had suffered from attacks of colic and jaundice without much fever. Recovery had been prompt. In this connection Dr. Lilienthal presented a gall-bladder which had been turned inside out and stuffed with cotton, and sewed up. A specimen prepared in this way showed the internal surface of the gall-bladder and the changes which had occurred as a result of inflammation.

Clinical Memoranda in the Study of a Case of Anuria.—Dr. A. V. **Moschcowitz** reported this case. The patient, a woman, had been admitted to hospital on March 15, 1901, while pregnant. She gave a history of previous malarial infection; also of sudden abdominal pain on the left side, followed by a sharp chill. Her physician had catheterized her twice, but had succeeded in withdrawing only a few cubic centimeters of non-urinous fluid. The left lumbar and left hypochondriac regions were the seat of a globular, sensitive tumor. Only 4 c.c. of fluid were withdrawn by catheter, and this fluid was milky in appearance and contained pus, some albumin, and just a trace of urea. Dr. Moschcowitz operated at 1 A. M., doing a double nephrotomy with a view to relieving the congestion of the kidney. The right kidney had been converted into a large purulent hydronephrotic sac, while on the left side there was only a small abscess cavity. The case was one of complete suppression of urine of three days' standing. Owing to imperfect drainage of the abscess cavity, the patient did not do well, and consequently on March 18, or twelve days after the operation of nephrotomy, nephrectomy was done on the right side. On March 21 the patient for the first time passed urine voluntarily, but it was ten days more before she passed urine regularly in the natural way. From a careful study of the case after operation, he had been led to conclude that the anuria had resulted from a bending of the ureter by the pressure of a floating kidney. Cases of anuria had been reported in which only one ureter had been blocked by a calculus. Such cases were described as reflex anuria, and the existence of this form of anuria had been demonstrated experimentally. There were undoubtedly a few cases on record in which the condition had been relieved spontaneously, but this result was so very exceptional that no argument seemed necessary to show that the treatment must be surgical. Nephrotomy was demanded to meet the immediate indication.

Dr. Moschcowitz said that since writing this paper he had had another case of anuria. The man entered the hospital with a tumor on one side of the abdomen. He had passed no urine for twenty-four hours. Nephrotomy on the left side was done, and a large cystic kidney found. There were numerous calculi in the parenchyma of the kidney. The suppression of urine persisting, the patient was again operated upon, a nephrotomy being done on the other kidney. It was then found that the kidney spoken of as cystic was really an example of cystic degeneration of the kidney. The secretion of urine was very scanty, and the patient eventually died.

Dr. W. **Meyer** spoke of a remarkable case in which both kidneys had been diseased, necessitating at first removal of one kidney, and later of nephrotomy of the other kidney for anuria. The patient recovered perfectly and had remained well.

Dr. **Kammerer** recalled a case of calculus pyelitis from which a large stone had been removed, and two or three months later nephrectomy had been done. Two years after this the patient was seized with an acute anuria, which lasted sixty hours or more. Dr. Kammerer operated, doing a nephrotomy on the remaining kidney. The ureter was laid bare for twelve cm., and a stone found. The kidney was drained, and the patient was at present alive and well, eight years after the operation.

A Case of Actinomycosis; Resection of the Sternum.—Dr. A. A. **Berg** presented a boy who had been admitted to the Mount Sinai Hospital with a history of a swelling having developed at the right side of the sternum about two months previously. Coincident with the appearance of this swelling the boy lost flesh and strength, and had a variable temperature. On admission, the swelling was found to be fluctuating, and was supposed to be a cold abscess connected with one of the costal cartilages. On aspiration, a thick, yellowish mucopurulent material was withdrawn, and microscopical examination showed the presence of actinomycosis. For several weeks it was injected with a 10 per cent. solution of iodoform and ether, but the abscess showed absolutely no tendency to heal. The abscess was then freely incised and the costal cartilages of the third, fourth and fifth ribs removed, leaving the perichondrium intact. The boy improved a little, but the discharge remained rather profuse. Later the abscess was cut down upon again and the sinus followed. This necessitated the removal of the sternum with the exception of the upper portion and the xyphoid cartilage.

The perichondrium was left. It was found that the source of the suppuration was a gland behind the sternum. The broken-down material was curetted away and the wound packed. The healing process since then had been rapid, and the boy had gained about thirty pounds.

The Disadvantages of Gauze Packing, Particularly in Appendicitis Work.—Dr. Robert T. Morris presented a brief paper with this title. He said that Tait himself had not understood why so many more of his patients recovered than the patients of contemporary surgeons, but the secret had been discovered since then. Tait operated rapidly with as little disturbance of the parts as possible, and as a result his patients, not having lost their natural resistance, were capable of manufacturing phagocytes. If a patient were subjected to much shock these phagocytes would not be manufactured. The introduction of gauze packing produced such shock. The speaker affirmed that gauze packing was to-day unnecessary in abdominal surgery in cases of the widest possible infection of the peritoneal surfaces. The use of gauze packing represented a transition stage in our knowledge of the methods of treating septic abdominal cases. Surgeons had been loath to give up the gauze packing, and had been very conservative because they felt that such a radical change in technique might jeopardize life. The statistics of surgeons who had discarded gauze packing were not, however, at all the statistics of mild cases. It would not be safe to teach that gauze packing could be entirely discarded in abdominal surgery at once, but certain it was that iodoform gauze could be dispensed with. There were many hospital cases called septicæmia, which were nothing more than cases of incipient iodoform poisoning. The differentiation of these cases was to be found in the fact that in the cases of iodoform poisoning the wound looks well and the patient does not, whereas in cases of true septicæmia the wound also looks badly. Again, if the urine of a patient suffering from iodoform poisoning were mixed with calomel, the reaction indicative of the presence of iodine would be obtained. Iodoform, then, could be dispensed with to advantage, and the gauze packing should be gradually used less and less.

Dr. Thomas H. Manley asked Dr. Morris what he would substitute for the gauze packing. He thoroughly agreed with him regarding the inadvisability of using iodoform.

Dr. Carl Beck said that he had used iodoform very freely since 1878, but had not yet met with one undoubted and demonstrated case of grave iodoform poisoning. There was no doubt that in all cases in which iodoform was used iodine could be found in the urine, but this did not prove that the iodoform was producing any disastrous effect any more than it would in the case of a syphilitic who was taking iodide. It had long ago been shown that while iodoform was apparently inert when in contact with dead tissues, it was an exceedngly active antiseptic when employed in connection with living tissue. He had recently observed a case in which on the necrosed portions of tissue the iodoform was found unchanged at the removal of the dressing, while on the granulating areas it had disappeared. He thought it was unsafe to entirely dispense with gauze, either plain or iodoform gauze, though admitting that gauze packing predisposed to hernia.

Dr. Charles N. D. Jones said that Dr. Morris had made the statement that Mr. Tait did not know the cause of his success, yet this was not strictly true, because Mr. Tait avoided the use of bichloride and other antiseptics well known to be dangerous and harmful. He agreed with Dr. Morris that gauze packing should be avoided in the abdominal cavity. He had found that sterile gauze became infected in septic cases within twelve hours, while formalin gauze would remain sweet for about twenty-four hours. The insoluble citrate of silver seemed to him the best packing, as it would remain without odor for a week or ten days, and he had never observed any ill effects from its use.

Dr. A. A. Berg said that the position taken by Dr. Morris that gauze packing was hurtful by preventing the formation of phagocytosis was interesting, but its correctness yet remained to be proved. It was well known that the serous membranes could take care of a small quantity of mild sepsis, provided their function had not been interfered with. Where the surface had been injured material would stagnate on the serous surface, and drainage would be required. The question of whether drainage could be dispensed with depended upon the intensity of the infection and whether or not the serous membrane was in a healthy functionating condition. Iodoform should be avoided as far as possible, and from the experience at the Mount Sinai Hospital this seemed to be entirely feasible.

Dr. Martin W. Ware said that the indication for gauze drainage as for the use of drainage tubes was to satisfy local mechanical conditions. Phagocytosis was only a theory. Phagocytosis could be excited by leaving a sponge or a piece of gauze in the peritoneal cavity.

Dr. Lilienthal said that he was positive that iodoform poisoning occurred with sufficient frequency to warrant the surgeon in being much more careful than in the past regarding the use of this agent. He had seen fatal cases of iodoform poisoning, and other milder ones resulting only from the use of an almost insignificant amount of iodoform gauze. In one of the latter class of cases the patient complained for a long time of the taste of iodoform, and emaciated rapidly, but the nature of the trouble was not recognized until the appearance of an eruption.

Dr. Morris, in closing the discussion, said that he thought gauze packing could be done away with in most cases of abdominal surgery. His personal preference was for the use of a small wick drain connected with a large mass of gauze outside of the abdomen. The plan of closing up the abdomen completely had been first proposed by Clark, but other surgeons had followed in that surgeon's footsteps, and were getting good results without drainage even in markedly septic cases. There would always be some cases which must be drained, as, for example, those in which there was considerable oozing after the separation of extensive adhesions. From the theoretical standpoint, the objections raised by Dr. Berg seemed to be well taken. At one time he would have agreed with Dr. Berg that when the surface of the peritoneum no longer appeared healthy and its lymphatics active it would be risky to close the cavity without drainage, but he could no longer accept this view, for, at the present time, he found very few cases in which the peritoneum was not able to drain itself. It had been stated by Dr. Ware that the theory of phagocytosis had not been proved. To this he would reply that it had been proved empirically, and that it was not local phagocytosis but general phagocytosis that was needed.

An Aid to Cocain Anæsthesia—Rubber-Tired Scissors.—Frederic Griffith, having noticed that persons being operated upon under cocain anæsthesia were greatly annoyed and excited by the clicking noise made by the surgeon's scissors, has devised a rubber buffer by which this noise is deadened, though not interfering with easy sterilization of the scissors. He exhibited the device.

Pneumotyphoid Fever.—W. E. Sheperd reports three cases of fever to which he gives the name pneumotyphoid. By this term is meant a condition in which the typhoid bacillus seems to exert its baneful influence especially upon the pulmonary parenchyma, producing symptoms that are practically identical with those of croupous pneumonia. Clinically, the cases presented the features of rather prolonged pneumonia with a diarrhœa and rose spots on the abdomen. The treatment was essentially a stimulating one with oxygen inhalations. In fact, so far as the histories go, the cases might have easily been mistaken for pneumonia with that septic condition of the bowels sometimes found in this disease, and which is accompanied by erythematous patches on the skin.—*American Practitioner and News.*

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PÆDIATRICS.

Stated Meeting, Held February 13, 1902.

ROWLAND G. FREEMAN, M.D., CHAIRMAN.

Acquired Syphilis in a Girl of Eight Years.—Dr. SARA WELTKAKELS presented a girl of eight years with acquired syphilis. Her previous health had been good. The history of the present trouble dated back about seven weeks. While in the bath a sore was noticed on the genitalia, and the child complained of frequent and painful micturition. On examination, the clitoris was very greatly enlarged, and in the deeper parts of this swelling was a distinct induration. There was enlargement of all of the lymph nodes throughout the body, but most marked in the inguinal region. The epitrochlear and post-auricular nodes on both sides were decidedly enlarged. At present there was a macular syphilide on the body, and inspection of the mouth showed the presence of mucous patches.

Stomatitis Due to the Bacillus of Vincent.—Dr. H. HEIMAN presented two children suffering from this form of ulcero-membranous stomatitis. The bacillus of Vincent and the spirillum of Muller were found constantly associated with this variety of stomatitis. A smear from the ulceration made on a cover-glass and stained with carbol-fuchsin would show the characteristic bacillus. The treatment consisted in the application of a 5 or 10 per cent. solution of nitrate of silver, and a mouth wash of permanganate of potassium.

The Pathology of Adenoids and of the Tonsils.—Dr. A. J. LARTIGAU read this paper. He said that, the presence of lymphoid tissue with irregular depressions and the lack of epithelial covering in some parts made infection easy, and it was also favored by the traumatisms to which the tonsils were exposed. Regarding tubercular infection of the tonsil, he said that it might occur as a primary or a secondary lesion. The latter was found in over 80 per cent. of the cases of advanced pulmonary tuberculosis. On other hand, primary tuberculosis of the tonsil was rare. The tuberculous lesions were usually few and focal in character. The only accurate results in this field of research had been obtained by animal experiments.

Operative Treatment of Adenoids and Enlarged Tonsils.—Dr. W. K. SIMPSON read this paper. He said that, strange as it might seem, there were still some who, for various reasons, were opposed to operation on adenoids and enlarged tonsils. In his opinion, all hypertrophied tonsils and adenoids in children sufficiently large to produce symptoms should be surgically removed. He was convinced that adenoids were responsible for more ills in childhood than any other one common pathological condition. Among the disorders arising from the presence of pharyngeal adenoids were repeated attacks of coryza, chronic rhinitis, arrest of nasal development, nasal stenosis and mouth breathing with the associated mental listlessness; a tendency to attacks of spasmodic croup, asthma and bronchitis. It was also almost the sole cause of middle ear deafness in cases of acute suppurative otitis media. A digital exploration should always be made before operating. The curette and forceps were the instruments needed for the removal of the adenoids; the use of the finger for this purpose was mentioned only to be condemned. The choice between the curette and the forceps was a matter of individual preference. He personally preferred the forceps, because it would bring away a larger mass and the operator could see how much had been removed. With the curette the portion removed was apt to be lost and might even drop into the larynx. In small children the curette was probably the safer instrument. The forceps should be strong, large enough to conform to the shape of the nasopharyngeal vault, and have sufficient cutting surface, and should be so protected as not to do harm to the uvula or the posterior border of the soft palate. The principal fault with the older type of forceps, represented by the Lowenberg forceps, was that the cutting surface was too small, necessitating repeated introductions. It was exceedingly difficult to exactly locate a small instrument in the nasopharynx, and hence he preferred a larger forceps. A very useful type of forceps was the Graedle, particularly as modified by Concannon. This forceps has an extensive cutting edge, and hence tearing was not necessary. When the operation was to be done without an anæsthetic, the child should be placed upright, and held by an assistant in the intubation position. A mouth-gag is used and the forceps are introduced, closed. They are then opened widely and pressed well upward and behind, the mass seized and the forceps withdrawn. The finger should always be introduced in order to determine the location and extent of any remaining masses. The latter might be removed with the finger, curette, or with smaller forceps. Occasionally only a small amount of the growth would be removed at the first attempt, because of a faulty adjustment of the instrument. The patient's head should be raised for a moment during the introduction of the instrument; then lowered and the child turned on the side to allow of the escape of blood. When the curette was used the position was the same. The curette should be chosen with a view to size and curve, these being determined by the age of the child and the situation of the growth. For those situated more on the vault and anterior, a curette with a marked forward curve would be required. The Gottstein curette, or some modification of it, was usually employed. The curette should be carried well up into the vault, carrying the soft palate forward; then it should be brought down with a bold sweep. Adenoids would recur in a small proportion of cases, probably because of portions having been left behind.

Tonsillotomy.—The bistoury was very seldom used in this country for doing the operation of tonsillotomy. Some operators made use of a wire snare on the supposition that there was less danger of hemorrhage, but the adjustment of the snare in a child was exceedingly difficult of accomplishment, and the danger of hemorrhage was not less. His personal preference was for some form of tonsillotome, the best, in his opinion, being that made by Ermold. He thought the little darts on the end of the fork should be dispensed with, as they often caught in tissues where they should not. The Mackenzie type of tonsillotome was also a very good one, because of its simplicity and strength. The instrument should be introduced and pressure made outward on the shaft while the assistant presses the tonsil inward from the outside. The instrument should be as small as consistent with grasping the tonsil, and great care should be taken not only to push the shaft of the instrument outward, but to maintain this pressure until the tonsil had been excised. Occasionally the tonsils were so adherent to the pillars of the fauces that they required separation with scissors or bistoury before excision. In a flat, broad or elongated type of tonsillar hypertrophy it might be impossible to encircle them with the tonsillotome. In such cases the tonsillar punch could be used to reduce the size of the tonsil, or galvano-puncture might be resorted to. The latter method was exceedingly tedious and troublesome. Tonsils, once properly removed, do not recur. The question of hemorrhage need not cause any anxiety. Hemorrhage of any gravity rarely, occurred after tonsillotomy in children. At the time of the operation the hemorrhage might seem rather profuse in some cases, but it usually ceased spontaneously. If, however, hemorrhage should occur, the operator should look for the bleeding point. If there appeared to be a general oozing, the application of peroxide of hydrogen or the galvanocautery or of a solution of adrenalin would probably answer every purpose, as would also the application of pressure. The use of suprarenal extract or adrenalin marked a distinct advance in the treatment of such cases. He had found adrenalin exceedingly useful in the removal of tonsils from older children and from adults. It should not be forgotten that after the use of suprarenal extract or adrenalin there was a possibility of secondary hemorrhage after the blood-vessels had regained their tone. Unless there were some marked indications, such as the appearance of sepsis or some unusual local condition, he thought it was better to do very little after the operation. Douching, spraying and the insufflation of powders should be forbidden except under strict indication; the vast majority of patients did better without any local treatment. The operation for the removal of adenoids left a very extensive wound, and the use of gargles, by causing undue motion of the throat, might cause hemorrhage. The swallowing of cracked ice at short intervals for the first twenty-four hours was excellent, as was also the application of ice to the throat externally. Confinement to the house and quiet should be enjoined, and it was well to have the patient sleep with the head high, in order to guard against hemorrhage. For several days after the operation the diet should be light, and such articles as crust of bread, dry crackers and pieces of meat should be avoided. Dr. Simpson favored doing tonsillotomy without anæsthesia, principally for the reason that by the motions gagging the operator was materially assisted in drawing the tonsil into view, and was much better prepared to control the hemorrhage after the operation. On the other hand, the operation for adenoids could be most thoroughly done under a general anæsthetic. It was desirable to have the child awaken quickly after the anæsthetic, and hence, many favored the use of the A.C.E. mixture, ethyl bromide or nitrous oxide, though his own experience had been solely with chloroform.

Recent Contributions on the Constitutio Lymphatica.—Dr. James Ewing read a paper with this title. He said that the lymphatic constitution was characterized clinically by sudden death of children, who showed: (1) General lymphatic hyperplasia; (2) Persistence of the thymus; (3) Hyperplasia of the aorta and sometimes of the heart; (4) Evidences of rachitis; (5) Evidences in their organs of retarded development; (6) Enlargement of the thyroid, and (7) General neurotic tendencies. It had been noted that the grand mal type of epilepsy occurred amost exclusively in persons showing the lymphatic constitution. Dr. Ewing said that in a former paper he had suggested that many sudden deaths, occurring in infectious diseases, were referable to this lymphatic diathesis, and since then several cases tending to confirm this view had been reported. In a large proportion of the cases there was enlargement of the thyroid. Recent observations had called attention to the presence of an atrophic stage of the lymphatic diathesis. The relation of the status lymphaticus to the various types of lymphatic tuberculosis demanded more attention than it had hitherto received. The essential danger in constitutio lymphatica was apparently the nervous disorder, and it should be noted that nervous symptoms were present throughout the course of the disorder. Laryngismus occurred frequently, if not exclusively, in persons of the lymphatic diathesis. Many cases of thymic asthma had been found to clearly belong to the lymphatic diathesis, and in some of these the enlargement of the thymus was certainly sufficient to give rise to pressure upon the trachea. There were, however, purely nervous cases in which no obstruction of the trachea could be detected other than that due to spasm. A most interesting question was the pathogenesis of the fatal symptoms. That subjects showing hyperplasia of the aorta exhibited a diminished vital resistance had been proved by a large number of observations. The true explanation of the fatal issue was, however, yet wanting.

Danger of Chloroform in Children.—Chloroform was the anæsthetic which was commonly and almost indiscriminately employed among children, and yet it was well known that in cases of status lymphaticus chloroform is almost uniformly fatal. This question was assuming great importance, and since writing his first paper on this subject he had learned of about fifteen deaths in this class of cases—indeed, the opinion was gaining ground at the present time that chloroform was only fatal in this class of subjects.

Notes on the Surgical Treatment of Enlarged Lymph Nodes.—Dr. Charles N. Dowd was the author of this paper. He said that the treatment of enlarged lymph nodes, of course, depended largely upon the diagnosis. The main point was to differentiate between simple and tuberculous inflammation of these nodes, and this was often most difficult. His own opinion was that tuberculous lymph nodes should be removed as soon as the diagnosis had been made. He had operated quite extensively on such cases and without any fatalities. The incisions could be so placed as to be less disfiguring than the scars following abscess formation. Of the cases upon which he had operated, twenty-three had been apparently cured and forty-seven improved. In a group of ten cases, followed for from four to eight years, there were apparently eight cures. One German observer had reported 130 cases of thorough operation with 70 per cent. of cures, while in 167 cases without operation there were only 24 per cent. of cures.

Dr. A. Jacobi said that the question would always arise as to why so many of these conditions were found in children and not in adults. This was especially true of swelling of the tonsils and of the neighboring lymph bodies. One reason probably was that the lymph ducts had been found comparatively numerous and comparatively large in the young. Another reason was that adults suffered more because, as a result of inflammatory affections in early life, the tonsils were no longer soft, and hence not so vulnerable to microbic invasion. This was the principal reason why diphtheria was so very rare in the adult and so very frequent in the young. It was, of course, not impossible that a certain degree of immunity might be produced by reason of repeated attacks in early life.

Not All Adenoids Require Operation.—Regarding the treatment of adenoids, Dr. Jacobi said that when adenoids are large, they should be removed. All were agreed on this point, but not so on the question as to whether operation was necessary in cases in which adenoids were small yet numerous enough to cause snoring. He was one of those who did not think these cases required operation. The cause of the chronicity of pharyngitis, rhinitis and rhinopharyngitis, of swelling of the tonsils and secondary laryngitis, was almost always a local catarrh, which, if recognized, had not been appreciated at its full value. The treatment was very simple, and consisted in irrigating the parts twice daily with saline solution or with a solution of boric acid. A large experience, extending over a great many years, warranted him in positively expressing the opinion that this simple treatment would not only prevent inflammation, but would restore to health many chronic cases. Irrigation by means of the cup would suffice, and, if it were generally adopted, would result in comparatively little need for operation. He found that it was the practice of specialists to carry out no after-treatment after operating upon adenoids. If they insisted that the parts should be irrigated and kept clean, there would be no relapses. He had never operated in these cases with an anæsthetic, for, no matter what anæsthetic was employed, it must be pushed in order to overcome the powerful masseter muscle. Such profound anæsthesia seemed to him dangerous. As a rule, the operation for adenoids was not difficult, and only one assistant was required. The operator should sit down and have the mother or assistant sit in a chair in front of him. The head of the child should be buried between the thighs of the operator. The Gottstein curette could be quickly introduced and the operation completed in a minute. This was a simple and easy way; he would not advise anæsthesia under any condition.

Dr. Francis J. Quinlan said that any kind of irrigation of the nasal chambers was very disastrous because of the forcing of the secretions into the middle ear. He would contend that all forms of lymphoid hypertrophy should be removed because what to-day was small and apparently insignificant might by to-morrow be sufficiently large to obstruct the nasal passages. It seemed to him that these irrigations did absolutely no good, because they force the secretions back to where they came from. These secretions came from the rhinopharynx only. When the lymphoid hypertrophies were allowed to remain they not only injured contiguous structures, but menaced even remote parts. The occurrence of snoring was no indication of nasal obstruction, because it often resulted from the dropping back of the tongue during sleep, or perhaps simply from the vibration of the soft palate.

Dr. **Henry D. Chapin** said that the laryngologists had been speaking of the severe forms of adenoids, while Dr. Jacobi had referred to the mild forms. He would agree with Dr. Jacobi that this latter class did not require operation. Only recently he had had a child under his care in whom the adenoids were becoming smaller under irrigations, yet a specialist had insisted that unless the operation were undertaken the child would become deaf or have some other dreadful affliction. Of course, all were agreed that the more severe cases should be subjected to operation.

Dr. **W. K. Simpson** said that the cases referred to by the last speaker as mild often proved to be the most severe ones in the end, quite probably from the occurrence of otitis media.

Dr. **Chapin** asked Dr. Simpson if he had ever known otitis media to follow the operation for the removal of adenoids.

Dr. **Simpson** replied that he certainly had met with such cases, and we all knew that persons had died from a splinter in the finger, but this was no argument against the treatment advocated.

Dr. **Dowd** said that what Dr. Ewing had said about the danger of giving chloroform to children should lead us to think seriously about revising the common practice here of giving chloroform to children. Why should this be done when it was customary to give ether almost always to adults ? Chloroform was as dangerous to children as to adults; ether should be the anæsthetic of choice.

Dr. **Jacobi** said that the average child bore chloroform better because the average child, not the diseased child, had a stronger heart than the average adult.

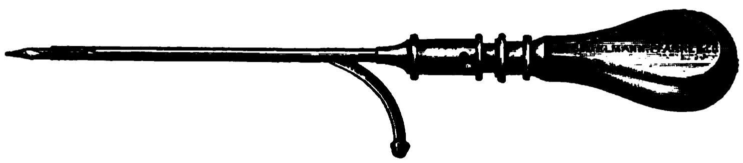
Dr. **E. Libman**, referring to the cases presented earlier in the evening by Dr. Heiman, said that the bacilli found in connection with this form of stomatitis were not specific, as they had been found elsewhere; they seemed to be organisms found in connection with the destruction of tissue. It had not yet been proved that they were typical of any special disease. This form of stomatitis had been known for years under another name. One could not exclude syphilis if these organisms were present, though diphtheria could be ruled out.

Septic Eczema; Pyogenic Urticaria.—R. Campana reports the case of a patient suffering from urticaria, impetiginous eczema, and a pustule which led to furuncle, all at the same time. The same micrococci were found in all the lesions. There was a true urticaria, and not a mere papular septic dermatitis. In support of the view that this urticaria was of septic origin is the fact that here and there in the infiltrated matters were found blood corpuscles, some altered and some discolored, and distributed among the epithelial cells were lumps of pigment. This pigment was evidently of corpuscular origin, and was composed of granules, which were all alike and of a relatively small size.—*La Riforma Medica.*

New Instruments.

AN IMPROVED TROCAR AND CANNULA.

By JAMES R. HAYDEN, M.D.,
NEW YORK



The above figure illustrates a very simple form of trocar and cannula, which being made entirely of metal, can be taken apart and sterilized by boiling. The tumor or cavity having been punctured in the usual manner, the trocar is withdrawn until it is stopped, at which time its point is just beyond the curved outflow tube, through which the fluid contents of the sac flow downward into a vessel instead of spurting backward as in the old straight instrument. The connecting bayonet joint between the trocar handle and the cannula is so packed as to prevent the backward passage of fluids and also the entrance of air. If so desired, a piece of rubber tubing can be attached to the curved outflow tube. My personal experience with the instrument has been in tapping hydrocele and aspirating the bladder, in both of which conditions it has given the greatest satisfaction. As it can be made of any desired size, it will, I think, be of practical value in tapping almost any tumor or cavity.

107 West Fifty-fifth Street.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending February 22, 1902:

	Cases.	Deaths.
Measles	989	35
Diphtheria and croup	300	54
Scarlet fever	299	25
Smallpox	55	13
Varicella	69	..
Tuberculosis	270	169
Typhoid fever	26	4
Cerebro-spinal meningitis	..	2

Surgical Treatment of Ascites.—N. Ito and K. Omi report five cases of ascites, which were operated upon after the Talma-Drummond method, which consists in suturing the omentum to the parietal peritoneum. The union thus formed favors the establishment of new blood-vessels, and thus prevents a large portion of the blood from entering the liver through the portal vein. The results which the authors obtained were very unsatisfactory, benefit being derived in only one out of the five cases, although all were operated upon very early in the disease before any considerable amount of ascitic fluid was present. In order to ascertain as nearly as possible the causes of their failure and the chief points of concern for the successful carrying out of the operation, they instituted experimental work upon dogs. Thirty of these were submitted to investigative operations. As the result of their study, they hold that the essential point for success is the obtaining of an extensive firm union between the intestines, liver, spleen, and parietal peritoneum. When such is secured, new brood vessels are developed in abundance, and those already existing are materially increased in size. Thus an extensive collateral circulation is set up, and a large portion of the blood is taken out of the portal veins before it reaches the liver. In order to obtain such a union it is recommended that the abdominal wound be not closed after the operation, but that it be abundantly packed with long strips of sterile gauze. These should be removed after twenty-four hours. The union by second intentions thus obtained favors the formation of granulation tissue and the extensive formation of new blood-vessels above alluded to. It is thought that by this variation the usefulness of the Talma-Drummond operation may be very much increased.—*Deutsche Zeitschrift für Chirurgie.*

Quinine Rash, with Report of a Case.—H. C. Wood, Jr., reports the case of a woman of thirty-five years who had taken two days previously, as a tonic, a prescription containing nux vomica and compound tincture of cinchona. Within a short time after taking the first dose she experienced stinging sensations along the forearm. A short time after this these areas became red. When seen, the eruption presented the appearance of a number of spots equally distributed over the extensor and flexor surfaces of the forearm, regular in outline, almost perfectly circular, from two to five centimeters in diameter, deep-red in the center, shading slightly toward the periphery, and surrounded by a slight macular rash. The temperature of the skin in the immediate neighborhood was distinctly elevated to the touch. There was, at first, according to the patient's description, some induration around the spots, but this had mostly disappeared when the patient was seen. Some of the spots had already faded and were copper-colored, in contrast to the bright red of those in active inflammation. There was slight itching. Temperature 99⅜°; pulse 88; no marked constitutional disturbances, no involvement of the mucous membranes. A placebo was ordered, and four days later the patient was seen again. The spots had faded to a marked degree, some of them actively desquamating.—*Therapeutic Gazette.*

The Treatment of Typhoid Fever, with Special Reference to the Use of Water.—G. W. Boot urges the free use of water by the mouth, by the bath, and by enema. Milk is the best diet, because, in addition to furnishing all the proximate principles necessary for the nourishment of the body in assimilable form, it furnishes more water than any other form of diet. But plenty of water should be given in addition. In his country practice, where tub baths are out of the question, the author has the patient placed on a rubber sheet, into which he sinks, forming a hollow. A pitcher of water at 80° or 90° F. is poured over him, and the water which accumulates around him is repeatedly soused over him by means of a large sponge, and cold water is constantly added. This reduces the temperature, stimulates respiration, and, by change of position, prevents hypostatic congestion of the lungs and pneumonia. Purgatives and enemata lessen the amount of infection; carry away the toxins formed in the intestines and eliminated by the bile; remove the toxins eliminated by the intestines; and lessen the local infection, by providing drainage for the infected Peyer's patches. They are not contraindicated, but rather indicated in diarrhœa.—*The St. Paul Medical Journal.*

The Salivary Secretion in Nervous Diseases.—A. Acquaderni reaches the following conclusions: Sialorrhœa is found in many nervous affections, and is a symptom to be classed with polyuria, glycosuria, and icterus. It is produced either by direct irritation of the salivary center (affection of the medulla), or by abolition of the cerebral moderating influence, or stimulation of the secretory tracks of the hemispheres (softening, hemorrhages), or reflexly through some lesion irritating the sensory nerves (neuritis—tic douleureux). In central paralysis of the facial nerve the salivary secretion of the affected side does not appear to be modified, and in no case is it diminished, but, if anything, increased. In peripheric facial paralysis there is diminution or abolition of the secretion, according to the severity of the lesion. Prognosis of sialorrhœa depends upon the affection in which it occurs; in some it indicates the progress of the disease, and in the absence of other bulbar symptoms, indicates involvement of the medulla (labio-glossal laryngeal paralysis, tâbes, anyotrophic lateral sclerosis). Persistent and prolonged sialorrhœa may, independently of the disease causing it, considerably aggravate the bad condition of the patient.—*Rivista Critica di Clinica Medica.*

A Case of Pseudo Cirrhosis of the Liver.—M. Strajesko reports the case of a man suffering from this rather rare disease, which is characterized by the symptoms of true cirrhosis, but differs from it anatomico-pathologically; there being no proliferation of the connective tissue of the liver. It is due to an inflammatory process, which is chronic in its course, and invades several serous cavities, resulting often in complete adhesions of the pericardium, the pleura, and thickening of the peritoneum covering the diaphragm and the liver. The cause of the inflammatory process is not known, but tuberculosis is frequently found in the family history of the patient. Clinical diagnosis of the disease is difficult, but is helped by coexisting heart disease and by long observation, which shows that the liver diminishes in size, that the spleen does not increase, and that ascites is quickly produced. Treatment consists in regulation of the heart's action and in puncture for the relief of the ascites. In some cases calomel is of use, and may even render the treatment by puncture unnecessary.—*Russki Arkhiv Patologii, etc.*

Agglutination in Typhoid Infection.—A. Di Donna has found that the serum of normal rabbits can agglutinate the typhoid bacillus in the proportion of 1:30. The serum of an immunized rabbit agglutinates the bacillus with which it has been infected, as well as other typhoid bacilli. The same serum may, in the proportion of 1:100, agglutinate bacterium coli which were cultivated on agar several months previously. With increase of the degree of immunity, however, there is decrease of the agglutinating power of the serum. The agglutinating power of a given serum is almost always in direct relation to the virulence of the bacillus with which the animal has been immunized. It is also greater when the intravenous method of infection is practised than when any other method is used. It is infinitely greater than the agglutinating power of the organic juices. A temperature of 60° C., acting for three hours on the serum of an immunized animal, does not destroy the agglutinating power. It is, however, lost in course of time, varying from twenty-five days to three months or more.—*Giornale Internazionale delle Scienze Mediche.*

Imperfect Osteogenesis.—Francis Harbitz thinks it doubtful whether true rachitis occurs during fetal life. He holds that the twenty cases, described by as many authors, were cases of imperfect osteogenesis. He describes a case of his own, that of an infant born six weeks before term, dying soon after birth, which was subjected to minute macro- and microscopic examination. The head was a mass of fractures, the clavicles, scapulæ and ribs were broken; there must have been over 100 fractures all over the body. Endochondral ossification was much delayed; periosteal ossification somewhat more advanced. The conditions shown by the miscroscope differed greatly from those found in rachitis syphilitic osteochondritis, and osteomalacia. The cause of the imperfect osteogenesis is obscure. In the case under discussion the umbilical cord was exceptionally short and very fragile, which might indicate insufficient nourishment as the cause.—*Norsk Magasin for Lægevidenskaben.*

The Treatment of Cold Abscess by Durante's Method.—Domenico Palieri reports two cases of extensive abscesses of the abdominal region treated by caustics, balsam of Peru, injections of iodoform, in glycerin, and injections of ether and of chloroform, without good effect. Durante's method of injections of the solution of iodine and potassium iodide was tried, beginning with a dose every fourth day, and increasing to one every day. The suppuration gradually ceased, and the fistulous passages closed, and after about thirty treatments the patient was perfectly cured. This treatment does not, of course, cure every case of abscess, but it has given excellent results. Mayner of Turin used these injections in twenty-five cases, and came to the conclusion that they are well tolerated. He is careful to insert the needle intramuscularly, to avoid patches of necrosis. He thinks the treatment causes apyrexia and accelerates cicatrization. Cases which are not benefited by it are those with vast areas of suppuration, or those in which a large joint is involved.—*Gazetta Medicadi Roma.*

Peculiar Case of Bladder Reflex.—Duncan P. Anderson reports the case of a man who suffered from attacks which occurred every two to six weeks, and were characterized by polyuria and irregular heart action, the latter symptom outlasting the former by about twelve hours. Some of the attacks were so severe that the patient had to urinate and defecate at the same time. Examination gave no definite results except of an enlarged prostate, and, by a process of exclusion, the author came to the conclusion that the attacks of tachycardia and polyuria were secondary to some reflex from the bladder, brought on by the enlarged prostate. Treatment consisted merely in the withdrawal of residual urine after micturition, and in washing with boric acid. After six months of treatment, the interval between attacks was increased from about three to sixteen days to about a month, and the attacks were less severe in character.—*The Montreal Medical Journal.*

Acute Delirium and Uræmia.—A. Cullerre reports two cases which bear out the idea that some cases of delirium are due to nephritis. In the first case, that of a woman picked up in the street and taken to an asylum, suffering from delirium with hallucinations of vision and uncontrollable restlessness, an autopsy showed no other lesion than that of granular kidney. In the second, that of a man of forty-two years, there was mental excitement with confused religious mania, turning to mutism, and later to profound melancholy with suicidal notions. Amelioration of the condition occurred, but nine years later the patient again was seized with homicidal and suicidal mania, followed by prostration, aneuria, continual vomiting, mussitation, coma, and death. No autopsy was held, but the symptoms of uræmia were, in the three days preceding death, too evident to be mistaken.—*Archives de Neurologie.*

Iodic Purpura with Fever.—The patient in the case reported by A. Stengel was a man of twenty-three, who was taking the iodide of potassium for asthmatic attacks, the initial dose being five grains, gradually increased to eight grains, three times daily. Gradually iodic spots appeared, with a fever rising of 101°, but without apparent cause. The withdrawal of the iodide led to a subsidence of the fever and the gradual disappearance of the rash.—*Therapeutic Gazette.*

The Structure of the Crystalline Lens.—Th. Lominsky, by a method of injection and impregnation, has become convinced that the interstices between the crystalline fibers can be reached by colored fluids and by injected matters; and that the crystalline fibers are composed of a row of lanullæ which together form the characteristic hexagonal figure found on transverse section of the lens.—*Russki Arkhiv Patologii, etc.*

Regular Exercise.—Regular exercise is one of the best means of getting rid of superfluous flesh; but to do any good, it must be taken systematically every day, in the air, if possible; if impossible, then in the house, in the form of calisthenics. Do not knock yourself up by suddenly beginning to take tremendous walks, if you are not in the habit of walking, but do things gradually, beginning, say, with a couple of miles, or even less, a day, and taking longer distances as you get accustomed to the exercise. Perseverance in exercise pays as in most other things.—*Indian Medical Record.*

Jews in the United States.—It is said that the United States has now the third largest Hebrew population of any country in the world. One in every seventy is stated to be a Jew.

Population of Paris.—The population of Paris has increased 6.98 per cent. in the last five years. At the present time the total population is 2,714,068.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended February 21, 1902:

SMALLPOX—UNITED STATES.

		CASES	DEATHS
California, Eureka	Jan. 27	1	case imported
Humboldt County	Jan. 27	5	cases in lumb. camps
Los Angeles	Feb. 1–8	3	
Sacramento	Feb. 1–8	1	
San Diego	Feb. 1–8	1	
San Francisco	Feb. 1–8	4	
Colorado, Denver	Dec. 28–Feb. 8	12	
Illinois, Belleville	Feb. 18–15	2	
Indiana, Evansville	Feb. 8–15	5	
Iowa, Clinton	Feb. 8–15	1	
Kentucky, Covington	Feb. 8–15	11	
Lexington	Feb. 8–15	2	
Louisiana, New Orleans	Feb. 8–15	1	
Maine, Portland	Feb. 1–15	6	
Maryland, Baltimore	Feb. 8–15	1	
Massachusetts, Boston	Feb. 8–15	38	6
Cambridge	Feb. 8–15	5	1
Everett	Feb. 8–15	3	
Malden	Feb. 8–15		1
Medford	Feb. 8–15	1	
New Bedford	Feb. 8–15	1	
Somerville	Feb. 8–15	1	
Taunton	Feb. 8–15	3	
Weymouth	Feb. 1–8	1	
Michigan, Bay City	Feb. 8–15	3	
Detroit	Feb. 8–15	5	
Grand Rapids	Jan. 29–Feb. 15	3	
Ludington	Feb. 8–16	2	
Winona	Feb. 1–8	1	
Nebraska, Omaha	Feb. 8–15	46	1
South Omaha	Feb. 1–17	61	
New Hampshire, Nashua	Feb. 8–15	2	
New Jersey, Camden	Feb. 8–15	3	1
Jersey City	Feb. 8–16	22	
Newark	Feb. 8–15	20	7
New York, Binghamton	Feb. 8–15	9	
Mount Vernon City	Feb. 18	1	
New York	Feb. 8–15	58	14
Ohio, Cincinnati	Feb. 7–14	13	
Cleveland	Feb. 8–15	1	
Hamilton	Feb. 8–15	5	
Youngstown	Feb. 1–8		3
Pennsylvania, Allentown	Feb. 1–8	1	
Norristown	Feb. 8–15	2	2
Philadelphia	Feb. 8–15	74	19
Pittsburg	Feb. 12	1	
Reading	Feb. 10–17	2	
Scranton	Feb. 1–15	2	
Williamsport	Feb. 8–16	5	
Rhode Island, Providence	Feb. 8–15	1	1
South Carolina, Charleston	Feb. 8–15	3	
Tennessee, Memphis	Feb. 8–15	12	
Nashville	Feb. 8–15	1	
Texas, Houston	Feb. 1–15	24	1
Washington, Spokane	Feb. 1–8	20	
Tacoma	Feb. 1–8	4	
Wisconsin, Fond du Lac	Feb. 8–15	2	
Green Bay	Feb. 9–16	16	1

SMALLPOX—FOREIGN.

Austria, Prague	Jan. 18–25	15	
Belgium, Ghent	Jan. 25–Feb. 1		2
Canada, Ghent	Feb. 8–15	1	2
Winnipeg	Feb. 1–8	4	
Colombia, Cartagena	Jan. 27–Feb. 2		3
Panama	Feb. 1–10	50	
France, Paris	Jan. 18–Feb. 1		11
Great Britain, Dundee	Jan. 25–Feb. 1	1	
Glasgow	Jan 31–Feb. 7	13	1
Liverpool	Jan. 25–Feb. 1	3	
London	Jan. 18–25	870	41
London	Jan.. 25–Feb. 1	1136	49
India, Bombay	Jan. 7–14		1
Calcutta	Jan. 4–11		3
Karachi	Jan. 5–12	13	1
Madras	Dec. 28–Feb. 3		2
Italy, Naples	Jan.. 25–Feb. 1	5	
Mexico, City of Mexico	Jan. 26–Feb. 2	1	

YELLOW FEVER.

Mexico, Vera Cruz	Feb. 1–8	4	4

CHOLERA.

India, Bombay	Jan. 7–14		1
Calcutta	Jan. 4–11		31
Madras	Dec. 28–Jan. 3		4

PLAGUE.

China, Hong-kong	Dec. 28–Jan. 11	1	1
India, Bombay	Jan. 7–14		250
Calcutta	Jan. 4–11		36
Karachi	Jan. 5–12	24	23

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Original Articles.

THE TREATMENT OF MALIGNANT GROWTHS BY THE *X*-RAY, WITH A PROVISIONAL REPORT ON CASES UNDER TREATMENT.*

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NEW YORK.

SOMETIMES, when one has progressed well along in a certain line of investigation, it is of value to "report progress." From this point of view I will present to-night a few thoughts upon the interrelation, in a curative sense, between malignant growths and the Röntgen radiation.

My simplest plan will be to report most briefly a few cases, with running comment upon their individual progress, and then to sum up, in general terms, the method of treatment and what is accomplished.

My greatest regret is not to have the pleasure of presenting to you the persons under treatment, but this is impossible, since they are all private cases, and would be unwilling to submit to our examination.

CASE I.—*Sarcoma at Elbow Joint.*—December 28, 1901: Miss E. P. was referred to me by her father, a physician. Preceded by some prior symptoms ascribed to rheumatism, this patient developed, in July, 1901, pain, inability to use the joint, and a swelling above the internal condyle of the left elbow. Pain and swelling increasing, sarcoma or tubercle was diagnosticated by Dr. Virgil P. Gibney, and the tumor excised. The wound not healing, in November, the arm was amputated at the upper third of the humerus by Dr. W. T. Bull. Microscopical examination showed round-celled sarcoma. Patient comes to me for treatment of the right elbow. This joint has developed exactly the symptoms experienced in the left before amputation, namely, pain and soreness on pressure, a steady ache and pain at the joint, inability to move it, and frequent twitching movements of the arm. I took a radiograph of the joint (exhibited), and found exactly the conditions shown by a radiograph of the amputated joint prior to operation, namely, a dark area (negative plate) of the external condyle, due evidently to a deficiency of lime salts of the bone at this point. The father, the patient, and myself were convinced that sarcoma had invaded the bone and its neighborhood.

Treatment by X-Ray.—December 30: No pain since first treatment. January 17: Treatments continued three times a week. Patient reports that elbow feels perfectly normal, and has resumed her normal use of the arm. February 6: Remains normal. February 20: The elbow for the last two weeks presents no symptoms of trouble whatever, and she uses it as usual. Took an *x*-ray picture to compare with prior *x*-ray picture of December 28 (exhibited). It will be observed that the dark area (on the negative) is much lighter, indicating, apparently, that the lime salts are again becoming normally deposited in the affected arc of the bone. So far as the evidence is at present attainable, this patient's elbow is cured, but with reservations.

CASE II.—*Extensive Carcinoma, Inoperable, Recurrent. Pain, Ulcerations, Fetid Discharge, Induration, nodular Enlargements, etc.*—December 11, 1902: In July, 1899, patient injured the left breast by a fall from a bicycle; had a sore spot in the lower part of the breast, and six weeks later on noticed a hard lump the size of a pea. In November this lump had become greatly enlarged. The entire breast and axillary glands were removed by Dr. Clement Cleveland. In February, 1900, she was again operated upon by Dr. G. Armstrong of Montreal, Canada, in an apparently most thorough manner. In about one year, January, 1901, two large lumps developed at the seat of the operation, and by September one of these had broken down into extensive suppurative ulceration. The entire left chest, even to the tip of the shoulder, has a tense burning sensation, is rigid with induration, violent red over a space as large as two hands; has some fetid discharge, steady pain, and pain darting into the back; her nights are sleepless; she cannot rest upon the left side. The disease has also invaded the entire right breast, and this is brawny, immovable, as if fast to the ribs, full of pain, it has a retractile nipple, other retractile areas, and various hard nodular projections.

Treatment.—The patient received five treatments in December, and went home for about four weeks for the holidays. She has since received seven treatments. The pain ceased from the moment of the first treatment. It returned slightly during the first weeks, but not at all since January 20. The fetid odor disappeared also at once. Of the two tumefactions, the open one began to discharge very freely, even to numerous small masses of débris, the size of a pea, while the other has diminished much in size. The tense and rigid skin of the chest and seat of the most active disease has become soft and pliable; the feelings of tension, burning and deadness have disappeared, numerous small nodules have softened and disappeared. The patient reports that so far as her feelings go she would not know that anything was the matter with her. The entire right breast also shows great changes. The retractile areas cannot be found, the angular nodules are rounded masses, the rigidity of the entire breast no longer exists. The hardening is becoming soft. The measurements are reduced one-half. The breast is easily movable.

We have here a case of most extensive carcinoma, in which no operation is possible, and in which the disease is speeding to a fatal termination. The effect of the *x*-ray, so far as I have gone, has been a remarkable amelioration of every symptom, a marked diminution in size of the new growths, and an entire cessation of pain and suffering.

CASE III.—*Carcinoma of Breast and of Region of Upper Third of Sternum.*—January 29, 1902: On September 11, 1899, at the Dewey parade, patient fell and hurt the right breast. A month later she discovered in it a small lump the size of a walnut; next she noticed retraction of the nipple, and found that the breast was considerably larger; then it became painful. Dr. J. Lee Morrill advised excision; also Dr. H. L. Purdy. This she refused, but was treated by an osteopath, who reduced the size of the breast by manipulation. About two months ago, discovered she had a "frightful pain" at the central upper portion of the chest, namely, in the region of the upper third of the sternum. This pain is of such a nature that she cannot stoop; it hurts her to extend the arms, to try to sing, or even to breathe. The sternal region gives her a sense of weight and oppression at the spot. Sharp pains radiate outward laterally on both sides, and shoot backward to the upper dorsal vertebral region and beneath the shoulder-blades. Her sleep is much broken on account of pain and the necessity of rising to make applications for relief. Often the pain extends down the left arm, like a neuralgia, to the fingers.

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*Read before the Harvard Medical Society of New York City, at its regular meeting, February 22, 1902.

Examination.—Right breast, a rigid, hard, tense, nodulated, immovable mass, of a bluish surface color; nipple retracted, retractile areas above and below the nipple; several small detached nodules; measurement of hard mass between calipers, vertical five inches, horizontal, five inches. Has pain in the breast most of the time; it is a "dumb" ache, like a toothache. Has glandular enlargements in the right axilla.

"*Sternal Symptom.*"—A flattish, but still distinctly elevated swelling or boss, three inches across in all directions, painful all the time as mentioned, and very painful to the slightest pressure; the elevation is about one-half an inch. January 31: Experienced relief from pain at once in the right breast after first treatment of day before yesterday. Breast softer, and she can button her dress over it without distress. Sternal region neither better nor worse. February 3: Reports that she should not know by her feelings that anything had ever been the matter with the right breast; it is softer, and appears to be dividing into lobes not before noticed. On the contrary, the sternal region gives trouble. It was relieved for twenty-four hours, then "started in again worse than ever"; it hurt to sing, to breathe, to lie down, or to move; compares pain to a severe neuralgia. The swelling is painful to the touch. At once, after treatment to-day, this swelling could be pressed upon without causing pain. The patient exclaimed, "All the pain is gone, and it is not imagination, for it acts so every time." February 5: Right breast. No pain and smaller. Sternum—Relief from suffering for three hours after last treatment, and then return of symptoms. February 7: Measurements of hard mass of right breast reduced from a vertical and horizontal diameter of 5x5 to 4x4 inches; retraction of nipple and all retractive areas no longer exist; several small kernels cannot now be found; nodular projections beneath the skin have flattened out; there is no pain. Sternal region—Great relief for twenty-four hours. February 9: Sternum—Swelling centralized and reduced one-half in its diameter; no longer painful to pressure; can take long breaths, and slept last night without pain. February 10: Similar report. February 14: Relief in sternum lasted 24 hours. To-day again pain and oppressive feeling.

A noticeable thing occurred during the treatment which was more than usually striking. At the end of three minutes, the patient said, "Why, there is relief now; it is like taking a hundredweight off; there is no doubt of it. I can breathe now; it is the first decent breath I have taken since yesterday." February 17: As mentioned, a severe treatment (five minutes to each side, one foot distance, brilliant *x*-ray as shown by fluoroscope) was given last time in my desire to favorably affect the sternal region. This morning the skin of the entire chest is very red, resembling a strong sunburn. Right breast; report, "absolute peace and comfort" until this morning, when a slight pain returned. Measurement of mass three and one-half inches horizontally by two and one-half inches vertically; breast tending to flaccid. Mild treatment on account of the skin burn. February 19: The tumor of the right breast is now reduced from 5x5 inches originally to 3½x2½ inches. The sternal boss or flat tumor is reduced from three inches in diameter to about one and one-half inches, but varies in measurement, and tends to centralize to a more distant tumor. The patient has comparatively little pain, and often, for one or two days at a time, none at all. February 20: Right breast, no pain and even flaccid. Sternum gives great pain yet, after the first twenty-four hours of relief is over. Treatment continued; erythema less. The patient was kindly examined for me to-day by Dr. W. B. Coley, and pronounced to be "typical carcinoma with advanced sternal involvement, absolutely inoperable." (Note.—March 1, no pain of any sort since record of February 20.)

CASE IV.—*Carcinoma of Breast.*—February 11, 1902: Mrs. ——, referred to me by Dr. C. Francis Burley. Began five years ago with a tumor and pain in the breast. One year later, a part of the breast was removed by Dr. Augustin H. Goelet. Remained apparently well for eighteen months and then pain and a tumor returned in the original site. Has been having injections of echefolia administered by Dr. Whitney, and also taking this medicine by the mouth. Tumor of left breast three and one-half inches long by two and one-half inches broad. An excrescent red growth, size of large marble, at nipple and a discharging opening at lower portion. Tumor hard and nodulated. But little pain. Large lymphatic gland in axilla. February 18: At fourth treatment, red excrescent area, quite pale and brownish; tumor softer and more movable and smaller. February 20: Measurements, three by two inches.

CASE V.—*Cancerous Tumor of the Stomach.*—February 5, 1902: Diagnosis by Dr. Atwell of Hoboken. Symptoms, retching, vomiting, intense pain, located at epigastric region; inability to take food except liquid and hot. Sister died of similar disease. February 18: Six treatments; uniform report that the pain is entirely removed after each treatment, and remains away from six to forty-eight hours; can also take more food. It is noticeable in this as in all cases I have so far observed, that the pain is even annulled during the treatment, namely, in from three to ten minutes. February 20: Reports that she has had three successive days without "an idea of pain," whereas before treatment pain was constant daily.

CASE VI.—*Sarcoma of Side of Head.*—January 25, 1902: Miss M——, a case of Dr. W. B. Coley's, referred to me for *x*-ray treatment. Began four years ago with a swelling in front of the ear; this cut out by Dr. Barnes of Kentucky; one year later, treated with caustic; soon swelling began anew with increased pain. Under treatment with Dr. Coley's serum the now large tumor decreased in size and became more comfortable. At present there is an extensive bony tumor in front of the ear and a soft tumor, about three by two inches, behind the ear; the soft tumor involving also nearly the entire tissue of the ear. The soft tumor has an "angry" appearance and presents a cluster of purplish red, hard, rounded divisions. The principal feature of both the hard and the soft tumefactions is the intense pain and sensitiveness to the touch, causing loss of sleep and necessitating also the use of ¼ a grain of morphia every two to three hours. January 29: Third treatment. Reports that last night for the first time in ten months she had great relief and could sleep peacefully; she required no morphia at night and had reduced the entire morphia taken fully three-quarters in amount. January 30: Some return of pain. February 1: Very comfortable; less morphia; slept six hours. Complexion less "muddy." Tumors scarcely painful to the touch. February 4: Both swellings are reducing in size. Finds she can open her mouth to its full extent, whereas she has been previously able to get food into the mouth only with great difficulty, and even has had to force a small tablet of strychnia in between the teeth. A previously large gland in the neck is now scarcely to be found. February 7: All of the soft tumor and the ear can be freely handled without causing pain; the soft tumor is also softer and smaller. February 10: Has pain, but very infrequently and much diminished. Continues reduction of morphia one half. February 15: Soft tumor fully one-half reduced in size; looks dry, brown and, so to speak, "drying up." The principal shrinkage is of the upper four-fifths, which is now quite on a level of the unaffected skin surrounding it. February 19: Tumor in front of ear distinctly more conical, due to shrinkage around its base. February 20: Reports "splendid night, not a particle of pain." Morphia taken, when at all, not for pain but from long habit. Merely a small lump of the soft tumor remains.

It is to be noted here that the disease is not outside of the bone, but within, and that, therefore, results are not so rapid as they are when the malignant growth is superficial.

Case VII.—*Epithelioma of the face.*—Patient referred to me by Dr. Clement Cleveland, December 13, 1901: Miss S., aged forty-four years. A small spot appeared on the left cheek in 1885; treated in 1886; cauterized in 1889; in 1890 broke down and was again cauterized; again cauterized in 1891, and this was repeated in 1893 and 1894. Galvanic electrolysis was used with some success in 1894. Since 1898 has been a large and deep open ulcer, varying in size.

Present Appearance.—Ulcer two inches in length by one and one-half inches wide. A large crater, one inch in diameter, extends with abrupt edges quite to the buccal mucous membrane and to the fibers of the orbicularis oris muscle, which look as if clearly dissected out. The ulcer presents everted and raised pearly edges, hard to the sense of touch. Its central portions are in a state of slough.

For an inch upward on the cheek, beyond the actual ulcer, is an extensive indurated area about ready to break down. Induration also extends outward from the edges from one-quarter to one-half an inch in all directions. The left side of the roof of the mouth is thickened, of uneven contour and indurated and evidently invaded by the disease.

January 15: Induration of the roof of the mouth has now entirely vanished; induration of cheek beneath the unbroken skin is softening and disappearing. Ulcer is reduced about one-quarter in size, and its edges are drawing together, as if cicatrizing — shows healthy granulations. The sloughing spot in the center was shielded by a piece of silver, cut to fit over and laid in over it. Treatments were continued three times weekly, under great difficulties of shielding certain spots and attacking others. February 5: Although doing very well, still to break down several indurated areas a severe treatment (vacuum tube equivalent to a seven-inch air gap, three inches distant, eight minutes duration) was given. February 8: Hard nodule at angle of mouth has softened. The entire ulcer, however, looks angry and venous colored, the granulations are dry and, as a mass, flattened out. February 14: As a result of the treatment of February 5, the ulcer has flattened out and reminds one of a dead jelly fish lying on the sand of a beach. February 17: Ulcer looks better and almost no induration can now anywhere be found. February 19: Same.

This patient kindly allows us to inspect the ulcer to-night. (Patient examined by members.) I present a photograph taken about four weeks after treatment began. Also some microphotographs of microscopic sections made by my friend, Dr. J. R. Taylor of Brooklyn. In his report to me he writes, "The microscopical examination of a nodule shows it to be a typical epithelioma." Although the ulcer itself in this case is not healed, it bids fair to most certainly do so; but its healing is delayed in its healthy parts and its healthy granulation tissue broken down repeatedly by the necessity of attacking the deep-seated portions of the disease, namely, the indurated areas beneath the surrounding skin not yet broken down. It is in these areas that the greatest gain has been made in this case.

Case VIII.—*Carcinoma of Breast.*—January 30, 1902. Patient kindly referred to me by Dr. W. B. Coley. She presents a nodule, the size of a pigeon's egg, angular, and showing angularity where the skin lies over it; to palpation hard and apparently fixed on a rib; has some pain; formed at upper portion of the mammary gland. Dr. Coley had performed three removal operations for similar nodules, but the patient would not allow of more extensive operation. He had also used his serum with great advantage, but was desirous of observing the effect of the *x*-ray. This tumor may be distinctly seized between the finger and thumb and is about three-quarters of an inch in thickness. February 1: Second treatment. No sign of nodulation visible where formerly it pushed the skin outward. February 3: Marked diminution of size of nodule. February 6: One can scarcely find any swelling. February 10: Patient greatly exhausted by social duties and after four days without treatment, returns with swelling slightly appreciable to palpation. February 12: Diminution of size of nodule. February 13: Nodule difficult to find. February 19: Impossible to feel any tumor; none exists; cured, except as to the usual possibility of a recurrence.

It is satisfactory that the diagnosis, confirmed by the microscope, and the disappearance of this tumor can be corroborated by our distinguished presiding officer, Dr. Coley, present with us to-night.

The *x*-ray has undoubtedly rendered a fourth operation by the knife, and that, too, a very unsatisfactory one as regards ultimate recovery, unnecessary.

Other cases are under treatment, including an epithelioma of the throat, carcinomas of the breast and sarcomas, but their histories are too recent to be of especial value to report at this moment, except to state in general that in their cases relief from pain is immediate, and from twenty-four to forty-eight hours at least, in duration, that a reduction in size and hardness is soon apparent, and that the patients, conscious of relief and improvement in their condition, become happy and cheerful.

Observations upon the Above Cases.—Anæsthesia and analgesia, and mode of action.—The salient feature presented by a consideration of the above cases is the immediate and complete relief from pain. This in itself is no small contribution to the treatment of cancer. The *x*-ray, from this point of view alone, would seem to be preferable to the usual narcotic medicines. The action of the *x*-ray is frequently as quick as the action of a hypodermatic injection of morphia, and as lasting.

In my opinion, this analgesic action is due to the benumbing of the nerves of sensation. Equally and similarly the remaining nerve supply of the new growth must be benumbed. We have, therefore, a reduction in the force of the total innervation of the new growth.

May it not be that this reduction of innervation results in a reduction in the activity of the growth of the part, and thus leads to a retrogression and cessation of its growth?

This view postulates an atrophy of the new growth due to lack of innervation. But my explanation of the total effect would extend even further than this paralysis of innervation, and would claim that the entire protoplasm of the part subjected to the radiation is to a greater or less extent benumbed in its activity. The result is a retardation of the protoplasmic activity of all the tissues, nerve as well as others. I would term the process a paresis or a paralysis of the protoplasmic activity. Exactly this effect I have produced with the *x*-ray upon small jelly fish as they moved about in the water of a salt-water aquarium. This paralyzing effect would affect the activity of a microorganism, if such exist in cancer, as quickly (or perhaps more quickly) than the activity of the new-growth tissue. It would also, probably, affect new cells quicker than other ones.

Effect of the Situation of the New Growth.—When the new growth is superficial, or an open ulcer, a simpler problem is presented than when it is internal and covered with sound skin. In the former case the Röntgen radiation may be used with a power that may almost resemble the action of a caustic; in the latter case the operator is delayed by the danger of setting up a burn or a gangrene of the sound skin.

That superficial epitheliomata of considerable extent may be cured by the *x*-ray is now beyond question. Dr. Francis H. Williams of Boston, by his admirable work upon the therapeutic qualities of the *x*-ray, has convinced surgeons of this. He has reported three cases of superficial epithelioma thus cured. Dr. Wallace Johnson and Walter H. Merrill of Philadelphia have also cured several cases of epithelioma, reported as early as December, 1900.

That, also, broken-down, open, and ulcerating carcinomata, as in Dr. Gilman's case of Chicago, or surface sarcomata, as in Dr. Skinner's case of New Haven, and a recent case verbally reported from Brooklyn, N.Y., treated by Dr. Fiske (all undoubted cures), should be cured, is more to be expected for the same reason, namely, that an open surface,or one over which no sound skin lies requiring to be guarded, may receive a severer treatment than skin-covered cases,or cases beneath a sound skin and within a bone.

But that carcinomatous new growths, not yet broken down and still covered by healthy skin, may be dissipated totally, as in Case VIII., and, almost entirely up to date of this report, Case III., is a newer fact and of extreme importance. For we are led to hope by such results that internal cancer, as well as external, may be cured. Corroborating the legitimacy of this expectation, is the fact that in the cases reported to-night the pain symptom of internal cancer is relieved just as in external cases, and proving that the *x*-ray actually reaches and affects the diseased parts.

In fact, one of the great advantages of the *x*-ray treatment is its far-reaching and general character; for instance, an entire chest may be cleared of disease, if present results are corroborated by further experience, where the knife, however skillfully used, could never search out every possibly affected lymphatic channel.

Method of Treatment.—I employ Ruhmkorff and high-frequency calls and static machines to actuate the vacuum tubes. The radiation from tubes actuated by any one of the three would seem to be identical.

I use the ordinary Jackson focus tube invented by Mr. Herbert Jackson of Kings College, London.

Mr. Jackson placed the platinum anticathode at the angle now employed to direct the radiation out of a Crookes' tube, and deserves this credit, to the exclusion of all the minor names now attached to Crookes' tubes of the Jackson type. Every tube in use to-day for the production of the *x*-ray is a Crookes' tube as thus modified by Jackson, and would otherwise be comparatively useless.

Using an oscillatory coil, my average consumption of energy in treatment is three amperes at 110 volts, with a probable frequency of 100,000 to 200,000 oscillations per second. Using a Ruhmkorff coil, my average is three to seven amperes at seventy-five volts. Using a static machine, I use one having ten revolving plates, thirty-two inches in diameter, run at a rate of 300 to 400 revolutions per minute.

Screens may be of "tinfoil" or thin sheet lead. I pay no attention to grounding the screen, nor to insulating it from the patient, as so often strenuously advised. Granting that the electrostatic effects reach and affect the patient, this effect is harmless and a mere modicum of what is intentionally used in daily and beneficial treatments. I do not care to insulate or to ground, for I believe the "burning" is produced by the *x*-ray, and not by the electricity of the electrostatic field. Proof enough of this distinction is the experimental fact that no burning of a part exposed to the dark hemisphere of a tube occurs while at the same exposure burning has taken place in the light or radiating hemisphere. Were burning due to the electrostatic impulses the entire tube would produce it, since the entire tube sends forth these electrostatic impulses.

As to the quality of the radiation, namely, differences due to the degree of vacuum in the tube, undoubtedly great physical and therapeutic differences exist—probably much greater than we are now aware of. The low vacuum tube, actuated strongly and near to tissue, can exert a destructive influence in burning and production of gangrene which a high-vacuum tube under similar conditions will not. I prefer a high-vaccuum tube (vacuum equivalent to a seven-inch air gap), actuated not too strongly. The quality of the radiation from such a tube produces a blurred and "muddy" definition in the fluoroscope, or upon the photographic plate in contradistinction to the sharply-defined image of other conditions of the tube ("soft" and "medium soft"). The blurring is doubtless due to "diffusion" of the *x*-radiation after impact within tissue.

But as to the choice of a "soft," "medium soft," or high-vacuum tube, practice must differ according to the case to be treated. Superficial growths, with no intervening sound skin, may be treated by a soft or medium soft tube, while internal growths, covered by sound skin, are more safely treated with the high-vacuum tube. This is not to say, however, that a superficial growth may not be treated by a high-vacuum tube, and this, in fact, is the method I would at present advise.

It is necessary to emphasize here the great caution required to administer enough of the *x*-ray, without burning, or injuring to the extent of gangrene, the patient's tissue, and yet enough to cause retrogression of the new growth.

The treatment is a hazardous journey between Scylla and Charybdis.

Uncertainties and Dangers.—1. The absence of a definite measure of the "dosage." 2. The possibility of a "burn" or of gangrene. 3. The difficulty of ascertaining when the "danger point" of administration as regards burning and gangrene is reached.

Conclusions.—What is accomplished by the *x*-ray? 1. Relief from excruciating pain and constant suffering, often immediately. 2. Reduction in the size of the new growth. 3. Establishment of the process of repair. 4. Removal of the odor, if present. 5. Cessation of the discharge. 6. Softening and disappearance of lymphatic nodes. 7. Disappearance even of lymphatic enlargements not directly submitted to treatment and often quite distant. 8. Removal of the cachectic color and appearance of the skin. 9. Improvement in the general health. 10. Cure, up to date, of a certain number of malignant growths.

REGARDING THE INFECTIOUS AGENT OF YELLOW FEVER; A REPLY TO DR. SOUCHON.

By ALVAH H. DOTY, M.D.,
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It can hardly be said that Dr. Souchon's communication, which appeared in the Medical Record of December 28, has in any way damaged the argument already advanced that yellow fever is not transmitted by personal contagion, or by clothing, bedding, etc., nor has it proven that the mosquito is not the medium of infection in this disease. Dr. Souchon's remarks were inspired by a paper which I presented at the last meeting of the American Public Health Association* relating to the means of transmission of the infectious agent in yellow fever, and in support of the argument above referred to. In this paper I have introduced, not theories, as Dr. Souchon suggests, but evidence in the shape of reliable statistics, which extend over a long period, and for which I have asked careful consideration.

Official reports of the different outbreaks of yellow fever occurring in New York City, extracts from which appear in my paper, indicate that during the period between 1798 and 1806, hundreds of cases of this disease were removed to Bellevue Hospital (then practically outside of the city), and to the Marine Hospital on Staten Island. These reports show that during this time but one case occurred among the physicians, their families, and the employees connected with these institutions, although there was free and constant exposure. The official account of this case, which only enhances the value of the statistics referred to, is as follows:

BELLEVUE HOSPITAL REPORT, 1798—JAMES HARDIE.

> . . . . "In short, Dr. Douglas, one of the assistant physicians was the only person residing there, who was seized with fever; but he had been in the habit of occasionally visiting his friends in the city, *and three days previous to his being taken ill had slept in a house the vicinity of which was highly infected, and it is more than probable that his sickness was occasioned by that cause.*" †

I have also referred to the report of Dr. Edward Miller, resident physician at Bellevue Hospital, who, in a letter addressed to Governor Lewis, under date of January 12, 1806, says: "No communication of the disease was ever observed in yellow fever hospitals situated at a distance from the city to which they belonged; no exception to this has ever occurred in any of the numerous seasons of the pestilence. In our hospitals, at Bellevue, the Marine Hospital on Staten Island, that of Philadelphia, or any other in the United States, provided the malignant air of the city has been avoided."

To the above I have added the statistics of the New York Quarantine Station, the records of which show that secondary cases of yellow fever have never occurred at Swinburne Island Hospital, to which place are removed all persons suffering with this disease who arrive at the port of New York. In addition, my own experience, which relates to the inspection and treatment of vessels and persons arriving at New York from yellow fever infected ports is given, and is in full accord with the result shown by the statistics above presented. In the official report of the transfer and treatment of cases at Bellevue Hospital and the Marine Hospital from 1798 to 1806 there is not the slightest reference to disinfection; moreover, we all know that during these early times the value and method of scientifically applying this important agent in the prevention of infectious disease was unknown. Therefore, in the consideration of the statistics presented by these hospitals, we are dealing with yellow fever where the freest exposure existed, and without disinfection. Moreover, the hospital reports referred to were made by physicians, who gave simply a statement of their experience, and were neither establishing or supporting a theory. I regard such data in the discussion before us as invaluable. Regarding this important array of evidence, Dr. Souchon is silent. He neither refers to, or discusses these statistics, nor offers an explanation for them which is in harmony with his theory. He states: "That yellow fever develops and spreads with difficulty in Northern climates, whereas the least spark which may pass through the North will set the South on fire." This is hardly in accord with the facts, inasmuch as we have indisputable evidence that at different times, between 1798 and 1822, yellow fever developed in New York City without difficulty, and with great virulence, and, so far as the rapidity of its propagation and its formidable mortality is concerned, it equalled that of outbreaks which from time to time have occurred in the South. Moreover, outbreaks of yellow fever about that period also occurred in Philadelphia and other Northern cities. Therefore climatic differences alone do not explain why yellow fever should propagate in the South and not in this section of the country. Futhermore, Dr. Walter Reed has shown, in connection with his experimental work in Havana, that infection does not follow the exposure of non-immunes to the clothing and bedding of those sick with yellow fever. Here is evidence to show that clothing, bedding, etc., is no more of an infective agent within than without the so-called yellow-fever belt. From other sections of the United States we have satisfactory proof that yellow fever is not contracted by personal contagion, or by contact with the clothing or other effects of those suffering with this disease. For instance, during the summer of 1855 a most formidable outbreak of yellow fever appeared in Norfolk, Va., after an absence of almost thirty years—excepting an occasional case brought to the city by an incoming vessel. Probably one of the most instructive and reliable accounts we have of this epidemic is found in a series of letters prepared for the Virginia Historical Society by Rev. George D. Armstrong of Norfolk,* whose valuable services during that trying period were well known. He was constantly with the sick and dying, and ultimately contracted the disease. The narrative of his experience is of great interest scientifically and otherwise. I submit a few extracts which have a direct bearing upon the subject under discussion. In concluding his history of the epidemic, Dr. Armstrong says:

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*Published in the Medical Record, October 26, 1901.

† The italics are mine.—A. H. D.

*Published in 1856 by J. B. Lippincott & Co.

"Those who were active in ministering to the sick and who did not take the fever, did not take it as a general thing until, as an epidemic, it reached the part of the city in which they resided. *The case of an apparent exception to this general rule, were most, if not all of them, I believe, like that of my nephew, Edmund James, who spent the night in a part of the town to which the disease had spread.** In my own case I was more than six weeks, almost constantly during the day, among the sick, the dying and the dead; often talking and praying with them when their breath was so offensive (for in this disease the breath generally becomes very offensive before death) that I have quitted the room sick at the stomach, and this in parts of the city where the fever was raging with the greatest violence, and yet I did not take the fever until, as an epidemic, it reached that part of the city in which I lived, and then I was one of the first to be prostrated by it. And I could mention many other similar cases to my own."

"Those employed in burying the dead, in so far as I know, did not take the fever until, as an epidemic, it reached the part of the city in which they dwelt. No man could have labored at his calling more faithfully than Mr. Dobbs, our principal grave digger. From early in the morning until late in the evening he was constantly at work in the cemeteries. I have myself seen him eating his meals there, and he labored thus before the order was issued forbidding interments in vaults. The stench from the dead bodies was sickening, and yet throughout almost the entire summer he remained as at other seasons. He lived at the extreme northern end of the city—the parts to which the fever extended latest of all, but it did extend to that part of the city, and then he and his wife both died of it."

"Those who resided in the adjoining county and came to the city during the day only, in no instance, that I have heard of, took the fever. Some in my own congregation there were who acted thus, and they all escaped. So with the country people who attended our markets, and there were some who attended throughout the season, not one of them that I have heard of died of the fever. Our citizens fled in almost every direction, many of them with the poison in their systems, and they sickened and died in almost every place to which they fled—in Philadelphia, Washington, in Richmond, in Petersburg, in Hampton, and on the eastern shores of Virginia. *Not less than thirty died in Baltimore, and twenty, at the least, in Richmond, and yet in not one of these places did a case of yellow fever originate by contagion from these sick and dying fugitives.*"*

Dr. Peter S. Townsend, who in 1823 published an account of the outbreak of yellow fever which appeared in New York City during the preceding year (1822), was firmly convinced that the disease was communicated by personal contagion or by the clothing and effects of the sick. However, when he analyzed the statistics which he had collected, he frankly admitted that the evidence in support of his theory was not entirely clear. Regarding this he says:

"It may be asked why the numerous cases of yellow fever in uninfected parts of the town, and who had either taken the disease in, or were removed sick with it from the infected district, together with the large quantities of furniture, bedding and goods brought out of this district, did not also communicate the disease. . . . . Why, these, however, and the remaining thirty-nine scattered over other parts of the city, supposing some of them to have brought their bedding or clothing with them, did not communicate the disease to their physicians, nurses or attendants, or to the inhabitants living in the neighboring houses, it is perhaps impossible to say. I will not deny that several of these cases, from the confined situation of the apartment in which they lay and the inattention of their nurses, seemed to have been placed under circumstances particularly favorable to communicate the disease."

Here are presented reliable statistics which cover a period of a hundred years or more. These reports do not represent theories, but practical experience; the most valuable material that can be submitted in the investigation of this subject, and while it does not show that the mosquito is the only means of infection in yellow fever, it does furnish conclusive evidence that this disease is not transmitted by personal contagion, or through the medium of clothing, bedding, etc. Such evidence cannot be set aside, and must be given most careful consideration in the scientific investigation of this subject. I invite Dr. Souchon to give us a frank expression of opinion regarding the statistics which I have presented.

The popularity of the belief that clothing acts as a medium of infection in yellow fever is due largely to the fact that heretofore we have had no definite knowledge regarding the manner in which the disease is propagated. The actual demonstration that yellow fever is transmitted by the mosquito goes far toward supplying the link which has been missing. In this way we are able to explain in a satisfactory manner why yellow fever occurs only in certain localities; why, under certain conditions, it may occur in New York, Philadelphia, and other places outside of what is known as the yellow-fever zone. The fact that mosquitos remain in close proximity to their home or breeding place will explain why yellow fever is frequently confined to certain localities in a town, and why secondary cases of the disease did not occur at the Bellevue and Marine hospitals, between 1798 and 1806, inasmuch as both of these institutions were far from the infected area. It also explains why we have not had secondary cases at Swinburne Island.

In connection with this part of the subject, it is of interest to note that during the prevalence of yellow fever in New York between 1798 and 1822 that the disease was confined only to certain sections of the city. Dr. Townsend, in giving an account of the outbreak in 1822, states that the disease first appeared at the foot of Rector Street, and afterward slowly crept to adjoining streets. The disease propagated in this manner in 1798. The outbreak first appeared at Peck Slip, a shipping district in the lower part of the city, and remained in the immediate neighborhood for a long time before spreading to adjoining sections. This is in full accord with the history of the epidemic which occurred in Norfolk in 1855, to which I have already referred.

As proof of the theory that yellow fever infection is transmitted by clothing, etc., Dr. Souchon cites twelve instances where this disease occurred among the crews of vessels after disinfection had been performed at the New Orleans and other quarantine stations. I confess that I am surprised that Dr. Souchon is willing to rest his case on this evidence, inasmuch as I can see nothing in it which can be accepted as satisfactory proof that yellow fever is transmitted by clothing, cargoes, etc., or which is inconsistent with the mosquito theory. Most of the vessels referred to by Dr. Souchon were from Vera Cruz or Havana. As Vera Cruz is less than eight hundred miles from the Mississippi State Quarantine Station, and as Havana is probably not six hundred miles from the same place, it is reasonable to assume that a tramp, or slow steamer, would take less than four days in its passage from either port to the above Quarantine Station; therefore a person having been infected in Vera Cruz or Havana could reach the said Quarantine and remain there a day or two before a period of incubation of five days had expired. Under these circumstances the fact that yellow fever was not recognized until after disinfection had been performed has really no scientific or practical significance. Furthermore, I believe that Dr. Souchon, as well as other distinguished and experienced sanitarians, have declared that in some cases yellow fever may occur after a longer period of incubation than five days. Therefore, why does not Dr. Souchon present this as a possible explanation of some of his reported cases, where the disease has developed after a period of five days from an infected port? For instance, in the case of the captain of the *R. D. Spear*, who had yellow fever eight days after leaving Key West (an infected port), particularly as he was the only one on the vessel who was allowed to land. To say the least, reliable evidence is wanting here to show that the captain contracted the disease through the medium of clothing. Besides, I believe we all agree that a person may be ill with yellow fever for a day or so before there is real evidence of it. This is particularly so among sailors, who reluctantly admit that they are sick. It is for this reason that, at the New York Quarantine Station, we have, for the past four years, taken the temperature of persons arriving from infected ports in addition to the regular inspection.

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* The italics are mine.—A. H. D.

In regard to the bark *Excelsior*, reported by Dr. Souchon, we have the case of a sailing vessel departing from Rio Janeiro on May 10, and reaching the Mississippi State Quarantine on June 25, having been on the voyage forty-five days. Dr. Souchon reports that no sickness occurred on this vessel either at Rio Janeiro or en route to New Orleans. The *Excelsior* was disinfected at the Mississippi State Quarantine Station on June 26, and detained there for about twelve days, and then allowed to proceed with all well on board to New Orleans. Two days after arriving at the above place, or about fourteen days after disinfection, a member of the crew became sick with yellow fever. This was followed within a day or two by the appearance of three other cases of the same disease. The very brief report that Dr. Souchon makes of this and other cases to which he refers leaves us in the dark as to his explanation of them. Does he contend that these men were infected during the disinfection of the vessel, twelve or fourteen days previously? If so, does he not regard it as very strange that of the number of persons thus affected none developed the disease within the ordinary period of incubation—five days. If Dr. Souchon does not regard this as unusual, why can he not with just as much reason assume that the captain of the *Spear* contracted the disease in Key West? He was but eight days away from that place when he reported sick. Or does Dr. Souchon believe that the crew of the *Excelsior* contracted the disease after disinfection was performed? This would indicate that the treatment referred to was not effectively carried out. Those who are familiar with the thorough and scientific way in which Dr. C. P. Wilkinson, who was then Quarantine Officer (1880), performed his work will reluctantly accept this theory. A reference to Dr. Wilkinson's report of the *Excelsior* case, dated July 21, 1880, which appears in the report of the Louisiana State Board of Health, shows that the hold, cargo, cabin, and forecastle were disinfected; this was performed twice, and in order to do the work thoroughly, the cargo was shifted, this being possible, as there were but 3,600 bags of coffee in the ship, while the capacity of the hold was 12,000 bags. Besides, sulphur dioxide, carbolic acid, and copperas were used. A reasonable, acceptable, and practical theory would be that the men on the *Excelsior* contracted the disease on their arrival at New Orleans, inasmuch as they were there at least two days before any evidence of yellow fever appeared. In order to prove this is not a fact, Dr. Souchon must furnish conclusive evidence that yellow fever was not present in New Orleans at the time.

Sailors have but little clothing, and that, as a rule, is freely exposed. In the case of the *Excelsior* there had been no case of yellow fever on board, and the vessel was forty-five days in transit, through a zone said to be favorable to the development of yellow fever, yet no evidence of infection appeared during this time. Is this not reasonable evidence that the disease was not transmitted by the clothing of the crew?

I am not aware that Dr. Souchon, or any other health official, has presented statistics which tends to prove that disinfection has diminished the extent of outbreaks of yellow fever which from time to time have appeared in the South. On the other hand, I believe that it has been stated on excellent authority that disinfection has been of no practical value in this direction. Moreover, I am satisfied that we have reasonably conclusive evidence that yellow fever is not propagated by the clothing, bedding, etc.

Whether or not other means of propagating yellow fever exist, we know that the mosquito is a medium of infection. This knowledge furnishes us a means of protection against the extension of yellow fever, which hitherto was unknown to us, and which has proven to be most effective in preventing the extension of the disease. I refer to the construction of hospitals, properly equipped for the treatment of yellow fever, the use of netting, etc. In what better or quicker way can we bring about a solution of the problem before us than by assuming that the mosquito is the medium of infection, and acting accordingly. If there are other ways by which the disease is transmitted, they will, under this procedure, much sooner present themselves. I believe that the knowledge we now possess of this subject fully justifies us in taking this course, and I am quite sure the public would endorse it. I can see no other way by which this important matter can be settled and commerce relieved of unnecessary and unreasonable restrictions. To continue as we have been doing in following traditions and theories which are antagonistic to scientific investigation, and not advance far enough to meet on a common ground where this subject can be properly considered and acted upon, simply means that we shall make no headway. I sincerely hope that Dr. Souchon, whom we all know leaves nothing undone in his desire to protect the public health, will feel favorably disposed toward a movement which, I am satisfied, is dictated by modern sanitation.

A New Method for the Isolation of the Typhoid Bacillus.—M. Biffi describes the process, which consists in sowing the matter to be examined on broth, to which has been added serum possessing the property of agglutinating the bacterium coli, the whole contained in a test tube furnished with the Berkefeld filter. If the Eberth and the coli bacilli are both present, the latter as it develops will become agglutinated, while the former, being unaffected by the agglutinating serum, will manage to pass through the filter of porous earth, and can be collected in a state of purity.—*La Riforma Medica.*

PNEUMONIA IN THE LIGHT OF MODERN RESEARCH.

By STEPHEN SMITH BURT, A.M., Yale; M.D., Columbia

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Impressed by the prevalence of pneumonia and, still further, by the tragedy it too often enacts in so many households everywhere, the following essay is undertaken by me with special reference to the cause of the fatality, as well as the prevalence of the disease, and to the measures best adapted for its prevention.

During the year 1890 the average length of life in the United States was 31.1 years, and in 1900 this mean amount had risen to 35.2 years, which is a striking proof of the increasing welfare of our commonwealth. In the last decade there has been a decline of nearly 10 per cent. in the number of deaths in the domain of accurate observation, known statistically as the area of registration. Commercial prosperity invariably leads to improved sociological conditions, and these, together with the notable advance in the science of medicine and sanitation, are the reasons for the lowered rate of mortality and the extended measure of human existence. But in spite of these facts, gratifying as they are, the ever-pressing question of unnecessary disease and premature death, with their consequent social and economical evils, remains open to the thoughtful layman, and likewise physician, for serious consideration.

The death rate from pneumonia in 1890 throughout this area of registration was 189.9, and in 1900 it was 191.9, per 100,000 of the population; whereas, in 1890 there were 245.4 and in 1900 there were 190.5 deaths from consumption under the same relative circumstances. Therefore, while the last-named disease is upon the decline, pneumonia, as the chief destroyer of life in this country, is coming into fateful prominence. According to the statistics of the census year of 1900, the three most common causes of death were pneumonia, consumption, and heart disease, and in the order enumerated. Consequently, with such momentous facts as these before us, a discourse upon pneumonia, which may be styled the "King of Death," and its incidents cannot well be deemed unwarrantable.

Pneumonia is a systemic, self-limited disease, with localized pulmonary manifestations. It is almost universal in its distribution. Though it occurs at all seasons, the winter and early spring are its times of greatest prevalence. Both in frequency and in fatality, it is in direct ratio to the density of population. With the exception of a few years in childhood, it pursues mankind, and with increasing deadliness, through all the decades, from infancy to old age. It is often the harbinger of death in alcoholism, certain chronic diseases, and in various conditions of debilitation. Of the aged it is the typical terminal malady. The negro race in this country is very prone to succumb to its ravages.

Pneumonia is undoubtedly an infectious disease, and chiefly by means of the sputum, in the same manner as pulmonary tuberculosis.

The expectoration of pneumonia is not likely to be so widely scattered as that of consumption for obvious reasons, nevertheless, there is more danger of and in its dissemination than is generally appreciated. Numerous instances were recorded of consecutive attacks of pneumonia in families, in schools, in barracks, in penal and in charitable institutions, and finally it dawned upon the profession that these were something more than mere coincidences. Such observations were made long before the pneumococcus or micrococcus lanciolatus was isolated, cultivated, and proclaimed by Fraenkel and Weichselbaum in 1886 to be the "invariable cause of acute lobar pneumonia." This word "cause," by the way, in my opinion, requires the qualifying word "exciting," in order that we may not lose sight of a very important element, namely, predisposition.

The birth of the germ theory in its causal relation to many of the diseases which are afflicting mankind, as a tentative conjecture, was hailed by me with enthusiasm; the subsequent growth of this wonderful hypothesis was likewise viewed with profoundest satisfaction. It has made clear and intelligible much that was formerly involved in obscurity and shrouded in mystery. It is one of the greatest achievements of medical science, and is destined to be the chief factor in the working out of the vital problem of unnecessary disease and premature death. Presaging a knowledge of the natural history of all contagious and infectious diseases, and a better understanding of what constitutes susceptibility, we can anticipate with confidence their gradual, but no less actual, extinction.

Although the discovery of an antitoxic serum, or of a specific drug of any description, has its sphere of usefulness, yet it is a comparatively narrow one contrasted with the universal and permanent benefit to the human race, that intelligent sanitation and organized preventive and restrictive measures must certainly accomplish. Preventive medicine is the remedy par excellence; drugs are, at best, but temporary expedients. We must chiefly devote our energies to the killing of the germs, and to the checking of further germination. These infectious diseases are the direct results of a congregation of human beings, and their ignorant or voluntary disobedience of the established rules of sanitation. We have but to behold the city of Havana at the present moment in order to see a reason for the belief that here finds expression. The eradication of pneumonia, the scourge of civilization, in view of the present limitations of our knowledge, seems well nigh impracticable. Still, on the other hand, a decided step has been taken in the right direction. It is now settled beyond question that the micrococcus lanceolatus is a uniform, unfailing agent, in contradistinction to diverse predisposing causes, of acute lobar pneumonia. Dr. J. J. Curry, in the *Journal of Experimental Medicine*, states that in 1896 he examined thirty-two consecutive cases of acute lobar pneumonia, and in every one the micrococcus lanceolatus was demonstrated. This microorganism is a somewhat elliptical, lance-shaped diplococcus that answers perfectly to Koch's law, which does not here require elaboration. The diplococcus pneumoniæ exists in the blood, heart, liver, spleen, kidneys, and other tissues of the body, as well as in the lungs. It is present, as a rule, in the diseases which complicate pneumonia, such as pleuritis, pericarditis, endocarditis, peritonitis, and meningitis. It is found almost invariably in the pneumonic sputum and, not infrequently, in the living blood. It occurs in all its malignancy in the mouth and bronchial secretions of many healthy individuals. It also dwells in a non-virulent condition in the mouth and throat of nearly everybody. The dust-laden atmosphere of the houses we inhabit and of the public halls we frequent is more or less permeated by these mephitic organisms. And the floating, powdered sweepings of our streets must necessarily contain a fair share of what is practically everywhere. Such a state of affairs would naturally suggest wonderment that mankind ere this had not been utterly exterminated. But, fortunately, it requires something more than the germ itself for the development of pneumonia. The importance of recognizing the ubiquity of these pneumococci and their genetic relation to lobar pneumonia rests primarily upon the manifest necessity of destroying these pneumococci during a seizure of the disease when expectorated. It is just possible, but not altogether probable, in the various instances where the affection is said to attack those in perfect health that the number of the microorganisms and their virulence are so overwhelming as to take by storm, as it were, the most robust individual. Contrariwise, there is much likelihood that this so-called perfect health is more apparent than real, and, if the truth were known, these persons have long been auto-infected and undermined by a chronic condition of suboxidation. In normal physiological conditions nearly all pathogenic germs are opposed, if not repulsed, by the inherent defensive powers of the healthy cells and tissues of the human organism. There was a picture in oil recently upon exhibition in the window of a well-known art dealer of this city, wherein is portrayed a small flock of sheep huddled together, and evidently lost in a snow-storm. Around these poor, cowering, half-benumbed creatures hover and soar a number of hungry vultures, eagerly awaiting an opportunity to attack their coveted prey, when resistance no longer shall be possible. This typifies the human tragedy now under consideration.

Among the conditions that tend to lower the resisting power of the body for the germs of pneumonia are the suboxidation already mentioned from an habitual lack of proper deep breathing, and the many hours daily spent in a polluted atmosphere. Few houses, schools, shops, factories, places of business, of worship, or of amusement, when filled with people, are adequately ventilated. The air of many of our public conveyances, such as the cars and ferries, when overcrowded, as they almost invariably are, is extremely poisonous. Going from the overheated, or the underheated, nearly always fetid, air of these places into the damp, chilly out-door air, in view of the known whereabouts of the pneumococci, is not infrequently a dangerous proceeding.

The average person seems to think that he can continue to neglect the ordinary laws of health, and somehow escape the logical consequence of this negligence. If in time of peace we should prepare for war, then equally, and for the same reason, in time of health we should prepare for disease. Nothing will so surely carry us through an illness, if it does not avert one, as a daily systematic attention to all that makes for healthfulness. Granting there is such a thing as undue solicitude in regard to matters of health and to the possibilities of infection, nevertheless, there is a vast difference between that and a calm, intelligent avoidance of the manifest dangers by which we are surrounded. The food we eat, the water we drink, and the air we breathe should all be matters of discrimination. In fact, the price of health, if not of life, is continual watchfulness.

The personal measures for the prevention of pneumonia, aside from the disinfection of the pneumonic expectoration, are the avoidance of undue exposure to inclement weather and of all crowded, ill-ventilated gatherings; reasonable attention to questions of sanitation; temperance in eating, in drinking—in fact, in everything; daily bathing, in order to insure a healthy action of the skin, and regular exercise in the open air, with special reference to complete respiration. There is nothing better constituted to purify the blood, and thus fortify the system against infection, than systematic deep breathing out of doors while briskly walking or engaged in horseback riding. Frequent changes of underclothing are exceedingly desirable. Linen network underwear is conducive to a marked freedom from acute nasopharyngeal and bronchial catarrhs. Active and unimpeded transpiration through the skin, complemental to the internal excretory organs, is a physiological necessity neither fully nor generally appreciated. Finally, viewed as a hot-bed of microorganisms, the mouth should be rinsed two or three times a day with a solution of formaldehyde in the strength of twenty drops, of the 40 per cent. solution, to a pint of distilled water; for it is salutary, if not absolutely prophylactic. These are some of the apparently simple, though actually important, expedients for self-preservation.

While pneumonia is to a great degree, if not entirely, a preventable disease, the practical difficulties involved in its prevention are evidently considerable. When the resisting power has been weakened by intemperance, by chronic disease, by neglect of hygienic and sanitary precautions, by old age, and by destitution, it is very prone to succumb to an encounter with the specific pneumonic microorganisms. Destitution, with its attending wretchedness, is largely a contributing factor in the prevalence of contagious and infectious diseases, and among them to the high death rate from pneumonia, especially in large centers of population, and any successful effort towards the alleviation of this condition is so much gained for the cause of preventive medicine, as well as philanthropy. The well-being of the poor insures the better being of the rich; the sanitary tenement lowers the death rate of the mansion.

The death rate for 1901 from all causes was: In Buffalo, 14; Chicago, 15.5; Philadelphia, 19; Boston, 20, and in New York, 20.5 per cent. No less than 10,482 persons died in this city last year from pneumonia. New York should be one of the foremost cities of the world in regard to sanitation, despite its size and the great drawback of her crowded, ignorant tenement population. Few cities are so advantageously situated as this for healthfulness, surrounded as it is by water, in almost perpetual sunshine, fanned in all directions by the winds, and in a climate that, for this latitude, cannot be called insalubrious. The methods to be urged upon the municipal authorities for the prevention of pneumonia are the enforcement of a more rigid observance in regard to the ventilation of schools, churches, theaters, shops, restaurants, and other such places of public gathering. The quality of our water supply, though it might be worse, could still be improved at the reservoirs by wholesale filtration. More than one city, both here and abroad, has settled this question beyond peradventure. In addition to the regular sweeping of the streets, they should be also flushed and thoroughly washed with water, weather permitting, periodically. Our extensive area of asphalt pavement would render this measure especially feasible and efficacious. When the streets have been carefully swept, and they are now being swept with care, thanks to the present Commissioner, and the sweepings carried away, there still, of necessity, remains a large amount of ungatherable residue, which is composed not of the dust of clean earth, but of germ-laden filth, commonly in a state of unstable equilibrium. If upon this pulverized remnant of these sweepings there chance to fall a gentle rain, the entire surface of the roadway becomes coated with a more or less thick layer of sticky nastiness, and only after a regular downpour are the highways in a temporary state of satisfactory cleanliness. In heavy showers like these nature gives the clue to what should be done regularly, and, if not from the hydrants, owing to the close proximity of our rivers, could be done at an outlay, effects being weighed, that would be comparatively insignificant. Is it not strange that, with all our boasted wealth, energy, enterprise, and intelligence, we should still be far behind some of the older cities of the world, such as

Paris, for example, in the custom of washing our thoroughfares! The defilement of our sidewalks by the dogs of the city is a fruitful source of disease, as well as a crime against decency, and should no longer be tolerated by the authorities. Spitting upon the sidewalks, and, indeed, upon the streets at all, should be prohibited by the Health Department. Here, again, we have something to learn from several cities of the continent. Much of this filthy, disease-spreading practice is due to thoughtlessness, a great deal to ignorance, and very little to a deliberate desire to offend good taste or to injure anybody. Already there has been a remarkable improvement, thanks to the efforts of the members of the Health Board in respect to this vicious habit, in the cars of the surface and the elevated railroads; hence it should not be considered Utopian, in view of these encouraging facts, to look with reasonable expectation for similar results from a like crusade in regard to our streets and sidewalks. It is my earnest hope that the honorable gentlemen now in charge of this metropolis will bear in mind the appalling death rate from pneumonia, and employ their highest endeavors in furthering the movement toward better municipal sanitation.

Seeing that there is yet no specific remedy for consumption, the great reduction in its mortality during the last decade must be due to the exhaustive efforts of the profession in general, and the health officers in particular, to instruct the people in regard to its infectiousness, and the measures necessary for its prevention. The work of the surgeon is brilliant, its results immediate, and it is widely appreciated. Meanwhile the silent, persistent efforts of the physician, in his laboratory and at the bedside, to devise means for the warding off, as well as the curing of, various diseases incident to his fellowman, do not so much appeal to the popular imagination. It is only after a considerable lapse of time, through the gathering of statistics, it becomes evident that certain maladies are disappearing, and that others are being greatly reduced in point of mortality. Cholera, typhus and yellow fever, for example, are practically things of the past in this country, and the death rate of pulmonary tuberculosis, as previously noted, has fallen off during the last decade 59.4 for each 100,000 of the population. Notwithstanding the general well-being of the inhabitants as a factor in this progress towards healthier conditions, to the medical profession pre-eminently belongs the credit for such priceless altruistic achievements. It is now further incumbent upon us, from humane and from scientific standpoints, to strive for these same results during the current decade with respect to pneumonia. There is no specific cure for this disease thus far, any more than there is for consumption. Wherefore, the course to be pursued with the one is the same as with the other in many particulars. Without exciting undue alarm, the people should be aroused to the danger of infection from pneumonia, and told how it may be averted. Had these 10,482 persons died in this city within a week or a month instead of a year, of pneumonia or any other infectious complaint, drastic measures would have been taken without delay to purge the city of such a plague and pestilence.

In conclusion, let me epitomize what the foregoing thesis endeavors to maintain—that lobar pneumonia is universal in diffusion, in nature infectious, unequalled numerically, and in fatality unsurpassed. It is a malady that can be lessened in frequency and lowered in mortality, if it cannot be eradicated; at the same time, this reduction in quantity and in destructiveness, for the most part, is to be effected by incessant sanitary promulgations.

DIABETIC COMA: SYMPTOMS, PATHOLOGY AND TREATMENT.*

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The array of symptoms known as diabetic coma was first described as an entity by Kussmaul in 1874. These symptoms were noticed in diabetes by clinicians long before this time, but they were not recognized as being peculiar to the disease until attention was called to them by the noted internist. V. Dusch described it in 1854, and Griesinger in 1859 noted a complex of symptoms which we recognize to-day as characteristic of this condition, without being aware that such were usually present in this state. He noticed that in one hundred cases of deaths in persons suffering from diabetes, similar symptoms showed themselves in eight cases. He described these as rapid loss of appetite, nausea and vomiting, burning thirst, severe epigastric pain, and great weakness and restlessness; a temperature that varied between 36.7° and 39.8° C., and an intensely acid urine. These symptoms were followed by rapid death. Griesinger thought they were of uræmic character. It was Kussmaul who first drew attention to that peculiar respiration called air-hunger, so characteristic in diabetic coma, and which is known to-day as Kussmaul's respiration.

The premonitory symptoms which characterize the onset of diabetic coma may vary in individual cases. Amongst those which are invariably present before collapse and coma ensue are the excretion of a large and increasing amount of B-oxybutyric acid and diacetic acid forming the so-called acidosis, which will be referred to later on, and of acetone and ammonia. Very often these symptoms are noticed long before actual coma occurs.

As a rule, such symptoms as Kussmaul's respiration, severe epigastric pain, nausea, vomiting, etc., are the precursors of an attack of coma, yet this condition may set in without any warning whatever. Not infrequently the exciting cause may be some sudden shock, worry, undue muscular exertion, a long railway journey or some digestive error. Occasionally the attack comes on quite suddenly, and the patient is overcome with drowsiness and collapse. So that if the patient is seen in this condition for the first time, it may be impossible to differentiate the attack from apoplexy, uræmia, or cardiac paralysis. Often a sudden change of diet from a moderately rigid to a rigid proteid diet is the exciting cause. The reverse of this has also been noticed. The condition of the bowels, such as obstinate constipation, may favor the development of coma; very rarely a diarrhœa ushers in the attack.

Diabetic coma frequently follows such complications as tonsillitis, bronchitis, pneumonia, carbuncle, gangrene, influenza, and other infectious diseases; gastritis, renal or hepatic colic, various abscesses, anæsthesia and surgical intervention.

Many times a sudden severe headache is the earliest symptom noticed; dizziness is often present. At other times the patient may be nervous, excited or restless. Sometimes the restlessness is combined with unsteady gait, and he reels like a drunken man. Other times there may be great fear, jactation, and occasionally delirium or maniacal manifestations are met with. Not infrequently the symptoms first noticed are muscle tiredness or muscle pain, sometimes very pronounced in the lower extremities; or great lassitude may be the earliest symptom observed, with yawning or sighing, sleepfulness and increasing somnolence. There may be great aversion to solid food, and unquenchable thirst. The voice is changed; it has that husky quality reminding us of pulmonary phthisis, and speech is short, incoherent or mumbling. The breath has the peculiar chloroform odor of acetone, which is often so great as to permeate the entire room. The urine has the same odor. The skin is dry.

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*Read before the Metropolitan Medical Society, December 17, 1901.

The respiration is at times irregular, but is usually of the variety described by Kussmaul as air-hunger. Very frequently this is the first symptom noticed at the onset of coma. Kussmaul's respiration is of a peculiar sighing character. The patient breathes with much exertion, using all the muscles of respiration, although the lungs and glottis are perfectly free. Inspiration is very deep and prolonged, expiration is short, and of a groaning or moaning character. Usually auscultation detects nothing more than increased vesicular murmur. The respirations are regular, only occasionally normal in number, and may increase to double the normal number as the condition progresses. In a very few of the quoted cases in literature, dyspnœa was entirely absent. In the numerous cases observed by the writer Kussmaul's respiration was present in the greater number.

Cyanosis may occur and is usually very slight, and limited to the nose, ears, hands, and feet. The temperature is often increased at first, then decreases rapidly as coma develops, and the skin becomes very pale and very cold.

The pulse is small and weak and increases in frequency, rising to 130 or more. The tension is low, blood pressure is diminished; the action of the heart is feeble but regular.

Albumin is usually present, though in small amount. A constant premonitory sign of coma is the appearance in the urine of a large number of short hyaline or granular casts, first described by Külz in 1891. These casts sometimes occur in enormous number a few days before coma sets in. They are very constant, and I have always found them in the urine just before and during the attack. In those cases in which the symptoms of coma disappear, the so-called abortive cases, these casts disappear also, only to return on the reappearance of coma.

Convulsions rarely occur, and the knee-jerks are frequently absent. As a rule, the pupils react to light to the very last, though usually they are widely dilated. In more than half of my cases ptosis was marked. As the condition progresses and coma increases it is with the greatest difficulty that the patient can be aroused, and as the coma deepens, he lies perfectly quiet and listless, and in this condition passes away. Very rarely the patient may be aroused till the very last to take his medicine and nourishment. Excluding the abortive and aborted cases, coma usually ends fatally in from twenty-four to forty-eight hours.

Pathology.—Of the various hypotheses which have been advanced appertaining to diabetic coma, but two seem to be tenable:—

(*a*) That of acidosis or acid intoxication, first described by Stadelmann and verified by Minkowski, Külz, Naunyn, and others.

(*b*) That of a specific toxæmia, as taught by Klemperer and von Noorden and their followers.

It has been observed that the urine in severe cases of diabetes contains sugar, even when all carbohydrates were excluded from the diet, and that such other products as acetone, diacetic acid, and frequently B-oxybutyric acid are also present in various proportions. At the same time, the excretion of ammonia, lime, and magnesia are increased, and it is also found that the alkalescence of the blood is diminished, sometimes very much so, a fact which never occurs in mild cases of diabetes.

Acidosis, a condition which includes the excretion of diacetic and B-oxybutyric acids, is the result of the disintegration or splitting up of fatty acids, and not of proteid substances, as was formerly believed.

No substance is so easily oxidized in the normal metabolism of the body as sugar. Physiologists tell us that in the combustion of sugar, other less oxidizable substances are also consumed. When for some reason the normal metabolism of the body is decreased the power of burning up the sugar of the body is also decreased; with lessened power of oxidation the sugar escapes in the urine, and with it such other secondary oxidizable substances which also escape combustion. Hence, B-oxybutyric acid, the mother substance of diacetic acid and acetone, is found in the urine.

Whether this acid exists in the body in severe diabetes, and circulates as such in the blood, as I believe, or whether this acid is the result of other butyric acids, such as the amidobutyric acid, is not important for us. Important is the fact that frequently a very large quantity of B-oxybutyric acid is excreted (M. Levy noticed in one case the excretion of 157 grams in twenty-four hours), and that this condition requires a very large quantity of alkalies for its neutralization. You know that the chief diet of diabetics are the proteids and fats. You must also remember that in the splitting up of the albumin molecule the phosphorus and sulphur form phosphoric acid and sulphuric acid, and that these acids also require alkalies to form salts for their excretion. Normally, the ammonia derived from the disintegration of proteids is combined with carbonic dioxide to form urea and water. But in these severe cases of diabetes the B-oxybutyric and other acids require this ammonia for their neutralization, and in this combination are excreted. When the system is so depreciated that not enough alkalies can be formed from the proteids, the soda and potassa bases having been seized upon from the beginning, these acids will unite with the lime and magnesia of the bone, and hence you have an increased excretion of ammonia, lime and magnesia. This whole condition is called acidosis, and while even a severe diabetic will endure this for a certain length of time—weeks or months, very rarely years—a point of tolerance will soon be reached, and then these various acids produce an acid intoxication and coma. This is the theory of the acid intoxication.

The toxic theory is really a continuation of the above theory. Klemperer supposes that these acids destroy protoplasm in a specific manner, producing a toxæmia. Such toxic substances, however, have never been isolated. Von Noorden goes a step farther and supposes that this circulating toxic substance paralyzes the central nervous system, and coma is thereby produced.

The rôle that Kültz's casts in the urine play in this condition is as follows: Külz has shown, and it has been subsequently verified, that when the so-called "Külz cylinders" appear in the urine before and during coma, a fatty degeneration of the epithelium of the uriniferous tubules takes place. Hence it seems not improbable that the kidney is unable to throw off the toxins which are the result of continued acid intoxication, they accumulate in the system, and coma results, a view also entertained by Domanski and Reimann in a late communication. It may be that the epithelium of certain portions of the convoluted tubules, including the ascending portion of Henle's loop, has a distinct function—that of excreting these toxins, just as they possess the property of excreting the solids of the urine, as Heidenhain has shown in his experiments with the indigo-sulphate of sodium. This supposition is strengthened by the fact that when a case of coma is aborted Kültz's casts disappear and the kidney regains its normal function.

It may be interesting to note here that experiments of injecting into the veins of animals B-oxybutyric acid, in hopes of producing diabetic coma, have been made, though only with partial success. Dr. Herter of this city has recently tried this experiment on two apes. The first ape died during the experiment, on account of imperfect technique. The second experiment was strikingly successful, the animal becoming suddenly stuporous, it being impossible to arouse him by pricking the skin. For over two hours he lay in a stupor, and then regained his normal condition. It must not be forgotten that the B-oxybutyric acid in itself is not poisonous; also that the condition of acidosis may, can and does usually exist for a long time, so that the intravenous injection of B-oxybutyric acid ought to be continued for a long time indeed to approach anywhere near the pathological condition of severe diabetes.

There is still another point to remember. A hyperglycæmia exists in diabetes mellitus. What influence bacteria may have in such a circulating medium, especially when the alkalescence of the blood is much decreased, one can only conjecture. Certainly this point should be further investigated. It may throw some light on the pathology of the subject.

Treatment.--Severe cases of diabetes mellitus which show a marked reaction to Legal's and the ferric chloride test with increased ammonia and B-oxybutyric acid secretion are always on the danger line of coma, and our efforts should be directed towards warding off this complication as long as possible by reducing, if possible, the acidosis and ammonia excretion. The enforced method of dieting in diabetes has much to do with this acidosis. The prime object in all cases of diabetes mellitus is to reduce the sugar secretion, and by so doing to reduce the hyperglycæmia, Hence all carbohydrates are excluded from the diet which now consists of proteids and fats, and from these two divisions of food a requisite number of calories are made up to keep the body in nutritive condition. But it has been shown that at a certain stage in diabetes, which is really the critical period of the severe form, the fats increase the excretion of acetone and diacetic acid, which, as you have seen before, are the results of the acidosis. Hence the danger of a fat diet. At the same time few patients can stand such a dietetic régime for any great length of time without gastric disturbances resulting. The proteids, too, favor by their disintegration the production of toxins, and many authors believe that the toxæmia of the latter stage of diabetes mellitus is produced solely by the disintegration of the ingested albumins. So that a rigid diet of proteids and fats should not be continued. It has been found that by giving carbohydrates in this condition the acetone and diacetic acid excretion are lessened and that digestion is improved; the sugar excretion, however, is then usually increased, and a condition of inanition eventually occurs. The carbohydrates which such patients must receive in their food may consist of moderate quantities of farinaceous broths, bread, potatoes and levulose. The best results are obtained from milk, and about one quart may be allowed in twenty-four hours. Experience has taught me that lactose is better borne in severe cases than any other form of carbohydrates.

The condition of the whole digestive apparatus must command the closest attention, and no article of food or admixture of foods given which may cause dyspeptic disturbances. Especially in acidosis, no one condition favors the development of coma so much as indigestion. Constipation must be overcome by either massage, enema, or such laxatives as aloes, rhubarb, or colocynth alone or in combination. Protect the patient from mental and intellectual exertion, exposure and injurious influences. Acids and narcotics must not be given. For the avoidance of impending coma all authorities recognize that the most important point is the reduction of the acidosis, and increased ammonia excretion, and advise the administration of very large quantities of alkalies, especially the bicarbonate of soda, by mouth, rectum, intravenous injection, or by hypodermoclysis. Enormous quantities, according to Lépine, Naunyn and others, must be injected, at the same time giving as much by the other channels as the patient will stand.

The normal excretion of ammonia in urine is less than 1 gram in twenty-four hours, and forms 5 per cent. of the total nitrogen excretion. Diet influences this excretion markedly. On a vegetable diet a healthy man excretes .4 grams, on a mixed diet .6 grams, on a proteid diet .875 grams daily. Because of their meat-fat diet diabetics excrete somewhat more than this quantity, and about 1 gram is taken as the average for such patients. But in severe cases much larger quantities are noticed, depending not only upon the diet, but also on the fatty and other acids present in the system. Such large quantities as 5-12 grams *pro die* have been observed. Stadelmann who has especially studied this subject, says that diabetics who excrete 2, 4, 6 or more grams of ammonia daily require constant watching and are always in danger of passing into coma; and that diabetics who have the disease in a severe form, and who show an increased excretion of ammonia in their urine are only to be put on a rigid diet with the utmost caution, and always with the simultaneous administration of alkalies.

The action of alkalies on the excretion of ammonia in urine, according to Camerer, shows that when these are given even in moderate quantities, the amount of ammonia and phosphoric acid in acid salts is much diminished. Camerer experimented on nine healthy subjects for seven successive days, giving on the second and third days 8 grams of bicarbonate of soda with 7.5 grams of citric acid, and on the other days giving no soda at all. The results are shown in the following table:

DAY OF EXPERIMENT.	AVERAGE EXCRETION IN GRAMS OF N. IN TWENTY-FOUR HOURS OF A HEALTHY INDIVIDUAL.				
	Total Nitrogen.	Urea N.	Ammon. N.	Total P_2O_5.	P_2O_5 in Acid Salts.
1st day no soda given.	11.1	9.7	0.55	2.4	1.4
2nd " soda "	11.5	10.0	0.38	2.3	0.8
3rd " " "	11.2	10.1	0.25	2.3	0.4
4th " no soda "	11.9	10.3	0.29	2.5	0.9
5th " " "	10.0	8.8	0.43	2.3	1.3
6th " " "	12.0	10.8	0.53	2.6	1.5
7th " " "	14.7	12.4	0.75	2.8	1.8

Thus it is shown that on the days when no soda was given the ammonia excretion rapidly increased, and when given a very decided diminution was observed.

In diabetes the alkalies do not influence the excretion of ammonia as much as in the healthy subject, and hence larger quantities must be given to bring about the desired result. Therefore, in the prodromal stage of coma, and even before this time, it is wise to give the patient as much soda or other alkalies as he can take, the physician being influenced by the reaction of the urine, and the condition of the digestive system.

In the year 1900, Leo Schwarz, before the Congress für Innere Medicin in Berlin, read a paper wherein he showed that the higher oxidation products of glucose and glycuronic acid, called respectively glyconic and sugar acids, when given in large quantity, produce a very decided diminution in the excretion of acetone and diacetic acid Schwarz was led to make these experiments from the fact that all carbohydrates have this effect. It was but natural, then, that he should try the effect of these drugs in the coma of diabetes, and in the *Prager medizinische Wochenschrift* of this year he relates a case of coma of which the following are the essential points: Patient, very young man, weighing forty-five kilos, entered hospital November 12, 1900. First severe attack of coma, November 19, was successfully treated by 70 grams of glyconic acid, neutralized by bicarbonate of soda. Patient was up the following day and remained well for three weeks. December 10, second attack of coma, also successfully treated by 50 grams of glyconic acid, neutralized by bicarbonate of soda. Patient remained well for fifteen days, and was up and about. On December 26 patient had a third lethal attack of coma. The supply of glyconic acid had been exhausted, and although every effort was made to restore the patient, he succumbed. This medication certainly heralded a great advance in the treatment of this terrible condition, for it seems that something rational had been found to reduce the acidosis and abort coma when it occurs.

Another rational mode of treatment would be the introduction into the system of a sufficient quantity of ammonia to unite with the various acids found in the condition of acidosis, so that by their neutralization the acid intoxication would be reduced, the alkalinity of the blood kept at its normal, and the disintegration of proteids prevented. Acting upon this proposition, I believe I have accomplished the same results as Schwarz in averting coma by the administration of very large doses of the drug called urotropin, formin, or aminoform, as a brief history of the following case will show:

W. P., thirty-seven years old; no specific history; disease discovered in 1897; has been abroad several times; in various health resorts. the last time in May and June, 1901; maximum weight at that time one hundred and three pounds. First seen by me August 23, 1901; weight, ninety-three pounds, so that he lost about ten pounds in two months. Sugar 5 per cent., marked acetone and diacetic acid and large amount of B-oxybutyric acid present. Ammonia increased. Quantity of urine voided eight pints. Albumin present; no casts. On August 27 he weighed ninety-six and one-half pounds, so that in this short time he increased three and one-third pounds in weight. On August 30, although in a very weakened condition, he left the city to join his family in the mountains, and when he returned, on September 11, he weighed but ninety pounds, and his condition was very miserable. The acetone in the breath was so marked that it pervaded the room and was recognized by others. He could barely walk. On September 23 patient showed symptoms of developing coma, Kussmaul respiration, severe epigastric pain, increased pulse, sensorium blunted. Kültz's casts present in large number, slightly elevated temperature; dilated pupils, great somnolence, some cyanosis, very marked acetone breath. Patient was at once given twenty grains of urotropin, repeated again in a half hour. The bowels were thoroughly evacuated, hot compresses applied to the chest, and an ounce of whiskey given by mouth. Toward noon respiration became normal. Urotropin again given in the same dose; pain disappearing; ptosis, which was present before, has disappeared. Sensorium clearing. In the evening the patient was again in his previous condition, the next day was out of bed and able to go about some. The next following day no cylinders could be found in the urine. Of course during all this time and long before this time, I had given the patient large quantities of carbohydrates in hopes of affecting the acetone excretion. And during all this time he was given as much bicarbonate of soda as he could take—from one to seven drachms daily, usually—in imported Selters water. Patient's condition remained stationary for some time; it even improved a little bit, so that on October 12 he was able to see me in my office. At that time he weighed eighty-six pounds. Until this time the urotropin had been continued on and off in decreasing doses. He seldom got less than twenty or more than sixty grains daily, but about this time it had to be discontinued on account of the frequent diuresis, which the drug produced, and which interfered with the patient's rest at night. On November 10 symptoms of impending coma were again present, which were again successfully averted by urotropin. On two subsequent occasions coma was also successfully combated. The most distressing symptom was the fearful loss of appetite from which the patient suffered, causing a continued loss of weight and strength. I had literally to force his food and drink, and the amount taken daily was rarely more than the equivalent of six or seven hundred calories. In this way things progressed until the morning of December 6th. After resting very well the previous night, the patient awoke with a very pronounced Kussmaul respiration, and I saw him very shortly after. Within the next few hours the patient received seventy grains of urotropin, although swallowing was extremely difficult, apparently from the great weakness only. As in the previous paroxysms the reduction of sugar in the urine just before the attack was very marked—from 5 per cent. to 1½ per cent.—while the acetone in the breath was apparently much increased. Kültz's casts were again present, though much less urine was voided on account of the inability of the patient to take much drink. Coma was successfully averted, and although the patient expired about twenty hours after the beginning of the last, fifth attack, he retained his consciousness and spoke to the very last. His exitus was the result of the asthenia.

My reason for using urotropin in this connection is that it is a chemical combination of ammonia and formaldehyde, which in the presence of an acid splits up in the body into its component parts. The splitting up of this drug takes place in the kidney, the ammonia being rapidly absorbed by the kidney veins, thereby entering the circulation and neutralizing any acids that may be present, while the formaldehyde passes out with the urine.

I have only given you the results of a single case in which I have used this drug for the avoidance of impending coma. The results of one case are not sufficient to make any specific claim, and farther use in more cases will be necessary in order to prove the efficacy of this reasoning.

40 East Sixtieth Street

The Dangers of Wearing Flannelette.—Presumably on account of the alarming number of recent deaths of children in Liverpool, owing to the ignition of flannelette garments, the Watch Committee have received a communication from the Home Office calling attention to the frequent fatal burning cases which took place in that city through the ignition of young children's clothing.—*Lancet.*

A NEW TEST FOR ALBUMIN.

By FLORA C. FUHS, Phar. D.;
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This new and simple test is based upon the following facts: (1) Albumin is coagulated by carbolic acid; (2) Equal volumes of non-albuminous urine and a mixture, composed of equal parts of carbolic acid and glycerin, form an emulsion which clears up entirely upon agitation, leaving a perfectly transparent and highly refractive liquid; (3) Equal volumes of albuminous urine and the above mentioned carbol-glycerin solution, when mixed together, produce a white turbidity, which remains, in spite of agitation, and does not precipitate on standing, nor redissolve.

The test is very sensitive, distinctly showing the presence of 0.1 per cent. of albumin in the urine, the degree of turbidity being proportionate to the percentage of albumin contained in the urine.

Numerous and repeated experiments were made by me to substantiate the observation that this turbidity occurs only when albumin is present, and, furthermore, that it is due to the presence of albumin and is a suspension of coagulated albumin.

For this purpose many specimens of both nephritic urine and urine of patients suffering with cystitis have been tested, as well as numerous specimens of urine proved free from albumin by the recognized and generally used reagents for the detection of albumin.

In no instance did a urine, shown to be free from albumin by the recognized tests, present the slightest turbidity by this new reagent, nor did a urine, proven to be albuminous by the same tests, fail to show the characteristic white turbidity after treatment with the carbol-glycerin solution.

The method of applying the test is very simple, and requires as little or less time than the other reliable tests for albumin, and, as the carbol-glycerin solution is a non-irritating mixture, it is much to be preferred to the disagreeable nitric acid.

The solution consists of carbolic acid and glycerin, equal parts. Glycerin is added to prevent the formation of a permanent emulsion between the carbolic acid and the watery element of the urine, and is added in excess so that no possible error can occur from this cause.

Test.—2 c.c. of carbol-glycerin solution are poured into a small test tube, and 2 c.c. of the filtered urine are added. Mix thoroughly with a glass rod, or agitate. If a clear, transparent liquid results, there is no albumin present; but if the slightest turbidity is noticeable, the urine is albuminous.

871 Park Place.

Bone Filling with Amalgam.—J. H. Barbat reports the case of a man with an ulcer of the leg contracted in the tropics, and which led through a fistula to the diseased tibia. The diseased portion of the bone was exposed and removed, and the cavity was filled with ordinary copper amalgam until the whole surface was covered, leaving a hole, which was partly filled with dental cement, the top being covered with more amalgam. The skin was sewed over the filling and dressings were applied. The wound healed except at the upper angle, with relief to all symptoms. The small opening at the upper angle refused to close, and probing revealed the fact that some of the bone had broken down. The amalgam was removed, and the bone was found in good condition, except at the upper end, which was curetted and the cavity filled with formalin gelatin. This was in turn removed, leaving a large cavity covered with a healthy surface. In time the skin grew down into the cavity, and complete healing finally ensued. —*Occidental Medical Times.*

Clinical Department.

A SEVERE CASE OF DIPHTHERIA, INVOLVING THE PHARYNX, LARYNX, TRACHEA, BRONCHI, AND PROBABLY THE ŒSOPHAGUS AND STOMACH.

By J. D. MACPHERSON, M.D.,
NEW YORK.
INSTRUCTOR IN DISEASES OF THE NOSE AND THROAT IN THE NEW YORK POST-GRADUATE SCHOOL AND HOSPITAL.

The following rather severe case of diphtheria is, I think, of interest enough to be reported:

J. M. consulted me on November 5, 1901, about his son Herbert, who had been croupy since the morning of November 3, and for several days before that had not appeared well. The child was a thin, pale, and anæmic boy, eight years of age; he had never been strong, he was a mouth breather, had suffered from frequent attacks of tonsillitis, and had had both measles and chickenpox some years before. I found the child sitting up, restless, and with a very anxious expression; he had a croupy cough and was so hoarse when he tried to speak that he could scarcely be understood. His pulse was rapid and rather weak, oxygenation was poor, and the cervical lymphatics were considerably enlarged. Upon examination of the pharynx, both tonsils were found enlarged, the right was much inflamed, and on it was a large patch of dirty grey pseudomembrane extending to the posterior wall of the pharynx.

The child was so nervous that it was impossible to obtain a view of the larynx. Of course, there was no time to wait for the report from a culture, and the boy was at once given an injection of 3,000 units of antitoxin. Steam inhalations and other remedial measures were ordered, and I promised to call again in a few hours.

As I left the house of another patient, a few doors away, some fifteen or twenty minutes later, the child's father called to me in a very excited manner saying his boy was suffocating. I found the patient suffering intensely. His face had a dusky hue, he was more restless than before and was quite cyanotic, in fact, his lips and finger nails were blue. His arms were stretched over his head, and with each attempt at inspiration, the supra- and infra-clavicular and upper abdominal regions were deeply depressed, and he gave every symptom of impending suffocation.

His condition was so grave that it demanded immediate relief. As my recent experiences with intubation in advanced cases had been rather discouraging, it was decided to do a tracheotomy at once. With the efficient aid of Dr. John Erhard of this place, the child was etherized, the trachea was promptly opened, and a hard-rubber tracheotomy tube was inserted. The patient rallied nicely, the cyanosis cleared up at once, and he was wonderfully relieved.

Calomel fumigations were ordered and the steam inhalations continued. The child coughed considerably and had rather a restless night.

November 6, the patient was in fair condition; pulse 130, temperature 101.8°, oxygenation good. The stomach was irritable, and all food was vomited. He had a fairly comfortable day, and in the evening vomited a large piece of membrane. The patch in the pharynx remained unchanged.

November 7, the boy had a comfortable night; pulse 128, temperature 99.8°. The tracheal wound looked well. At 1.30 P.M., the child had an attack of dyspnœa, and as I was out of town, Dr. Erhard was sent for. He cleansed the tube which was obstructed, and the child breathed easier. Three hours later he had a more severe attack of dyspnœa. I removed the entire tube and cleansed the wound carefully, but without relief. A soft catheter was then passed down through the trachea to the bifurcation. Violent cough was excited, and several good-sized pieces of membrane were expelled, with such force that they flew across the room. A silver tube of larger caliber than the rubber one was inserted, and the child was greatly relieved. The pulse was feeble and at times intermittent, and strychnine was given hypodermically. The child was still nauseated, and made signs that he had great pain on swallowing. As he absolutely refused nourishment most of the time, nutrient enemata were ordered.

November 8, the patient had a restless night; the pulse was weak and he appeared exhausted. He still refused nourishment and vomited several large pieces of membrane. I was called four times this day to relieve severe attacks of dyspnœa, in two of which death seemed imminent. The trachea became obstructed, and passing a catheter into it was difficult and afforded no relief. So I decided to curette the trachea as reported by Scudder and others.

The tube was removed and the child was held in an inverted position by the nurse. A small flexible curette was passed through the tracheal wound down to the bifurcation, and the whole surface was rapidly curetted. There was but little bleeding and considerable relief followed. Later the patient became greatly distressed and ogygenation was poor, although the trachea was quite clear.

Loud bronchial râles could be heard over both sides of the chest. The child's condition was getting desperate, and it was decided to risk dropping some artificial digestant into the trachea. This was done, a few drops of a digestant solution being instilled into the trachea every hour. When I left the child at 1 A.M., he had Cheyne-Stokes' respiration and an intermittent pulse, and I thought his chances of recovery were very poor.

November 9, the patient had a restless night, and coughed up a great deal of membrane. The stomach was still irritable. He was very weak, but oxygenation was better and breathing much easier.

November 10, he had a fairly good night, though still coughing up quantities of membrane. He vomited nourishment and large pieces of membrane, also considerable of the latter passed per rectum. I attempted to remove the tracheotomy tube, but the child was so distressed that I was obliged to reinsert it.

November 11, improving. The tracheotomy tube was removed. The boy had passed only eight ounces of highly albuminous urine in twenty-four hours.

November 12, much improved. Has passed almost a normal quantity of urine. Several large pieces of membrane found in stool. From this time on improvement was steady, but more or less membrane was found in every stool, and on November 18, a piece six inches long and an inch wide was passed. Nourishment had to be almost forced into the child until November 19, when he began to take it more willingly, and on this day membrane was found in the stool for the last time.

The chief interest in the case lies in the extensive surface covered by the pseudomembrane, which I believe passed as far down as the smaller bronchial tubes. From the dysphagia, anorexia, nausea, vomiting, and finally the large quantities of membrane found in the vomited matter and stools, I think there is no doubt that the œsophagus and stomach were also involved by the diphtheritic process.

This patient received 13,000 units of antitoxin during his illness, and the calomel fumigations were used every one or two hours, three ounces being used in all.

How much the instillation of the digestant into the trachea had to do with the child's recovery may be questioned, but certainly there was marked change in his condition for the better within fifteen hours after it began to be used. As a strict quarantine could not be maintained on account of lack of space, the other six children in the family were given immunizing doses of antitoxin. None of them contracted the disease, excepting the youngest, a child eighteen months of age, who developed marked laryngeal stenosis and a rise of temperature, but everything cleared up nicely in twenty-four hours, after an injection of 2,000 units of antitoxin.

HYPERTROPHIC AND ATROPHIC CIRRHOSIS OF THE LIVER.

By JOHN A MITCHELL, M.D.,
NEWARK, OHIO.
SURGEON TO THE NEWARK CITY HOSPITAL.

From the fact that there has been of late doubt expressed by some medical writers as to whether hypertrophic and atrophic cirrhosis of the liver were not two distinct diseases bearing no relation to each other, rather than, as is generally understood, being simply different stages of the same disease, I beg to report the following case:

Mr. J., aged thirty-five years, father of two healthy children, consulted me in August, 1899, for a trouble, the symptoms of which indicated some affection of the gall-bladder. There was almost a constant feeling of pain or uneasiness in this region, the pain at times becoming very severe. The gall-bladder was distended and tender on pressure. The edge of the liver could be easily felt below the border of the ribs. After a month's treatment, which probably had nothing to do with what followed, he passed a number of small gallstones, the largest of which were about the size of a grain of corn. Some relief followed the passage of these stones, but in a short time the pain returned. Suspecting the presence of a larger stone, too large to pass through the ducts, I sent him to the hospital for operation. On cutting down to the gall-bladder I found it empty; its walls were much thickened by previous inflammation; there was no obstruction of the hepatic and common ducts, they seemed to be in a perfectly healthy condition. The liver was large, at least one-quarter larger than normal, dark in color, and hard to the touch. The presence of this enlarged liver, in connection with the facts that the man had been a steady and at times a hard drinker, and that he gave the history of having contracted syphilis in his early adult life, led me to suspect the final stages of cirrhosis. I therefore attached the omentum, which seemed to be in a perfectly healthy condition, to the abdominal wall, before closing the incision.

The patient recovered from the operation without incident and was very much improved for almost a year; so much so that he returned to his work, which was that of a blacksmith. During this time he took no alcoholic drinks whatever and was temperate in his eating. At the end of eleven months from the time he left the hospital he again consulted me for a severe train of gastro-intestinal symptoms. He could take nothing but the lightest kind of food, which caused severe pain in his stomach and bowels. There was marked tenderness all over this region, also rigidity of the abdominal muscles. The bowels were obstinately constipated, and his digestion finally failed altogether; he wasted away to a mere skeleton, and died eighteen months after the operation.

At the post-mortem examination there was found a strong broad adhesion of the omentum to the abdominal wall, and this adhesion was richly supplied with blood vessels. To the establishment of this collateral circulation was probably due the absence of ascitis. The liver was much reduced in size, light in color, and hard. A portion of the gland was sent to the microscopist, who pronounced the condition one of chronic interstitial hepatitis.

A large portion of the omentum was thickened and quite hard to the touch, thickly studded with bead-like deposits. This condition the microscopist pronounced due to tuberculosis. It is rare that an opportunity is afforded to note so closely the pathological conditions existing in the early stage of this disease, as in the above case, and I think it furnishes convincing evidence of the relationship existing between the two conditions—hypertrophic and atrophic cirrhosis of the liver.

The presence of tuberculosis could not be ascribed to an inherited predisposition, as both the parents and their families were remarkably free from tuberculous troubles. Many writers, however, speak of the frequency with which cirrhosis of the liver is complicated with tuberculosis.

69 N. THIRD STREET.

REPORT OF A SUCCESSFUL CASE OF GASTROTOMY IN AN INFANT.*

By JOHN T. HOWELL, M.D.,
NEWBURGH, N. Y.

W. V. B., aged nine months, was referred to St. Luke's Hospital, Newburgh, November 22, 1901, by Dr. Howell White of Fishkill, with the following history: On the morning of admission, the mother, while dressing the child, suddenly discovered that he had an open safety pin in his throat, and before she could rescue it, the pin had slipped down beyond her reach. The physician who was soon called, administered chloroform and searched the throat with his finger, but unsuccessfully. He then brought the child to the hospital, when we attempted to locate the pin by aid of the fluoroscope. This was also unsuccessful. The baby had refused its bottle from the first and had vomited some bloody mucus several times. Later I passed a rubber tube into the stomach, hoping to dislodge the pin if it had caught in the œsophagus, but it was apparently not lodged there. It was then decided to do a gastrotomy, rather than trust to the natural passage of so uncertain a foreign body as an open safety pin, an inch and a quarter long. The stomach was reached through a median incision, and the foreign body having been located, that portion of the stomach containing it was withdrawn, and the pin was extracted through a small incision. This opening was closed by a double row of Lembert sutures. The recovery was nearly uneventful. The highest temperature, 103° F., occurred six hours after operation, but it fell to 99.3° F. within twenty-four hours. There was no fever after seventy-two hours, and during the same period the pulse fell from 130 to 120, and the respirations from forty to twenty-four. Rectal alimentation with peptonized milk was begun after eight hours, and at the end of fifty-four hours this was supplemented by small amounts of the same given by the mouth. Saline enemas afforded great relief. Hypodermic injections of morphine, gr. $\frac{1}{40}$, were given occasionally during the first forty-eight hours. The bowels moved freely at the end of two days. On December 9 the stitches were removed from the abdominal wound, which was found to be healed. On December 13 the child was discharged from the hospital.

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* Read before the Newburgh Bay Medical Society.

Largest Recorded Aneurysm of the Heart.—R. G. Curtin reports the case which had been under his observation for two years preceding death. That portion of the autopsy record bearing on the cardiac aneurysm is as follows: "Springing from the left ventricle was a very large aneurysmal sac, which was in close contact with the left side of the chest. The pericardium was thickened and quite intimately adherent to the heart and the aneurysmal sac, but they could be separated by the occasional use of the knife. The mediastinal pleuræ were everywhere incorporated with the pericardium. Near the base of the heart the pleura contained soft, yellow lymph, evidently the result of a recent inflammation. The aneurysmal sac formed the apex of the mass. Its walls were about 0.3 cm. thick, and were composed of a dense, light, fibrous material, appearing to the naked eye to be made up of widely separated muscle fibers, demonstrable after the pericardium was removed. When the sac was opened it was found to contain a large amount of blood. In its lower part and half-way up its sides it was coated with laminated clots, about 2 cm. in thickness. After the removal of the black clotted blood the cavity was filled with water. Upon weighing, its weight was found to be 2,850 grams. On emptying the sac and reweighing it, the weight was found to be 1,370 grams less. As a cubic centimeter of water weighs a gram, it will be seen that the cavity had a capacity of 1,370 cc., or nearly a liter and a half. Two holes communicating with the left ventricle were discovered about the size of a large quill. The apertures were about 1.25 cm. apart, and seemed to be located in a white substance which was undergoing atheromatous change. The inside of the sac was covered here and there with atheroma. In some places calcareous degeneration had taken place. Spicules of this material appeared in the incision, and at one place, in the left side of the sac, a hard plate gave forth a sharp click when struck with a knife.—*Transactions of the Philadelphia Pathological Society.*

The First Treatment of Penetrating Wounds of the Eyeball.—Walter L. Pyle says that in these cases the greatest cleanliness should be exercised, and if there is reason to expect infection copious irrigation with solutions of boric acid (gr. X— ℥ j), mercuric chloride (1 : 5,000) or other antiseptics should be practised. After thoroughly cleansing the conjunctival sac, and the seat of injury, any foreign material or cilia in the external wound should be carefully removed. If the wound is entirely in the cornea, a solution of atropine or eserine is instilled, and a pressure bandage applied; union usually will occur in twenty-four to forty-eight hours. If the iris is prolapsed into the wound, it may be possible to free it by gentle manipulations with a spatula. Otherwise it will have to be seized with an iris-forceps, drawn out of the wound, and freely abscised. Ciliary prolapse should be replaced or abscised, unless it is very extensive. If the sclera is wounded posterior to the ciliary region any prolapsed vitreous should be abscised. The author gives directions for removal of foreign bodies in the eye.—*International Medical Magazine.*

A Case of Acquired Deaf-Mutism.—Mayo Collier reports the case of a girl of nine years, who at the age of three years began to lose her hearing and her power of speech. The trouble gradually increased until, when seen by the author, she was absolutely a deaf-mute. Examination of the ears showed within each, in contact with the membrane, a hard inspissated mass of cerumen of old standing. This was removed with some difficulty. The membranes were found to be extremely retracted, somewhat opaque, but otherwise healthy. Politzer's bag was used, and a wash ordered for the nose. The child improved rapidly in hearing and speech, and at the last interview repeated after the mother, whose lips were covered up, several verses more or less correctly and quite intelligibly.—*Medical Press and Circular.*

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE CANCER QUESTION.

IN *The Hospital*, February 15, has been collected a series of statistics relating to cancer, as well as the opinions of various authorities upon the unsolved points in connection with the disease.

The whole compilation provides instructive reading, and in view of the increasing interest which is being everywhere displayed in all that pertains to cancer, some quotations from the same will be pertinent.

Newsholme, writing in the *Practitioner* on the statistics of cancer, mentions that in the five years, 1891–5, this disease was responsible in Great Britain for an annual registered mortality of 712, and in 1896 of 764 to every million of the population. It is almost certain that these figures understate the actual death-rate from malignant disease. Cancer causes more deaths every year than any other disease, with the exception of bronchitis, pneumonia, and phthisis.

According to the figures for 1896, one out of every fourteen men, and one out of every nine women, reaching the age of thirty-five years, dies of cancer. In 1881–90 the average death-rate from cancer of males aged twenty-five years and upwards was 9.49 per 1,000; in 1871–80, it was 6.97 per 1,000 of the population aged twenty-five and upwards.

With regard to the effect of occupation on cancer mortality, Tatham's report is quoted, which, for the period of 1881–90, shows that among all occupied males the comparative mortality figure for cancer was 44, among all unoccupied males, 96. The theory that excessive nervous strain and anxious work provoke cancer does not receive support in the fact that the comparative mortality figure for medical men is only 43, while it is as high as 70 for brewers. The contrast beween lawyers, 60, and clergymen, 35, is great. Chimney-sweepers occupy a supremely high position in mortality from cancer. The low figure for coal-miners indicates that they enjoy a comparative immunity from cancer, as well as from phthisis. He suggests that the high figures against some occupations may be attributed to intemperate habits.

The greater increase of cancer mortality among males confirms the view that the registered increase of cancer mortality is in a large measure only apparent. Between 1881 and 1891 the registered increase of mortality from cancer was 69 per cent. among males and 28 per cent. among females. This is explained by more accurate diagnosis, more frequent autopsies, and the fact that cancer in the male is more frequently internal and difficult of diagnosis than in the female. The question whether cancer is really on the increase could be solved were all deaths accurately certified, and especially if the primary site of the cancer were stated in each case. Major, writing in the *British Medical Journal*, whilst strongly of the opinion that there has been a real increase of cancer, is not prepared to accept the cancer mortality statistics on account of defective death certification. He quotes the fact that during the year 1896 letters of inquiry were sent by the Registrar-General to practitioners with respect to unsatisfactory certificates, which inquiries resulted in as many as 597 deaths being transferred from various vague causes to the cancer list in one year.

The report of the Cancer Committee of the Birmingham branch of the British Medical Association, which appeared in the journal of the Association, states that there are certain more or less well-defined areas in which the mortality is markedly higher than the average, and others in which it is much lower—a damp, ill-drained, water-logged soil is more frequently associated with a high cancer death-rate than a dry, well-drained soil, and that contamination of the soil or subsoil for long periods with decomposing organic matter is a concomitant of, and probably bears a casual relation with, the specially high cancer mortality; that while second and third cases of cancer occur in particular houses with a somewhat greater frequency than can be accounted for by mere coincidence, there is much greater weight of evidence that cancer is found with extraordinary frequency in particular groups of houses, say, in the same street, thus constituting "cancer foci." This may be associated with contaminated soil. Cancer occurs more frequently in old than in new houses, and in districts inhabited for a long time, than in those recently built over.

The report suggests that under certain circumstances the disease may be transmitted direct from one person to another, among those who are constantly in close association.

Roswell Park is convinced that cancer is actually contagious, while D'Arcy Power believes that, under very favoring conditions, it is an infective disease.

The foregoing views touch upon many of the most salient features of the cancer question, and the expression of expert testimony on the matter can do nothing but good.

The trend of opinion in almost every country would seem to point to the initiation of a really vigorous crusade against cancer, but it would be well if these modern knights of science were to take for their motto, *festina lente*, and to resolve on a plan of campaign calculated to bring about the best results before proceeding further.

The fight against cancer must be waged on different lines to that against tuberculosis. The origin of cancer, unlike tuberculosis, has yet to be discovered, and the primary and essential object surely is to collect funds in order to prosecute this search to the best possible advantage.

As was pointed out by Mr. Malcolm Morris in the *Practitioner*, April, 1899, "Collective investigation" of the etiology of cancer should be organized, so that laboratory workers in different parts of the world may be in touch with one another, and exchange views constantly as to progress.

Individualism in science work is good in its way, exciting healthy emulation, but organized labor in this particular field of research might yield better results. Whether scientific men of different nationalities would be unselfish enough to regard the matter in this light is perhaps somewhat dubious.

At any rate there can be no disputing the fact that one of the supremely important questions of the day is to discover the origin of cancer, and it is also an undeniable truth that to accomplish this object very large sums of money are needed.

EUTHANASIA.

About a year ago suicide was discussed editorially on more than one occasion in the Medical Record, and provoked general attention. The subject of suicide has always been of engrossing interest to all sorts and conditions of men.

The latent strain of morbid curiosity respecting matters psychological, which is inherent to a greater or less degree in every human being, is one reason for this manifestation of concern in all relating to suicide.

Every now and then the question comes to the front, and is made the theme of philosophic dissertations.

In England, recently, a particular phase of the same topic has been widely debated.

The *London Spectator*, February 1, contains an article on that form of suicide known as euthanasia, which was suggested by the circumstance of a Deputy in the Saxon Parliament introducing a bill to permit doctors to put patients, whose recovery was hopeless, to death. After dealing with suicide from various aspects, moral and otherwise, the writer in the *English Review* discourses on the matter from the standpoint of the general public and the physician, and, in part, says: "A feeling has sprung up that God cannot have intended the useless torture of any human being, and that, accordingly, to make death easy when it would be exquisitely painful must, at least for the sufferer himself, be justifiable.

"The thesis is seldom maintained in fruit, though Mrs. Oliphant, who was a strong believer in God, openly defended it in 'Carita' in cases of cancer."

With regard to the proposal to legally endow the medical profession with the power to end life in hopeless cases when so desired, the article in the *Spectator* runs as follows: "The world seldom makes mistakes when its self-protection is concerned, and to give such powers to a whole profession would distinctly lessen its security. As a rule, with a few exceptions, doctors are good people, but there are many of them, and some of them must be bad. To give all a legal right to administer poison on demand, without responsibility, would be to arm every profligate heir with a most dangerous weapon. It is not well for the sake of the class itself to trust the power of life and death to any class which must, of necessity, exercise it in secret. It may be said that the power is trusted now, and so it is, but with the usual guarantees, and this additional one, that the rule of the profession is to preserve life when it can. They have a right, when suffering threatens life, to risk life by the use of sedatives sufficient to prevent that threat—but they act always under the restraint of professional opinion of relatives, and of the law. To remove the last check would be to constitute doctors a separate caste, with rights different from those of the rest of the community—never a safe position. The immediate effect would be to create a new professional impression that their business was not so much to avert death as to secure pleasant death—euthanasia—and the question at what point it should be secured would admit of widely different interpretations. The world, we feel sure, even if it ever accepts euthanasia as allowable, will prefer doctors whose respect for life can be trusted as now under all circumstances."

The above remarks brought forth a flood of correspondence, one writer stating that the late Alfred Nobel advocated suicide under legal and medical control, and offered an immense sum of money to found a suicide club on a gigantic scale, where those who were weary of life, from sickness or from other causes, could begin the descent of Avernus painlessly and easily, while another correspondent declared that under Edward II. euthanasia could be practised legally by physicians under certain conditions.

The writer in the *Spectator* argues ably—if argument be needed—against legalizing euthanasia, but he takes the situation somewhat too seriously. The granting of such powers to the medical profession is probably as far off as ever it was. The public and the large majority of the doctors will sternly set their faces against the passing of any measure which would grant control over life and death, no matter under what circumstances, to any class, and which would serve, in a manner of speaking, to cast a shadow over that class.

Perhaps in these times of stress and strain, when neurotics and degenerates abound, there may seem to be a greater tendency to advocate such a law as the legalizing of euthanasia than ever before, but it must also be borne in mind that like proposals were made before the commencement of the Christian era.

Another point which was hardly given due consideration in the arguments concerning euthanasia in England is that even if doctors were to be legally invested with the power to end the life of a person stricken with a deadly and painful disease, that there would probably be but few sufferers who would avail themselves of the privilege.

In any case, there can be no doubt that a proposition of the nature of the one advanced in the Saxon Parliament would be as promptly scouted in every civilized country as it was there.

PUBLIC HEALTH BILL.

A bill has been introduced in the House of Representatives to establish a board of public health, and for other purposes. The object of this bill, as stated in the preamble contained in the first section, is to create a commission of public health, to be composed of a commissioner and of a representative from each State and territorial board of health, the Surgeons-General of the Army and of the Navy, the Supervising Surgeon-General of the Marine Hospital Service, or such other medical officer from either service as may be designated by the chief thereof, with the approval of the President, to be known as the "National Commission of Public Health," which shall be a bureau in the Treasury

Department, and the duties of which shall be to collect and disseminate information with regard to the prevalence of infectious diseases in this and other countries; to collect and publish vital statistics; to prepare rules and regulations for securing the best sanitary condition of vessels from foreign ports, and for preventing the introduction of infectious diseases into the United States and there spread from one State or Territory into another State or Territory; and, in general, to make investigations, publish information, and formulate rules with a view to the preservation of the public health; and to perform such other duties as may, from time to time, be prescribed by the Government authorities.

The bill contains thirty-one other sections, which cover all the duties which might be supposed to come within the province of a national board of health.

It, however, would seem—according to the provisions of the bill—that by far the greater part of the work which will fall to the lot of the proposed new board is that concerned with the prevention and spread of infectious diseases and with quarantine matters.

The Marine Hospital Service, by the thorough manner in which it has performed these duties, has made for itself an enviable and world-wide reputation, and would it not be wiser to enlarge the scope and increase the staff and emoluments of a long and well-tried body of men, than to a large extent merge their offices in the suggested new board.

Without prejudice, it appears that the formation of a commission of public health on the plan sketched in Mr. Ray's bill is unnecessary.

THE AMENDED VACCINATION ACT FOR NEW YORK STATE.

THIS act, introduced into the New York State Senate by Mr. McCabe, has been read twice and committed to the Committee on Public Health.

Its provisions contemplate far more stringent regulations with regard to the enforcement of vaccination than are at present in force.

The vaccination of school children is strongly insisted upon; the trustees or other officers in charge of schools may adopt a resolution excluding children and persons not vaccinated from schools, but ten days' notice shall be given of the adoption of such a resolution, by means of posting copies of the same in public and conspicuous public places within the limits of the school government to the effect that provision has been made for the vaccination of children who desire to attend school, and whose parents or guardians are unable to obtain vaccination for them on account of poverty or for other valid reasons.

The Board of Health of each city or town is required to furnish the means of free vaccination or revaccination to all the inhabitants thereof, and can enforce the fulfillment of this measure, whenever in the opinion of said board the public health and safety demands such action.

The local boards of health are invested with the power to quarantine for fourteen days any person who refuses to be vaccinated.

Principals of schools, colleges or universities, superintendents of almshouses, State reform schools, industrial schools, hospitals and the like, commanding officers of the National Guard, proprietors or managers of manufactories or of business houses, heads of police or fire department of any city, or public and municipal officers of any kind, are required to take care that no person shall remain under their charge or in their employ who shall not have been successfully vaccinated within a period of five years, except upon presentation of a certificate, signed by a registered physician, stating that he has twice vaccinated said person without success and that there exists vaccinal insusceptibility.

The act in its amended form is both comprehensive and binding and would seem to leave no loop-hole for escape from vaccination.

With the regulations as regards schools, hospitals and any place in which a number of persons are gathered together in more or less close contact, none but the prejudiced against vaccination can find fault.

The clause in the act which accords the boards of health the power of quarantining may perhaps be regarded by the strenuous objectors as a somewhat arbitrary measure and an infringement of the rights of citizenship.

However, if the matter be pondered upon without bias, it will be seen that in the framing of this regulation the good of the many is the first consideration. A person who has been exposed to the contagion of smallpox is clearly a public menace, and whatever may be his own opinions on the subject, he should not be allowed to parade them to the danger of the entire community.

The efficacy of vaccination as a safeguard against smallpox and the need of revaccination at certain periods has been abundantly proved over and over again—the experience of Germany has conclusively demonstrated this fact, and although there are some who in the face of the strongest evidence still refuse to attribute any virtue to vaccination, nevertheless they must for the common weal be compelled to yield to the will of the majority.

If vaccination is to be made strictly compulsory, then it would seem necessary, in the natural order of things, that free vaccination should be available to all.

On the whole, the amended vaccination act meets the exigencies of the situation in a satisfactory manner, and deserves the support of the medical profession.

Philadelphia Neurological Society.—At a stated meeting, held February 25, Dr. F. X. Dercum read "A Memoir of the late Dr. John T. Eskridge." Following this Dr. Adolf Meyer, Director of the Pathological Institute for the New York State Hospitals, delivered, by invitation, an address entitled "Conditions for Psychiatric Research," in the course of which he outlined the course of work that he hopes to pursue in connection with the new position to which he has recently been elected. He dwelt especially upon the coordination necessary between clinical study and postmortem observation, and he made an earnest plea for full and careful records of cases, in order that their distinctive features may be established and a practical scheme of classification worked out. At the close of the meeting a reception was tendered Dr. Meyer at the University Club.

Medical Holders of Medals of Honor in the Army.

A board of officers of high rank, headed by Major General McArthur, which has recently been engaged in an investigation of acts of heroism performed by officers and men of the United States Army during the war with Spain, the Philippine insurrection, and the expedition against Pekin, has found that but ten officers of the entire army should be awarded a medal of honor, the highest distinction in the power of the authorities to bestow. The list of the officers so honored is headed by the name of First Lieutenant George W. Mathews, assistant surgeon, United States Army; the medal being granted him for "most distinguished gallantry in action near Porac, Luzon, P. I., October 29, 1899, in attending wounded under a severe fire of the enemy, and seizing a carbine and beating off an attack upon wounded officers and men under his charge." Dr. Mathews is a native of Massachusetts, and was appointed to the Army from that State.

Besides Assistant Surgeon Mathews, four other medical officers of the Army, now living, have been granted medals of honor, which correspond, in the circumstances under which they are awarded, to the coveted "Victoria Cross" of the British Army. These officers are: Col. B. J. D. Irwin, who received his medal for "distinguished gallantry in action against hostile Apache Indians," while voluntarily in command of a body of troops; Lieut.-Col. H. R. Tilton, for "distinguished gallantry in action against Indians . . . where he fearlessly exposed his life and displayed great gallantry in rescuing and protecting the wounded"; Major J. K. Corson, for "most distinguished gallantry in action near Bristol Station, Va.;" Capt. (now Brigadier-General) Leonard Wood, for "distinguished conduct in the campaign against hostile Apache Indians during the summer of 1886."

But one hundred and ten medals of honor are now held by living officers, of which number five have been awarded to army surgeons. Considering the relatively small number of medical officers of the Army compared with officers of the line, and the fact that the duties of the former largely require their presence where there is no opportunity for the performance of acts of gallantry in action for which, under the law, such medals can alone be awarded, such a showing speaks volumes for the heroism of the medical men in the Army. In the British Army it is said that, in proportion to its members, a greater number of Victoria Crosses—given for "valor" only—have been awarded to members of the Royal Army Medical Corps than to those of any other branch of the service.

Annual Report of the State Board of Examiners of New Jersey.

The State Board of Medical Examiners of New Jersey has been in existence since 1890, and has every reason to look back with pride upon its record during that period.

By means of the provisions of the law which brought this body into force, definite minimum requirements, preliminary to medical practice, have been established, which are of a higher standard than any heretofore existing since laws regulating medical practice in New Jersey were first enacted.

Its labors, too, in the interests of public health have been attended with much success.

The Board of Medical Examiners has, by the enforcement of stricter laws, improved the status of the profession, diminished quackery, and made it imperative that its licentiates possess a reasonable knowledge of modern medicine and sanitary science.

It is the duty of the Board of Medical Examiners to enforce compliance with the statutory educational requirements of the State; to examine approved applicants for a State license and to issue a certificate of license to those who attain the average that the State demands. This course determines the merits of the applicant for license, and places the profession of the State upon a higher and more equal footing than could otherwise be done.

During the year just gone by the Board has examined eighty-seven applicants for medical license, sixty-three of whom were licensed and twenty-four rejected, making the percentage of rejections 27.58; twenty-three applicants for midwifery license were examined, sixteen of whom were licensed and seven rejected, making the percentage of rejections 30.

New Jersey has set a good example to many States of the country by the excellence of her laws regulating the entrance to a medical career, and has done more than her share towards gaining the object desired by the medical profession generally, of establishing a uniform medical standard in every state of the union.

Cigarette Smoking.

The question of the harmfulness of cigarette smoking is continually coming to the front. Dr. H. F. Fiske, Principal of the Northwestern Academy in Evanston, Ill., has recently stated that only 2 per cent. of those addicted to cigarette smoking in the school had been able to reach the first grade, while in the lowest grade there was a percentage of such smokers of 57.

A mass of evidence has been brought against the cigarette as a most injurious factor in undermining the health, and especially of seriously affecting the nervous system of persons accustomed to smoking them to a large extent.

There can be no doubt that cigarette smoking is exceedingly harmful to the young, and probably smoking of any description in adolescence or adult age is calculated to be opposed to sustained mental effort.

That, however, cigarette smoking in itself is more harmful than are the other modes of using tobacco has never been proved; indeed, the experience of those who have made a study of the matter points to an opposite conclusion. The experiments made by the Health Department of Chicago, some five years ago, failed to reveal any of the peculiarly insidious and noxious properties in several brands of cigarettes examined, which it is often stated they possess, and the analysis undertaken in the laboratory of the *London Lancet* three years ago, of many brands, both American and English, reached similar results.

Smoking, when young, is harmful in many ways, and undoubtedly, as Dr. Fiske says, tends to weaken and deaden the mental faculties.

For this reason, therefore, cigarette smoking is to be condemned in the young, and not because the cigarette *per se* is especially injurious.

Indecent Medical Advertising in Daily Press.

There is such a general subversion of the ethical to the commercial by the editors of the newspapers of this country, that the action taken by Mr. Frank A. Munsey, who recently purchased and reorganized the *Washington Times* is worthy of special commendation, and sets an example for good which it is much to be hoped may not be unheeded by other editors. In an announcement to the public, Mr. Munsey says: "There is another way of keeping a paper alive when it is not on sound business lines, and that is by running a lot of disreputable and shameful advertising—advertising that ought to put to shame any self-respecting publisher. I refer to a class of so-called medical advertisements that are carried by most of the newspapers of the country—even the respectable papers—but which advertisements are indecent and vile, and which the Post Office Department should compel publishers, regardless of their avarice, to drop."

Following out his ideas, Mr. Munsey has eliminated all advertising matter of this sort from his paper. This action has, undoubtedly, resulted in considerable financial loss, as the *Times* was formerly a conspicuous sinner in respect to the publication of advertising matter of a disreputable character, and it is much to be hoped that this loss may be more than offset by an increased circulation among the decent and cleanly-minded of the community. There is no doubt that suggestive "medical" advertisements of aphrodisiacs, specifics for venereal diseases, preventives of such diseases and of conception, "female regulators," offers of professional services to "ladies in trouble," and the rest of the class, form one of the greatest menaces to public health and morals. They directly incite to vice by promising immunity from its consequences, which they thrust before the notice of the young and innocent. As suggested above, the whole problem is one that should receive the attention of the Post-Office authorities, who have it in their power to prevent this insidious debauchery of the public morals The forcing out of advertisements of this sort from the public prints is one of the first tasks to which a politically-united medical profession should set itself.

MILITARY HYGIENE AT WEST POINT.

It is understood that, at the direction of Secretary Root, the academic faculty at West Point is now engaged in a consideration of the course of study given the cadets, with the purpose of adding a course of instruction in military hygiene to the curriculum. This addition is strongly favored by the Superintendent, Col. A. L. Mills, who, with other progressive line officers, believes that the object lessons of the sanitary deficiencies of line officers during the war with Spain should not be disregarded and that the scientific and technical training of the cadets should, if necessary, be cut down so as to permit of their proper instruction in the care of troops. Col. Mills is said to believe that military efficiency depends upon the attainment of four great essentials—suitable armament, proper food, efficient transportation service and careful sanitary government—and to favor a course of instruction in practical military hygiene to the cadets extending over not less than thirty hours in each academic year. His broad-minded attitude in this respect is in marked contrast with that of previous Superintendents of the Military Academy, who officially opposed the repeated recommendations of the Board of Visitors that such a course of instruction should be established, and his efforts will meet with the hearty approval and support of the medical profession and of the country at large. It has always seemed to us as if the preservation of the health and efficiency of his own forces by a general was second only in importance to his destruction of the army of the enemy, and that the accomplishment of the former was one of the chief factors in bringing about the latter result. Unnecessary suffering and mortality from preventable disease has always appeared to us to be the result of bad generalship quite as much as poor organization and strategy. The public at large has rapidly come to this way of thinking and in the future will be slow to excuse sanitary deficiencies in commanding officers. We are glad to see that the up-to-date line officers in the army are alive to the necessity of a proper knowledge of hygiene on the part of all those who may have command of troops, and that the traditions of the past, in respect to the study of this most important subject, are to be pushed aside by the progressive administration which is now directing the affairs of the Military Academy.

NEW TREATMENT OF LEPROSY.

The *San Francisco Chronicle* of a recent date has an extremely eulogistic article upon the treatment of leprosy in the Hawaiian Islands by the active principle of the tua-tua shrub.

The journal in question says: "Nearly three years ago the Department of Agriculture sent twenty-seven of the tua-tua plants to Dr. Carmichael, United States Marine Hospital Surgeon then at Honolulu, but now here. The plants were set out in the experiment station grounds in Honolulu, were they flourished, waxed green and produced many buds. With the plants came statements from Venezuela—their home—that leprosy had been successfuly treated with the extract. Dr. C. E. Camp, assistant in the bacteriological laboratory of the Board of Health of Hawaii, has been experimenting on lepers ever since the receipt of the shrub.

In Tahiti really wonderful advance toward the cure of leprosy has been achieved by the use of the shrub, but in Hawaii it has been difficult to induce the lepers to undergo the treatment. The use of the medicine is generally accompanied by severe colic, and the Kanakas will not submit to the pain, even though a promise is held out of a partial cure of their terrible affliction.

The lepers are free to accept or refuse treatment, and cannot be forced to take the medicine. A Portuguese in Honolulu, who had leprosy, was given the tua-tua, and, according to Dr. Camp, shows absolutely no symptoms of the disease now.

Curiously enough, the Board of Health of Hawaii is seemingly unwilling to aid Dr. Camp in his experiments, or even to permit him to treat those lepers under the care of the board. President Sloggett of the board when asked as to this, said: "The Board of Health of Hawaii has invariably turned down requests to be allowed to experiment with leprosy cures. We have done this because the owners of cures were invariably proprietors of patent nostrums, who hoped to sell their manufactures by getting the indorsement of the board. We, of course, would be pleased to see the discovery of some cure of leprosy, but I doubt if any such cure will ever be found."

The newspapers of Honolulu have taken the matter up, and in vigorous terms have urged that the Board of Health give Dr. Camp every opportunity for investigating the merits of tua-tua.

Thus the *San Francisco Chronicle:*

"It would be interesting to learn upon what grounds the prophylactic qualities of tua-tua in the treatment of leprosy are based. Are there any definite proofs that leprosy has been sucessfully treated by the drug in Venezuela and how many cases has Dr. Camp treated with benefit to the patients in Honolulu?

"There should be no great difficulty in ascertaining these facts, and if it can be decisively shown that even partial relief from the disease has been derived from the administration of tua-tua, then no restrictions should be placed upon investigations with regard to tua-tua.

"In the meantime, and in default of definite information, it would appear that the stand taken by Dr. Sloggett is distinguished by sound common sense."

Buffalo's Experiment in Dealing With Vice.

It is stated that the ministers and police of Buffalo have reached an agreement with regard to dealing with vice, by which disorderly houses are to be restricted within certain limits, and all public thoroughfares to be kept free from the vicious element.

This new departure on the part of the administration of Buffalo is not, however, without a previous example in this country.

For twenty years, according to a correspondent to the *New York Evening Post*, there has been a like arrangement in Minneapolis, Minn. All the saloons there have been, and they are now, in an area confined to six blocks in width from the Mississippi River on each side, and other questionable places in a narrower limit. This district is regularly patrolled by the police, and keepers of houses of prostitution are regularly fined.

The plan is declared to have answered excellently in Minneapolis.

Regulation of vice in the large towns of the European continent is conducted on somewhat similar principles; the houses of ill fame are, as a rule, confined to a certain district and are subjected to strict medical and police supervision.

Such a system undoubtedly has its merits, and, in a modified form, might act well in New York, where a large part of the population is ignorant and of vicious tendencies.

The Committee of Fifteen have deserved well of the community by their efforts to control prostitution, and will doubtless watch the results of Buffalo's experiment with great interest.

The question of vice in all its forms, and especially of prostitution, of course closely concerns the medical profession, who naturally know better than any other class the evils which are incurred by it, and who would gladly welcome any movement calculated to suppress or repress its worst features.

Tuberculosis in Havana.—The Health Officer of Havana, Major W. C. Gorgas, Surgeon U. S. Army, has recently given much attention to the prevention of the spread of tuberculosis in that city. A sanitary census taken of the city shows the existence of 1,187 cases of tuberculosis, and these have been urged to apply to dispensaries as out-patients for relief, sleep with bedroom windows open, avoid confining occupations, and take proper precautions relative to the disposal of the sputa. Special attention has been given to the cigar manufactories in this respect, particularly since tubercle bacilli were found in cigars which had been made by a consumptive. To this end, cigar workers are required to moisten the tips of cigars, in finishing them, with sponges, instead of with the lips, as was formerly done, and work benches are placed so as to face the same way instead of toward each other. The public reader, a peculiar institution common to all Cuban cigar factories, who is hired to read newspapers, novels, etc., to the hands while at work, will in the future be required to devote a portion of his time to reading matter relating to elementary hygiene and the prevention of disease. The work is essentially educational and persuasive rather than coercive, and is meeting with hearty support from the Cubans.

News of the Week.

Proposed Increase of Medical Corps of Navy.—Recommendation has been made by Surgeon-General Rixey of the Navy that the Medical Corps of the Navy be increased by forty medical officers, this increase to be made by the addition of fifteen surgeons and twenty-five assistant surgeons. Owing to the increase in the size of the Navy, the greater number of ships in commission and the large amount of time lost by medical officers in changing station between the United States and the Philippines and other outlying stations, Surgeon-General Rixey finds considerable difficulty in furnishing proper medical attendance. He believes that the addition should affect the higher as well as the lower grades, and points out that the senior passed assistant surgeon has been in the service for twelve years. His recommendations have been approved by the Secretary of the Navy and forwarded by him to Congress, with the recommendation that the necessary legislation be enacted.

Philadelphia County Medical Society.—The stated meeting, held February 26, was devoted to a symposium on cholecystitis. Dr. Joseph McFarland presented a communication on "The Pathology of Cholecystitis," Dr. Joseph Sailer one on "The Etiology and Diagnosis of Cholecystitis," Dr. J. Chalmers Da Costa one on "The Surgical Diagnosis and Treatment of Cholecystitis," and Dr. Solomon Solis-Cohen one on "The Medical Treatment of Cholecystitis." The discussion was participated in by Drs. J. C. Wilson, J. H. Musser, Ernest Laplace, G. G. Davis, J. B. Deaver, and W. E. Hughes. A resolution was adopted pledging the moral and material support of the Society to Dr. H. M. Righter against whom a verdict was recently rendered with damages fixed at $1,000 for the development of contagious impetigo following vaccination.

Northern Medical Association, Philadelphia.—At a stated meeting, held February 28, Dr. Orville Horwitz read a paper entitled "The Diagnosis and Surgical Treatment of Renal Tuberculosis," and Dr. H. D. Geisler a paper on "The Urinary Changes in Some Cases of Renal Tuberculosis at the Philadelphia Hospital." The discussion was participated in by Drs. Charles P. Nohle, I. P. Strittmatter, and others.

Pathological Society of Philadelphia.—The stated meeting, held February 27, was devoted to a symposium on the subject of the blood. Dr. Alfred C. Croftan presented a communication entitled "The Ferment-Chemistry of the Blood, with Particular Reference to General Metabolism," Dr. Courtland Y. White a paper on "Diagnosis by Means of the Study of the Formed Elements of the Blood," and Dr. Joseph Sailer one on "Diagnosis by Means of the Study of the Serum Reactions of the Blood."

Fort Named after Dr. Lazear.—Following its policy of naming the posts and fortifications of the country after distinguished members of the Army, the War Department has recently directed that one of the seacoast defences near Baltimore, Md., shall hereafter be known as Battery Lazear. This action was taken, so the order says, "in honor of Dr. Jesse W. Lazear, late an acting assistant surgeon, United States Army, who, while on a visit to Las Animas Hospital, Havana, Cuba, on September 13, 1900, and while collecting blood from yellow-fever patients for scientific study, was bitten by a Culex mosquito and deliberately allowed it to satisfy its hunger, and, as a result, contracted yellow fever, of which he died on September 25, 1900, thus by his self-sacrifice positively determining that the mosquito carries yellow-fever infection."

An American Hospital in Paris.—Mr. Edward Tuck, formerly of Boston and later of New York, but for twenty-five years a resident of Paris, has promised to defray the entire expense of establishing the free American hospital in Paris, announcement of which has already been made, and the ground for which has already been bought in the Passy quarter, in one of the most healthful parts of Paris. The hospital is to be named Franklin Hospital, and besides being built on the latest American model, it will be managed entirely by American physicians and nurses. Mr. Tuck will not only defray the expenses of installing the institution, but he will also donate a sufficient fund to maintain it permanently without outside help. Dr. Magnin will be director of the institution. Building will be begun in the spring, but it is not expected that the hospital will be ready for occupancy under two years' time.

The Journal of Obstetrics and Gynæcology of the British Empire is the somewhat cumbersome title of a new monthly journal which made its appearance in London with the new year. The editor in chief is Mr. Alban Doran, whose name conveys a promise of excellence, assisted by a huge staff of collaborators, most of whom, we imagine, will be content with contributing their names without engaging in any arduous editorial work. The first number is good, and if the succeeding issues are as good the future of the journal is assured.

Innocuous Yellow-Fever Serum.—Dr. Caldas, who enjoyed a little notoriety hereabouts some months ago, while he was making a trial of the Caldas or Bellinzaghi (we never have known exactly which it was) yellow-fever serum in Havana, and whose experiments failed completely, recently laid his case and his grievances before his Brazilian confrères. The National Academy of Medicine in Rio de Janeiro appointed a committee to examine into the alleged virtues of his serum, and the report made was that the serum was innocuous and also inefficacious.

Hospitals for Contagious Diseases.—It is announced that the Health Commissioner will ask for an appropriation to build five hospitals for the treatment of contagious diseases, together with an equal number of disinfecting plants, in this city. One hospital will be provided for each borough.

The Chicago Water Supply.—The Board of Health of Chicago is constantly warning the people of that city against the use of unboiled water. Until now, it is said, there has been no rainfall sufficient to flush the sewers since the middle of last October, and consequently the first flushing that occurs will wash out an immense amount of filth into the lake and river. This will inevitably contaminate the water and render it unfit for consumption unless previously boiled.

More Public Baths in New York.—The Committee on Public Baths of the New York Association for Improving the Condition of the Poor recently sent a communication to the President of Manhattan, suggesting various plans for the construction and maintenance of public baths. The committee advocates the construction of sixteen bath buildings in various parts of the city; plans were presented.

War on Mosquitos.—The New Jersey House of Assembly has appropriated $10,000 to meet the expenses of an extensive and well-considered plan of campaign looking to the extermination of mosquitos, especially anopheles, in that State.

A Dental Practice Bill has been introduced in the New York State Legislature providing that no degree in dentistry shall be conferred in this State unless the candidate has satisfactorily completed a three-year course in an institution registered by the regents or has had five years' actual practice in operative and mechancal dentistry subsequent to the registration of his certificate as a student, and passes an examination to the satisfaction of the Board of Examiners.

Distribution of Charity Fund to the German Hospitals.—The German Charity Ball Committee has apportioned $10,000 of the receipts of the ball held January 23 among the various institutions, as follows: German Hospital, $1,700; German Society, $1,250; Isabella Home, $1,050; St. Francis Hospital, $1,050; St. Mark's Hospital, $1,050; Poliklinic, $1,050; Wartbury Home, $1,050; West Side Dispensary, $900, and German Ladies' Society for the Relief of Widows and Orphans, $900.

Total Abstinence Hospital.—The articles of incorporation of New York Red Cross Hospital, approved recently by the State Board of Charities, contains the following sentence: "Alcohol, as alcohol, or in any of its forms, shall never be used in the said hospital for internal medication or as a beverage." The incorporators of the hospital are: William T. Wardwell, *President:* John S. Huyler, Dr. A. Monae Lesser, Bettina H. Lesser, Allen Wardwell, Orleans Longacre, John P. Faure, Edward R. Johnes, Max W. Kraus, Alfred L. Manierre and William A. Gans.

A New Building for the Ophthalmic and Aural Institute.—Work will soon be begun upon the foundations of a new building for the New York Ophthalmic and Aural Institute, now located in East Twelfth Street. The new hospital will be at the corner of Sixty-fourth Street and Central Park West.

Influenza is prevailing to a greater extent than for several years past in London, where it has caused a decided rise in the death-rate. Many prominent men in the various walks of life are prostrated, and business is seriously impeded in many establishments owing to the absences of clerks and others down with the grip.

Medical Society of the Missouri Valley.—The fourteenth semi-annual meeting of this society will be held at Lincoln, Neb., on Tuesday, March 20, under the presidency of Dr. Richard C. Moore of Omaha. An interesting program will be presented. The secretary, to whom all the titles of papers to be read should be sent without delay, is Dr. Charles Wood Fassett of St. Joseph, Mo.

International Association of the Medical Press.—A meeting of this association will be held at Monte Carlo on April 7. Delegates to the meeting will be appointed by the various national associations of the medical press. The main subject of discussion will be that of copyright of scientific publications, a report on which will be drawn up to be submitted for approval to the plenary reunion of medical journals, the Second Internationl Congress of the Medical Press, to be held in Brussels next autumn. The question of the establishment of an international medical news organization will also be discussed at the Monte Carlo meeting. Communications regarding this meeting should be addressed to Monsieur R. Blondel, Boulevard, St. Germain, 93, Paris, France.

The Intercolonial Medical Congress of Australasia was held at Hobart, Tasmania, on February 17-22, under the presidency of Dr. Gamaliel Henry Butler of Hobart.

Typhoid Fever in Michigan City.—An epidemic of typhoid fever prevails in Michigan City, Ind. Two hundred cases of the disease are reported to be in existence there. Besides the typhoid fever epidemic, 2,000 cases of winter cholera have developed since the middle of December in a population of 12,000, according to the report of the State Board of Health. Several deaths have occurred, and suits have been brought against the city for damages, as it is alleged that the epidemic is due to a preventable contamination of the water supply.

The Texas State Medical Association.—The time and place of meeting of this association have been changed from El Paso, April 22-25, to Dallas, May 6, 7, 8 and 9.

The Nathan Hatfield Lewis Prize.—A committee of the College of Physicians of Philadelphia announces a prize of $500 to be awarded to the author of the best essay, embodying original observations or researches, on "The Relation between Chronic Suppurative Processes and Forms of Anæmia," submitted on or before March 1, 1903. Essays must be typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device, and containing the name and address of the author. No envelope will be opened except that which accompanies the successful essay. Unsuccessful essays may be reclaimed by their respective writers or their agents within one year. The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize. The competition shall be open to members of the medical profession and men of science in the United States. The original of the successful essay shall become the property of the College of Physicians. The trustees shall have full control of the publication of the memorial essay. It shall be published in the *Transactions* of the College, and also, when expedient, as a separate issue. The essays offered in competition may be sent to Dr. J. C. Wilson, 219 South Thirteenth Street, Philadelphia, Pa.

Victoria University in England is, it is said, about to suffer dissolution. Liverpool insists on having a university of its own, and general opinion seems to indicate that Leeds and Manchester must of necessity claim similar action for their respective centers. This premature disintegration is much deplored by many in the best position to judge of its probable detrimental effects on educational progress.

"The Woman's Medical Journal" has appeared in larger form with the beginning of the year, the old magazine form having proved inadequate. Dr. Elizabeth Dunn has been added to the editorial staff, having charge of a new department of Mental and Nervous Diseases. Dr. Eliza H. Root remains in editorial charge. We congratulate our esteemed contemporary on the well-deserved prosperity to which its improved appearance bears evidence.

A New French Hospital in New York.—The French Benevolent Society of this city is about to build a new hospital on Thirty-fourth street, a block west of the present location. The hospital will be of red brick and limestone, seven stories in height, eighty-four feet wide and ninety-eight feet in length. Each of the wards will have a sun parlor in the rear, and there will be a large roof garden. The present hospital building and the lot on which it stands has been sold.

The Chicago Eye, Ear, Nose, and Throat College.—At the annual meeting of this college, held February 10th, the following were named as the board of directors for the ensuing year: *President*, Dr. W. A. Fisher; *Vice-president*, Dr. A. G. Wippern; *Secretary*, Dr. J. R Hoffman; *Members*, Drs. Thomas Faith and H. W. Woodruff.

Obituary Notes.—Dr. Ervin Alden Tucker, of this city, died on March 3, after a short illness of pneumonia. He was born in Attleborough, Mass., February 2, 1862. He was a graduate of Amherst College and obtained his medical degree from the College of Physicians and Surgeons, New York, in 1889. After study abroad he returned to this country, and was for a time resident physician in the Sloane Maternity Hospital, becoming later assistant attending physician to the same institution. He was a member of the Medical Society of the County of New York, the New York County Medical Association, the Academy of Medicine, the Obstetrical Society, the West End Medical Society, and the Society of the Alumni of the Sloane Maternity Hospital. A widow survives him.

Dr. Edward Mott Moore of Rochester, N. Y., died at his home in that city on March 3, at the age of eighty-eight years. Dr. Moore, when in active practice, was one of the best known surgeons of this State, and was a prominent member of the American Medical Association. He was a graduate of the Medical Department of the University of Pennsylvania in the class of 1838. He was one of the organizers of the New York State Medical Association. In Rochester he was always active in public works, and was known as the father of the Rochester parks, because of his successful efforts to beautify them.

Dr. Conrad Mund of this city was drowned by the upsetting of a boat in the Great South Bay on March 2. He was graduated from the College of Physicians and Surgeons, New York, in 1900, and subsequently served on the house staff of the Paterson, N. J., General Hospital.

Dr. Elizabeth B. Wakeley died on February 27, in Orange, N. J., where she was visiting. She had been a practising physician in New York State for more than thirty years. She was born in Connecticut seventy years ago, but had spent most of her life at Levanna, on Cayuga Lake, N. Y. She is survived by her husband and three adult children, two of whom are physicians.

Dr. Alice Ewing of Chicago died at Kenosha, Wis., on February 26, aged fifty-two. She was graduated from the State Normal School at Whitewater. After teaching five years she was graduated from the Hahnemann College in 1887, and from the Northwestern University Woman's Medical School in 1894.

Dr. Joseph A. Booth died on February 26, at his home in this city, from heart disease, after an illness of several months. He was born in Baltimore, Md., sixty-two years ago. He studied medicine in this city and became a general practitioner. For many years he made his home at Long Branch, N. J., but abandoned his practice about a year ago, and had since lived quietly in this city.

Dr. Arthur T. Muzzy of this city died March 4 at the Presbyterian Hospital of heart disease. He was born in 1851 in Madura in southern India, where his father was a missionary. He was graduated from Amherst College in 1874, and from the College of Physicians and Surgeons, New York, in 1879. At the time of his death he was president of the Charity Hospital Alumni Association. He had been for nine years assistant surgeon of the Eye and Ear Infirmary. He was also a member of the board of managers of Christ Hospital in Jersey City, and consulting physician at the Isabella Heimath for Aged Couples. Dr. Muzzy was a skilful ophthalmologist and a genial gentleman, and the news of his death will come as a sad blow to his many friends and admirers in the medical profession of this city.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

IMMORAL ADVERTISING—PATHOLOGICAL SOCIETY—OBSTETRICAL SOCIETY—THE "STOMACH CHAMBER"—CANCER AND VEGETABLES—SMALLPOX NOTES—OWENS COLLEGE —ANOTHER V. C. FOR AN ARMY SURGEON—INQUESTS.

LONDON, February 14, 1902.

THE evil of immoral advertising is being brought before the public in consequence of the fuss made by the *Daily News* over its new management. Through the Press Association it has sent successive items of information about its entirely new management, which, after all, seems not more new than many an entertainment advertised in similar terms. The chief point is that Mr. Cadbury of cocoa fame, who became chief shareholder when the paper went pro-Boer, has taken over the entire financial responsibility, and appointed a new editor and a new general manager. Mr. Cadbury is a Quaker, and as such, opposed to all war, but that is no reason why his paper should always blame his own country, and support its enemies. Perhaps he perceives this, for he has stated he disapproves "a policy of denunciation," and wishes the paper to be confined to the treatment of great social questions, and to take an "attitude of more moderation."

But the point which is of most interest to the profession is advertising. Gambling and turf news and advertisements are to be excluded—a welcome sacrifice to principle which I fear few will follow, for the increase of the gambling spirit is notorious, and is greatly stimulated by the newspapers. But what about quack advertisements? Some of these are thinly veiled incitements to immorality and crime, against which the medical press has vainly protested. Surely Mr. Cadbury will admit that nothing could be worse than these, and he can scarcely be ignorant of them. The other quack class which offers cures for every ill that flesh is heir to cannot have escaped his notice, for the *News* has been nearly as bad as any of the cheap papers. Next month it is to come out under the new control, and perhaps—or say possibly—we may see a paper without pages of displayed falsehoods, such as even respectable papers like the *Daily Mail* and *Daily Express* do not disdain to circulate as advertisements.

But there are greater sinners than these—to wit, the religious papers—and just now they are exhibiting the most barefaced hypocrisy. Many of them absolutely live on quack advertisements, and do not hesitate to commend quack medicines in their other columns. They are not ignorant—their conduct has often been brought under their notice, but they subordinate all to what pays. Yet the majority have long declined to advertise either alcoholic drinks or tobacco. Alcohol one can understand, but why tobacco? The clergy of all denominations smoke. Many, indeed, take alcohol, and a few defend its use, but there is a strong prejudice against their example, and the evil of drink meets us at every turn. But tobacco—very few are opposed to it, and the clergy, as a class, are inveterate smokers.

A great fight is now going on between the tobacco trusts, and any amount of advertisements can be had for the asking. One of the so-called religious periodicals has broken with the custom and accepted them, to the disgust of their rivals, which are afraid to do so. But I expect they will fall in, notwithstanding the protests of their readers, for it is well known that their subscribers are not numerous enough for financial success, and the prospect of dozens of pages of extra profitable advertisements must be a great temptation to men who see no sin in prostituting the press to shameless falsehood and unclean suggestions.

At the Pathological Society's meeting demonstrations were given of hyaline bodies from a syphilitic lesion; of the arborescent or "inverted fir-tree" appearance in stale-cultures of anthrax; and of Pappenheim's stain for plasma cells. There was also an exhibit of avian filaria from British Guiana. It is not known whether any symptoms are produced by the filaria, nor what are the intermediate hosts. Some experiments with antitoxins, described by Dr. R. T. Hewlett, should be considered by those gentlemen who have been giving them by the mouth, for although the results were not new, they confirm the conclusion from others that antitoxins are not absorbed from the alimentary mucous membrane. Not the slightest protection was conferred on rabbits or guinea pigs against minimal doses of toxins of diphtheria or tetanus by their antitoxins given by either the stomach or rectum.

The annual meeting of the Obstetrical Society was held on the 5th inst., when the officers for the year, nominated by the Council, were duly elected. Dr. Horrocks was re-elected *President* after giving an address in which he referred to some alterations in the rules proposed by the Council, which were adopted by the meeting. One of these is a curious example of the phases of opinion in the Society: instead "of all medical *men*" who have a registerable diploma being eligible for election, it is to read in future "all medical practitioners," etc. The object of the change is to admit women. The most curious point is that the change is only going back to the original wording at the formation of the Society in the sixties. At that time there were no qualified medical women. When they entered the profession the Society signified its prejudice by altering the wording to "medical *men*." Now the women are too numerous to be ignored by this Society, which has been for years thriving on the sale of diplomas in midwifery to uneducated women, and has thereby incurred a large share of responsibility for the midwives' question. In spite of the disapproval of the majority of the profession, this illegal traffic in diplomas continues and tends to maintain a partial qualification opposed to the medical acts, which lay down that a practitioner must be qualified in all three branches. It is strange that the Society has not long since been brought before the courts or the signers of its trumpery certificates been penalized. One would have supposed that such a society would have welcomed *qualified* medical women from the first instead of waiting until they were generally recognized. Perhaps the change is intended to precede a revolution in the shape of the introduction of the *unqualified* women who boast themselves L.S.O. to the Order of Fellows. Few would pity the sellers of unauthorized certificates should they be swamped by their pretended licentiates and "Mrs.——, F.O.S. Midwife" become a common card in the windows of unqualified women.

The other alteration in the rules relates to the privilege of papers read at the Society being buried in the *transactions*. Those not accepted are to be returned to their authors—as ordinary honesty would suggest, and "no longer considered the property of the Society," and all papers read at the meetings may be published in any scientific journal, with the acknowledgment that they were so read.

Professor Birmingham of Dublin described in the *Journal of Anatomy* some two years ago a "stomach chamber" and a "stomach bed," terms which were justified at the Irish Academy of Medicine lately by a specimen hardened *in situ* by formalin. The stomach, when lifted out, showed a distinct chamber bounded above by the diaphragm, below by the small intestines, pancreas, upper extremity of the kidney and transverse mesocolon. This chamber, he said, the stomach fills when distended; when contracted, a portion of the colon presses up in front of it into the chamber. In the healthy adult male he finds the stomach projects downwards, at an angle of 45°, inwards and forwards. When distended, its pyloric extremity tilts upwards and the æsophageal opening is not directly on the lesser curvature, but on the anterior surface. Tight lacing displaces the viscus and alters its relations.

Professor Symington agreed as to the position, but did not see the necessity of the terms "stomach chamber" and "stomach bed," but Professor Cunningham thought them useful and helpful, and said the transverse mesocolon divides the abdominal cavity into a gastric intestinal region.

As I mentioned Dr. Braithwaite's suggestion that salt may tend to cancer, I may add another note from the North. At a late meeting of the Liverpool Medical Institute, Sir W. Banks, in a paper on cancer, mentioned the common notion that excess of flesh meat conduces to the disease.

To this Dr. R. J. M. Buchanan opposed the opinion that it was rather associated with raw vegetables. Holding the parasitic origin, he thought it probable that the parasite was introduced into the body through some lower form of animal life which was in constant association with vegetable food. He had observed that cancer houses were often infested with snails, and the victims indulged freely in salads.

What will the vegetarians say to that? It is not long since they were told the tomato was the dangerous article. Now they are warned against all salads! Perhaps before the summer this idea will be refuted, and we may take salads in due season without fear.

Smallpox continues with variations in the numbers notified, but on the whole fewer than last week. Yesterday there were fifty-four, of which twenty-seven were from the East End. Last night 1,176 cases were under treatment. Three cases have occurred in Dublin. The public have exhibited some alarm, which has driven many to revaccination, and is so far good. But so far this epidemic is much less serious than former ones; *e. g.*, in 1871 nearly 10,000 persons died of the disease. In the last six months there have been 524 fatal cases. There is therefore no occasion for panic.

Liverpool City Council asks for the repeal of the "conscientious objector" clause. There are other indications that the public is tired of what Lord Lister called "the tremendous experiment."

The notification of chickenpox is being ordered by a number of local sanitary authorities in various parts of the country.

The London School Board has elected as its medical officer James Kerr, M.A., M.D., Cantab. He had a distinguished career at St. Bartholomew's Hospital and at the University, and he has been for some time medical officer of the Bradford School Board. He has written some good papers on school hygiene and similar subjects. As he is to give his whole time to the work of the London schools, perhaps he may be able to educate that most obstructive board which is at present dominated by faddists. I have told you before of the way in which it obstructed all vaccination efforts. Only last week it sat upon one of its sensible members—for all are not faddists—who proposed to exclude unvaccinated children, or if that was *ultra vires*, to seek parliamentary authority to do so. The proposal was refused to the tune of a clerical whine on the cruelty of keeping children from school. Are they so far gone as to call it kindness to expose them to the horrors of smallpox?

Owens College is preparing to celebrate its jubilee next month. The Prince and Princess of Wales are to be present. This is interesting at the moment when Victoria University is threatened with disruption by the determination of Liverpool to separate and have its own university.

Surgeon-Captain Crean is awarded the V.C. He has more than once been returned as "mortally" wounded, but recovered. On December 18 Captain Crean was wounded while at work in the firing line at a range of 150 yards, but continued attending to the wounded until he was hit a second time, and was supposed to be mortally wounded. At one time Captain Crean was a noted athlete.

Two inquests on doctors have been held. One was found severely burned in his room, where he had fallen asleep in front of a large fire. The other was discovered terribly injured on a railway line, on which he appeared to have fallen from a train, a door in which was found open on arrival at the next station.

Two men practising at Clitheroe as dentists, but not registered, were committed for trial on a charge of manslaughter at an inquest on a woman to whom they had given chloroform. One of them said he had given it between 300 and 400 times during the last fifteen months in which he had been in the town. Important questions should arise at the trial, prior to which I refrain from comment.

INOCULATION FOR SMALLPOX:

To the Editor of the Medical Record:

Sir: In these times of smallpox vaccination controversy the following from the *Westminster Magazine* for 1776 may be of interest:

"Inoculation of the smallpox, according to Dr. Douglas of New England, took its rise from the Circassians, a people inhabiting near the borders of the Caspian Sea, who were fond of preserving the beauty rather than the life of their females. They were solicitous of gaining some advantage by every traffic, and for ages past have sold their daughters to the Turks and Persians; and, in order to sell them to better advantage, inoculate them very young. The handsomer they were, the more price they yield.

"From hence this useful operation passed into Turkey, first among the lower class of people. People of fashion at Constantinople, says Dr. Pylarin, did not know it till the year 1701. Dr. Timon, afterwards, in the year 1713, and in the following year, Pylarin transmitted to the Royal Society, at London, an account of inoculation.

"Among the curious, it was not for some time considered with admiration; till at length, in the year 1721, Mr. Maitland, a Scotch gentleman, though no physician, began the practice in London. From the month of April to December eleven were inoculated with happy success.

"In the spring of the next year, an experiment was made by the king's command upon six children, and not long after upon five others, but not with equal advantage, though, all things considered, with great and laudable success; the Lady Mary Wortley Montague, spoke to our Ambassador at the Porte, bringing the practice from Constantinople, and first introducing it here. These experiments succeeded so happily that, upon good advice, their Royal Highnesses the Princesses Amelia and Carolina underwent the operation, and, by the blessing of God, had a favorable smallpox and recovered. In the same month were inoculated Spencer, the only son and heir of Lord Sunderland, and a certain servant of the Lord Bathurst; but, unfortunately, both died.

"This ill success greatly injured, for a time, the reputation of inoculation, though it did not quite abolish the practice. The two Masseys (brothers), one a clergyman, even preached, and the other, an apothecary, with several more, wrote violently against it; and in the space of three years, throughout all England (as Dr. Jurin, Secretary to the Royal Society, remarked) not more than 477 were inoculated, of whom twenty-nine did not receive infection, nine died, and many, after the smallpox, were afflicted with various disorders, of boils, abscesses, sordid malignant ulcers, consumptive habits, etc. The proportion of these to those who were perfectly cured is uncertain; but thought not less than one in ten, as appears from Douglas's calculation. The following years the proportion of those who died was greater. At length the practice by degrees grew much out of use among us.

"But at last, by experience and care, it flourished more than ever, and still continues, to the saving of many thousand lives. Chuse but sound bodies, and convey the least quantity of infection, just enough to disturb the blood a little, and without the force of any previous preparation, a very mild kind of smallpox, eight days after, will come forth, that need not confine the patient above one day within doors; for the freer they enjoy the cool air the better. I myself have inoculated above forty at Leigh, and not one had a single bad symptom, or the least ill consequence ensued.

"But there is no good convenience, they say, but a bad one attends it. Though the inoculated thereby escapes death, yet by communicating the infection to others, who never had the smallpox, great mischief has been thence occasioned, as the increase of burials in the yearly bills of mortality, ever since inoculation came up, but too melancholy prove; to remedy which, and that the great benefit of inoculation may be fully enjoyed, I, with our Members of Parliament, conjointly with other honorable representatives, would offer a bill to the House for proper restraints and regulations to be observed, and to have pest-houses on purpose at proper distances from towns and cities, for the inoculated to perform quarantine, before mixing again with the multitude; or whatever other ways and means their superior wisdom think fittest; then the great blessings of this new discovery might be freely reaped without danger to others; and many of our most gracious Sovereign's loyal subjects' lives would thereby be happily prolonged, to the great and general good of the nation.

"Leigh, September 14, 1776. J. Cooke."

F. B. Stephenson, M.D., U. S. N.

U. S. Navy Yard, Portsmouth, N. H.

Progress of Medical Science.

Boston Medical and Surgical Journal, February 27, 1902.

Broncho-pneumonia in Epidemic Form.—William Watson McKibben reports the occurrence of this disease in five children in one family. Two died, the other three were removed to a hospital and recovered. Pneumococci and pus organisms were found in their sputum. In cases of broncho-pneumonia at the Babies' Hospital, in which tubercle bacilli were found, Holt also discovered pneumococci, which he regards as explaining the fact that tuberculous broncho-pneumonia cannot be distinguished from the simple form by the symptoms. Osler cites examples of the epidemic form of pneumonia depending on a specific microorganism. The author also witnessed a small infection in 1899 and several epidemics have been seen in Worcester during the past ten years.

Some Points of Value in the Diagnosis of Disease of the Abdominal Organs.—Henry Jackson says that pain is the most unreliable symptom, it being often absent in grave cases of appendicitis and sometimes overshadowed or benumbed by the severity of whatever disease is present. Nausea and vomiting are of great importance, so is the occurrence of obstinate constipation in a patient who has not previously suffered from it. The general appearance is often a guide to diagnosis. Tenderness must be distinguished from pain, and spasm is the most important sign of all, as it is as evident in the unconscious as in the conscious patient. The most valuable sign in the diagnosis of intestinal obstruction is an empty rectum, when there has been no movement of the bowels for several days. Examination of the blood may give important evidence; leucocytosis is almost invariable in cases of acute inflammatory disease with exudation. The Widal reaction is of importance when found, and the blood count is of value in the elimination of malaria, when chills of doubtful etiology are present; in malaria or in typhoid fever the leucocytes are below the normal number. The malarial organisms, if present, determine the diagnosis.

The Significance, Pathological and Clinical, of Abdominal Pain.—Maurice H. Richardson reaches the following conclusions: When a patient has been seized with sudden severe abdominal pain, the pain should not be masked by opiates before the surgeon has seen the case. Previous history, symptoms, and signs must be carefully considered, and careful examination made of thorax and abdomen. If hemorrhage is suspected, the abdomen must be explored; if the patient is in collapse, and the pulse is weak, a preliminary infusion of salt solution should be made into veins or under skin. Exploration should be immediate when pain is excruciating and the abdomen shows signs of infection. The seat of initial pain is a good guide to the incision. The history and signs other than pain must be relied on for exact diagnosis. Were exploration a routine procedure, more lives would be saved. The genuineness of the pain should be tested; the pain of atypical typhoid fever, pleurisy, or pneumonia must be guarded against, and functional disturbance is not to be confused with organic disease. In doubtful cases the surgeon should explore. If exploration is not justifiable the pain is to be controlled by morphine, hypnotics, or even a general anæsthetic. Excepting in a few cases, chiefly of renal and biliary colic, the pain that demands general anæsthesia demands operation.

Journal of the American Medical Association, March 1, 1902.

The Unveiling of the Cell.—In a general discussion of recent progress along this line of study, L. F. Barker emphasizes three facts: (1) The remarkable variety and complexity of the chemical substances given off by the cells to the blood and lymph; (2) The chemical specialization of the various tissues of the body; and (3) The value of chemical and physical conceptions as working hypotheses in the interpretation of life phenomena. He adds that the conception of a chemical differentiation of tissues more divergent even than that which characterizes their morphology promises to be a distinct incitant to further investigation and discovery. Certain it is that aside from the chemical and physical peculiarities common to protoplasm in general, there are a host of special activities localized in the cells of different regions of the organism, the necessary consequence of ontogenetic development and a long phylogenetic history.

Examination of a Genito-urinary Patient by the General Practitioner.—F. C. Valentine lays down the following rules: (1) All genito-urinary examinations should be painless; (2) The operator should conduct no examination unless his arms are bared to above the elbows and his clothing protected by a gown and apron; (3) During every genito-urinary examination the physician should protect his eyes with spectacles—not eyeglasses—even if he has no visual defect. (4) Ideal examinations are made in the morning, before the patient has passed his first urine; (5) The amount and character of a urethral discharge can be estimated only by correct technique in expressing the urethral contents; (6) The color of a urethral discharge changes when it dries upon the patient's garments; (7) The meatus should be cleaned before passing urine for examination; (8) The manner of urinating is often pathognomonic; (9) The epithelia found in the urine are indicative of the locality of the lesion; (10) Examination of the urethral adnexa is a necessary part of the steps for complete diagnosis; (11) No instrumental ingression of the urethra should be attempted without most thorough efforts at rendering it aseptic; (12) The technique of striving at urethral asepsis is neither complicated nor difficult; (13) The soft bougie-á-boule is the only instrument that can be used for tactile exploration of the urethra; it is purely a diagnostic instrument; the rigid sound is wholly a therapeutic instrument; (14) Urethroscopy with a modern instrument is not difficult; (15) The general practitioner is perfectly competent to examine the vast majority of genito-urinary cases; (16) Such examinations only exceptionally require extraordinary skill or a large armamentarium; (17) The pathology of genito-urinary disease does not materially differ from that of other affections.

New York Medical Journal, March 1, 1902.

The Value of the Eosinophile Count in the Differential Diagnosis of Human Blood.—O. S. Wightman presents the following conclusions: (1) Eosinophilia may occur in higher percentage in animal's blood than in human blood; (2) The physical condition of the animal whose blood is to be compared may play an important part in the increase or decrease of eosinophiles present; (3) In the specimens examined the polymorphonuclear counts were low and the lymphocytes high, exactly contrary to conditions present in normal human blood; (4) The eosinophile count is not a constant or trustworthy factor in diagnosis, but, on the other hand, is very unreliable and unsatisfactory; and, finally, (5) As a comparative test the eosinophile count is a negative quantity.

A Bougie Removed from the Abdominal Cavity; Ruptured Abdominal Hernia.—Two clinical histories are given by J. T. Johnson. In the first an abortion was produced by the passage of a No. 8 flexible bougie. When the fœtus and membranes came away the bougie could not be found. Severe abdominal symptoms two days later led to exploration of the uterus, into and through which a sound was passed until only the handle protruded from the vagina. It was concluded that the bougie had penetrated the uterus, and was in the abdominal cavity. Exploratory incision showed this to be true, the bougie being folded over and covered by the omentum. The case recovered without incident. The opening in the uterus had become thoroughly closed and could not be found. In the second case an umbilical hernia had ruptured, and several feet of bowel had been out on the abdominal surface and covered with unsterilized cloths and bandages for at least seventeen hours. The parts were cleansed and returned to the cavity of the abdomen. The patient, a woman of fifty-seven years, did well for seven days, and then died, apparently of general septic peritonitis. Her general condition previous to the rupture was bad, and her surroundings unfavorable before she was taken to hospital. The author gives a summary of previously reported similar cases.

American Medicine, March 1, 1902.

Suggestions to Anæsthetizers.—Frank E. Simpson makes the following suggestions: (1) Give the patient your undivided attention; (2) Administer the anæsthetic slowly; (3) Keep the patient's lower jaw forward; (4) Observe extreme caution (especially in chloroform administration) when the stage of unconsciousness is at hand; (5) During deep anæsthesia watch particularly the respiration, but also the pulse, eye, and color; (6) The rolling of the eyeballs from side to side is the first and most easily-observed indication of returning consciousness.

The Treatment of Acute General Peritonitis.—Eugene A. Smith defines acute general peritonitis as a rapidly-spreading inflammation of the visceral and parietal peritoneum due to bacterial infection. In the male, undoubtedly, a vast majority of cases are due to appendicitis, and, in the experience of the writer, this has also been the case in women. According to Treves and others, several causes of peritoneal infection are grouped as follows: Obstruction of the bowels, perforation of typhoid, gastric, and tuberculous ulcers, cholelithiasis, nephrolithiasis, rupture of visceral and other abscesses, and fat necrosis. Bacteriology offers the ideal classification for the forms of the disease, but the clinician cannot yet apply this classification in practice, to determine prognosis and treatment. Thus treatment is uncertain, unless by radical procedures; effectual in the most severe infections of the peritoneum, an attack is also made on the less severe infections. The writer thoroughly believes in the value of sterile decinormal salt solution in the treatment of acute general peritonitis. The solution is heated to a temperature of 110° F., and large quantities are used to flush every accessible part of the peritoneal cavity. From four quarts in early cases to sixteen or twenty quarts in late cases are used, and the process takes from five to fifteen minutes. In draining the abdomen after irrigation for acute general peritonitis, the writer uses Price's aluminum tubes in the pelvis, and gauze wicks in the iliac fossa, behind the cæcum and among the intestinal coils. In these patients the abdominal wound should be left as open as is consistent with retaining the abdominal contents. Silk-worm gut sutures are used to approximate the upper and lower edges of the peritoneal incision, and gauze compresses may be loosely tucked into the gaping wound to hold back the intestines till adhesions can form. A many-tailed bandage may be used to prevent extrusion of the gut. After the operation the anus is dilated to allow the easy escape of flatus. In the postoperative treatment, strychnine is used hypodermically in severe cases. Salt solution is given in all cases, per rectum. Catheterization may be necessary. In severe cases the urine is quite certain to be scanty, and to show albumin and casts. Morphine should be used if the patient is restless, hiccoughing, or in great pain. Whiskey may be given if it can be borne by the stomach. On the third, fourth, or fifth day, calomel may be given, with sodium bicarbonate. Rochelle salt or compound jalap powder may follow this, and a turpentine and glycerin enema may be given later to aid in moving the bowels. Nourishment by the mouth is forbidden for three to six days after operation. Cracked ice or seltzer water in teaspoonful doses is allowed from time to time. Meat broths may be given cautiously on the third day or later. Milk is badly borne, as a rule, and should not be given till the second week of convalescence.

Medical News, March 1, 1902.

Acute Pelvic Suppuration; Its Conservative Treatment.—John O. Polak claims that: (1) Early diagnosis in pelvic suppuration is imperative; (2) When the diagnosis is made, operation should be performed; (3) The vaginal operation is the one of choice; (4) when it is done early with strict asepsis it is curative and may preserve the function of the woman's organs; (5) It improves the patient's condition, makes subsequent operation easy, and prevents rather than causes adhesions; (6) It may be used for diagnosis in obscure cases without shock or injury to the patient (if aseptically performed). Finally, this operation may be applied to every acute suppurative condition within the pelvis.

Suturing the Head of the Humerus to the Acromion in Old Subcoracoid Dislocation.—Carl Beck examined this case by means of the Röntgen rays, and discovered the typical signs of subcoracoid dislocation. After various methods of reduction were tried under anæsthesia, to no avail, a nearly semilunar incision was made, beginning at the acromion and running over the intertubercular sulcus, and was extended vertically alongside the anterior surface of the arm. By means of this both joint and acromion were exposed. The adhesions were dissected and the head of the humerus was rotated in the glenoid cavity. But on account of the pronounced tendency to forward displacement, which could not be overcome, the head of the humerus was fastened in the cavity by suturing it to the acromion after a hole had been drilled through the acromion as well as through the head of the humerus. The writer believes this procedure to be better than resection of the head of the humerus. No force is required, and laceration of the muscles, bloodvessels, and nerves is easily avoided.

Ventrofixation; A Suggestion.—Victor C. Pederson objects to the incision of the linea alba in this operation. He describes the method of which he approves as follows: (1) Exposure of the sheath of the rectus through a median cutaneous incision two or three inches long; (2) Strong retraction of the skin to one or the other side; (3) Opening the sheath of the rectus about three-quarters of an inch from the median line; (4) Liberal loosening of the rectus from its sheath, and retraction of it as far outward as possible; (5) Opening of the peritoneal cavity; (6) Loosening of the peritoneum behind the linea alba; (7) Search for large vessels at this point; (8) Passage of the sutures as follows: The median edge of the peritoneal wound is seized with forceps and the needle is introduced half an inch away from the middle line; it is next carried through the uterus, emerging beyond the median line on the opposite side; it is then passed forward through the peritoneum, previously loosened as described, and then through the linea alba sufficiently deep to secure a firm hold; the two ends are then seized in an artery clamp; the other suture is passed in the same way and both are tied, so that the knot is extraperitoneal; (9) Suture of the peritoneum; (10) Restoration of the rectus to its sheath; (11) Ordinary layer sutures close the rest of the wound. Mattress sutures are used in closing the sheath of the rectus, and in such a way that they do not pull on a single bundle, but on many bundles of fibers. A retention catheter is inserted in the bladder before the uterus is suspended, and from six to ten ounces of salt solution injected. In this way the best place for fixing the uterus is clearly indicated.

Philadelphia Medical Journal, March 1, 1902.

The Ice-Pack, and Its Definite Therapeutic Advantages Over Other Methods.—Lester L. Roos advocates this treatment in typhoid when the temperature goes above 102.2°. If there is any renal disturbance, hot milk should be given before and after the pack and at each change of the sheets. If the kidneys are normal, then whisky is given instead, before and after the pack. The mattress is covered with a couple of blankets, on top of which is a rubber sheet, over which is another blanket. Thus the body does not have to come in contact with the rubber. A sheet and blanket that have been soaked in water at 70° F. are brought to the bed and the patient is rolled from his warm coverings into these wet ones. Half an hour later, others are substituted at a temperature of 60° F., again at 50°, and lastly at 40° F. At the last two packs, the axillary spaces, the arms and the legs from the middle of the femur down, are covered with cracked ice, packed outside the sheets. By this method the exposure which so often leads to pneumonia is avoided. Hemorrhage and perforation will never be seen. The pack is a nerve sedative and a cardiac stimulant. This method can be carried out in any home.

Two Cases of Adiposis Dolorosa: One in a Man, Complicated by Epilepsy; Another in a Woman, Presenting also Circinate Retinitis.—F. X. Dercum states that of the twenty-four or twenty-five cases of this disease on record, only three have occurred in men. The one reported in this paper is thirty-nine years of age. He is 4 feet, 10½ inches high. There are numerous accumulations of fatty tissue over the entire trunk. The abdomen is so pendulous that the genitals are hidden as though by an apron. Huge folds of fat also hang from the sides of the trunk. The deposits of fat on the arms are not as great in proportion as those in the trunk. This is true also of the fatty deposits in the thighs and legs. Everywhere these masses of fat are exquisitely painful to pressure. The skin is dry. The lower parts of the forearms and hands and the lower parts of the legs and feet are entirely free from all fatty deposit. There is some fatty deposit in the face, but not to any extent. The face is somewhat flushed with a tendency to lividity. Back of the equator of the eyeball the conjunctiva assumes a thickened yellowish appearance, as if due to deposits of fat beneath. There are accumulations of fat in the orbital cavity, which can be distinctly felt by the fingers. The second case is a woman, aged thirty-three, married and a housekeeper. The thighs are enormously enlarged. The upper and middle thirds of the legs and both upper arms and the upper and middle thirds of the forearms are also enlarged. She complains of extreme tenderness and soreness to the touch, over widely-distributed areas. There is no spontaneous pain. She tires very easily. In the left eye there is a circinate retinitis. Both of the cases belong to the localized diffused type of the disease. The greatest part of the deposit in the man is upon the trunk, in the woman upon the thighs. Asthenia is a marked symptom in both patients. The man is subject to epileptic attacks. In both patients there is a marked tendency to discoloration of the tissues from slight injuries.

A Case of Ascites, Due to Hepatic Cirrhosis, Treated by Transplanting the Omentum Between the Peritoneum and Abdominal Wall.—W. J. Roe and Geo. W. Spencer report this case. The patient was forty-one years old when first seen by them. Ascites had begun about three months before this time. The personal history pointed to syphilitic infection, and this was supposed to be the cause of the cirrhosis. The liver and spleen were not discovered by palpation. She was put on mixed treatment, and in addition was given hydrochloric acid, nux vomica and cardamon. Paracentesis was performed thirty-two times in fourteen months. The patient was very eager for an operation, and it was at last agreed upon. The objection was to establish venous circulation through the medium of adhesion between the veins of the omentum and the veins of the anterior abdominal wall, and thus relieve the obstructed vena porta. The operation took only twenty minutes. Recovery was uneventful and in four weeks she was feeling better than for any time during the previous two years. She lived about eight months after this paracentesis being performed twenty times subsequent to operation. Autopsy showed entire absence of right kidney, and the presence of a very large horseshoe kidney on the left side, extending to the right as far as the head of the colon and appendix. Frequent examination of the urine during life had never shown any albumin or casts. The absence of blood in the ascitic fluid and its comparatively low specific gravity, 1010, were factors in diagnosis against the possibility of malignant disease, causing the ascites. The writers do not believe that the horseshoe kidney was in any way a contributory factor to the ascites. The liver was much smaller than normal, and firm to the touch, but not hobnailed. The gall-bladder was moderately distended, and, with the ducts, was free of calculi. The writer believes that operation is indicated in such cases, and thinks that in this case it prolonged life six months.

The Lancet, February 22, 1902.

Rheumatism as a Cause of Epistaxis in Children.—Sidney Phillips gives notes of ten cases of epistaxis occurring in young children. He believes the association of this symptom with rheumatism to be very common. It was not due in his cases to a toxic effect of the salicylates, for it occurred before the latter were given. The author assigns no cause for the complication, and says he has found no mention of the fact in literature except that rheumatism may cause nose-bleed indirectly through changes set up in the endocardium.

Tetanus Following Revaccination on the Leg; Recovery after Prolonged Use of Chloral Hydrate.—W. Findlay and J. W. Findlay report the case which occurred in the person of a girl of twenty-one years. The operation was done in the usual manner, proved effectual and the patient was doing well when on the tenth day she was exposed to a strong draught. On the twelfth day she commenced to complain, but was not seen by the doctors until the next day. The vaccine wound was covered with a light sloughy mass and did not look well, though it quickly cleared off on the application of a poultice. There was no temperature, but there was rigidity of the muscles of the neck and jaws. The latter symptoms gradually became more and more pronounced and the administration of chloral was begun. It was necessary to continue it for a period of over six weeks, during which time the patient occasionally took as much as 240 grains in the twenty-four hours. Recovery finally ensued.

Burns from Celluloid.—Commenting on the fact that so many articles now in common use are made from celluloid, Alexander Ogston calls attention to the evident fact that celluloid articles of uncertain composition and dangerously explosive quality are everywhere sold and are in constant use, and that the conditions under which they may ignite in varying circumstances cannot be fully inferred from experiments regarding their ignition point made in a physical laboratory; (2) Badly manufactured celluloid ignites at variable temperatures, too low for it to be safely used; (3) It follows that restrictions should be imposed upon the sale of all such articles which do not sustain, without ignition, a temperature equal to that sustained by well-manufactured celluloid; (4) It is worthy of consideration whether all celluloid articles of personal wear and such others as might give rise to fires ought not to be compelled to have the word "ignitible" conspicuously imprinted upon them; (5) If the suggestion to render celluloid incombustible by the addition of some chemical should be practicable it would be the best solution of the difficulty, and such an addition ought to be made compulsory by legislative enactment.

The General Pathology of Tumors.—In the third Erasmus Wilson Lecture C. P. White sums up his conclusions concerning the pathology of tumor formation as follows: (1) Tumors should be classified on a histological basis. The best mode of effecting this is to make use of the threefold basis of cells, tissues, and organs; (2) The rudiment from which a tumor springs may consist (*a*) Of the structures normally present at the point of origin; (*b*) Of an embryonic collection of cells; or (*c*) Of tissues of new formation, the result either of an inflammatory condition or of previous tumor formation; (3) Extrinsic factors play a part in tumor causation, but are not the determining factors—that is, the occurrence or non-occurrence of tumor does not depend on extrinsic factors. In particular, the parasitic theory is shown not to stand a critical investigation; (4) The determining factor in tumor causation is to be found in the intrinsic factors; (5) This determining factor consists in the existence of a condition of unstable equilibrium between the intercellular forces, so that proliferation, once started, is progressive and is not limited by the resistance of the surrounding tissues; (6) The cause of this instability are many and various and may be either intrinsic or extrinsic; (7) Proliferation having started, the cells acquire the habit of growth—that is, the power of independent proliferation which enables them to proliferate in parts of the body in which the condition of equilibrium is stable; (8) Tumors grow by proliferation of their own cells; (9) Tumors do not invariably continue to increase without limit. Under certain circumstances they may cease to grow and may diminish in size or may even disappear completely; (10) Tumor formation is not to be regarded as an isolated process, but is to be considered as one of a group of progressive processes with which it is closely allied. Still less must one form of tumor, such as carcinoma, be considered apart from the others.

British Medical Journal, February 22, 1902.

Hydrogen Peroxide in the Treatment of Lupus Vulgaris and Tuberculous Abscess.—Charles Herbert Gunson declares that hydrogen peroxide is a most effective germicide, yet practically unirritating, and harmless to delicate cells if not used in its full strength. Its mechanical action is also valuable, on account of its effervescence. It is valuable in lupus exedens, also in the healing of chronic or tuberculous abscesses, after their contents are evacuated. It has an excellent effect when sprayed on ulcers and purulent wounds.

Should Milk Be Boiled?—W. B. Ransom says that there is no solid evidence to show that milk raised to its boiling point (110° C. = 233° F.), or to the temperature of boiling water for ten minutes or a quarter of an hour, suffers any diminution of its nutrient qualities. Neither is it probable that, if consumed within twenty-four hours of the heating, it will cause infantile scurvy. The same is true of Pasteurized milk heated to 80° or 85° C. None of these methods renders the milk absolutely sterile, but they do kill most pathogenic microbes (*e. g.*, those of tuberculosis, cholera, diphtheria, and typhoid fever), and if the milk be kept cool and drank within twelve hours of the heating, few or no spores will have developed into bacilli. Pasteurization is probably less reliable than heating to 212° F. for ten minutes, and is also more difficult to carry out. In times of epidemic summer diarrhœa the heating should be prolonged for at least half an hour, and the milk drank within a few hours, or subjected again to the process. Milk should always be drank as fresh as possible.

On the Effects of Forced Feeding in Cases of Pulmonary Tuberculosis and in Normal Individuals.—Noel D. Bardswell, Francis W. Goodbody, and John E. Chapman conclude: (1) That since very large diets gave worse results than those of more moderate amount, the indiscriminate stuffing of all tuberculous patients should be replaced by systematic dieting. The diets as regards amounts and constitution should be determined in each case after due consideration has been given to the respective conditions as regards: (*a*) The activity and extent of disease; (*b*) Amount below weight; (*c*) Digestive capacity; and (*d*) To some extent personal dietetic likes and dislikes; (2) That in view of the bad effects which overfeeding gave rise to in the normal individuals, great care should be taken in the selection of a diet for patients who, as the result of treatment, have reached or passed their highest known weights. When this regain of weight is associated with arrested disease, the original diet found suitable for a person considerably under weight and with active lesions, should be reconstructed more upon the lines of what would be suitable for the same person in perfect health. The lungs do not seem to improve any more upon forced feeding than upon generous diets, and certain uncomfortable symptoms, such as anorexia and vomiting, are met with more frequently in cases having large diets than in those of more moderate amounts.

Deutsche medicinische Wochenschrift, February 6, 1902.

Tertiary Syphilis of the Pharynx.—Levinger emphasizes the importance of the accurate recognition of isolated tertiary syphilitic lesions of the posterior nares and tonsils. When the posterior nares alone are involved, the lesions escape superficial observation, and can be seen only when posterior rhinoscopy is undertaken; for this reason patients whose history and objective symptoms are suspicious should always be examined in this manner. As a rule, the patients complain of sore throat, especially upon swallowing, and frequently this is so severe in nature that food is only sparingly partaken of, and the bodily nutrition is seriously impaired thereby. Headache is a prominent symptom. The ear may become involved through the Eustachian tube and a purulent otitis media develop. The soft palate is often considerably infiltrated. and less freely movable than normal. The voice has a nasal intonation, and in the morning is apt to be very hoarse. If the syphilitic lesion is of any considerable size, the presence of a purulent discharge is added to the above symptoms, and the breath becomes fetid. As a certain amount of such a discharge is more or less frequently swallowed, digestive disturbances, which may become pronounced, are caused thereby. The conjoined administration of potassium iodide and mercury forms the sheet anchor of treatment for this condition. In addition the local application of calomel and orthoform is to be recommended. The author reports a case in exemplification of the favorable results obtained by this method of treatment. Levinger also reports a case in which there was a syphilitic tumor of the tonsil. He believes that the case is unique, and that a similar condition has not hitherto been observed. The diagnosis is practically based upon the enlargement of the neighboring lymph glands and the fact that under the administration of potassium iodide the tumor rapidly disappeared. A syphilitic history was absolutely denied and no other lesions of syphilis were observed.

Myelogenous Leukæmia.—Hans Hirschfeld and Ernest Tobias report two cases of myelogenous leukæmia and bring out interesting points in regard to the blood condition in this disease. The first case was observed for about five and one-half months, when it was lost sight of. The second case was followed to the autopsy table, where it was discovered that pulmonary, pleural, and hepatic tuberculosis was present. It is interesting to note that the pulmonary tuberculous condition was not diagnosed during life, although lung symptoms were present and were regarded as pneumonic in nature. Coincident with the development of the pulmonary symptoms there was a marked fall in the total leucocyte count from 426,000 to 283,300, and it is somewhat remarkable that the probable existence of tuberculosis was not suspected. In this case a tumor of the external ear developed. It was removed and found to be a myeloma. In general, it may be said that the differential leucocyte count in both of these cases was similar in character, but different in detail. In the first case the polynuclea neutrophiles were generally increased. Only on three occasions was their number subnormal. At times they constituted from 82 to 88 per cent. of the total number of leucocytes. The highest figures for the myelocytes were present in the second case, 31 per cent. In this case, however, their number was subject to great variation, as frequently they were only present in from 1 to 7 per cent. Taking the cases in their entirety, these cells were more abundant in the first than in the second case. The large and small mononuclear leucocytes were much more abundant in the second than in the first case. The second often showed from 18 to 28 per cent. of the large and from 14 to 26 per cent. of the small varieties, while 11 per cent. for the large and 6 per cent. for the small were the highest figures obtained in the second case. Each case showed days when both of these varieties of leucocytes were entirely absent. Eosinophiles were more abundant in the second than in the first case. The highest figures for these cells were 10 per cent. in the first and 18 per cent. in the second case Mast cells were very scarce in the first case. On many days they were entirely absent, and the highest figures obtained for them were 1.18 per cent. In the second case they were abundantly present, the highest figures being 19.2 per cent. The important point brought out by these figures is the fact that in considering the diagnosis of myelogenous leukæmia from the standpoint of the differential leucocyte count, general principles and not figures are to be considered. For staining the blood smears eosin and methylene blue and Ehrlich's triacid stain were used. The multinuclear cells, both neutrophilic and eosinophilic, varied greatly in size, many giant and many dwarf forms being observed in the same smear. A few multinuclear cells showed a granule-free protoplasm. In some of the neutrophiles and eosinophiles the granules were variously colored, and shades varying from a light blue to the normal characteristic color were frequently seen in the same cell. Occasionally peculiar small polynuclear cells were seen, which differed from the dwarf forms in that they contained very few granules which stained a deep red or violet. Some of these contained strongly refractive unstained granules, and are to be considered as mast cells. The authors examined the blood in both of these cases for the presence of protozoa, employing the methods of Löwit. They detected the presence of the bodies considered as parasites by this observer, but the same failed to take the olive-green tint which he describes. This, however, may be due to the fact that they used different dyes from those which were employed by Löwit. These forms were observed more frequently in the large mononuclear and polynuclear than in the small mononuclear leucocytes. This is in contradistinction to the findings of Löwit. They do not regard these forms as parasites, but as artifacts and degenerative products. Upon autopsy similar elements were not found in the blood-forming organs. Animal inoculations were conducted by means of emulsions of the spleen, lymph glands, and bone marrow obtained from the second case. Twelve rabbits were thus inoculated. The results were negative. Three died soon after the injection, four succumbed in twenty-four hours to sepsis, and the rest remained healthy, being subsequently killed and dissected. A hyperleucocytosis of a varying grade was present in every case, but no leukæmic changes were observed in any case in the blood, organs, or bone marrow.

Berliner klinische Wochenschrift, February 10, 1902.

The Peculiarities of Ear Diseases in Children.—B. Baginsky considers certain factors which influence the development, peculiar characteristics, and sequelæ of ear diseases in children. In the first place the anatomy of the temporal bone in childhood differs from that found in adult life. The petrosquamosal fissure is of considerable size in childhood, and forms a distinct communication between the middle ear and the cranial cavity. A vascular prolongation of the dura mater is lodged therein, and in cases of middle-ear infection forms a ready means of transit by which infective matter may be transported from this location to the interior of the cranium. In adult life this fissure is practically closed. The hiatus subarcuatus is also much larger in children than in adults, and forms an additional source of danger for the extension of infection from without inward. This liability is still further increased by the fact that in childhood the mastoideo-squamosal and tympano-squamosal sutures are not fully united. The Eustachian tube is much shorter, wider, and more horizontal in children than in adults, and hence is much more capable of transmitting infective matter. It is also certain that the presence of adenoids, which are almost exclusively seen in children, favors the development of middle-ear infection. It is also well known that children have great vulnerability of the nervous system, and are much less resistant to all sorts of infections than are adults. This cannot fail to have a certain influence upon the development and course of ear affection. Finally the results of autopsies have shown that the mucous membrane is much more vascular and succulent in childhood than in adult life, and therefore at this age especially susceptible to infection. The peculiarities depicted account for the great frequency of middle-ear infection in children, and its marked tendency to involve the internal ear, and the cerebral meninges. The early recognition of middle-ear infection at this age is, therefore, especially desirable, as then appropriate treatment may be instituted and serious consequences avoided. In all suspicious cases thorough local examination should be at once undertaken. Especially is this true of the so-called cerebral or meningeal form of otitis media. This condition at the outset simulates a genuine cerebral meningitis. Local examination shows the membrana tympani congested and frequently bulging. Whether this form of otitis media is due to direct transmission of the infection to the meninges or is brought about by excessive pressure upon the stapes has not been as yet definitely determined, but it is probable that in different cases either or both of these causes may be operative. Of especial interest are cases of otitis interna acuta. Here little aid in diagnosis can be obtained from local examination, as the middle and external ears are usually found in a normal condition. In these cases it is generally impossible, at first, to make a positive diagnosis, and occasionally that cannot be made at all ante mortem. The genesis of this condition is still in doubt. Some claim that it is always to be considered as an extension from an acute cerebrospinal meningitis. Others hold that it is a circumscribed affection of the internal ear directly produced by infection from without. A case previously reported by the author (*Archiv für Kinderheilkunde*, Bd. XXVIII.), which upon autopsy showed only lesions in the labyrinths, demonstrates that it is possible for this disease to be entirely local in character.

French Journals.

Accidental Inoculation of Tuberculosis.—Jacob presents his observations made on a soldier with excellent family and personal history, upon whom the writer had operated for a large pocket filled with pus and fungosities, in the iliac region. In his search for the portal of entry of the tubercle bacillus, Jacob discovered a small ulceration on the dorsal surface of the metacarpophalangeal articulation of the left middle finger. This ulceration had all of the characteristics of an anatomical tubercle, resulting from the prick of a pin. The extirpation and examination of this lesion after animal inoculation, demonstrated clearly the origin of the tuberculosis. This accident happened two months before the development of the ileolumbar abscess.—*Lyon Médical*, February 16, 1902.

Chloroform in Cases of Cardiac Disease.—H. Huchard concludes that (1) Accidents due to chloroform are not more frequent, in the majority of cases, in patients suffering with heart disease or disease of the aorta than in patients afflicted with other affections; (2) Cardiac or aortic affections are not a contraindication to anæsthesia, upon condition that they are not infectious in the acute stage, and that the organism affected is not very feeble; and that the chronic affections have not reached the asystolic or dyspnœic period; (3) In those suffering with heart trouble or disease of the aorta, chloroform should be given in small quantities progressively and continuously, just to the point of almost total suppression of the palpebral reflex; (4) Generally speaking, the saying of Sédillot is applicable, that "Chloroform well prepared, and especially well administered, does not kill."—*Bulletin de l'Académie de Médecine*, February 11, 1902.

Traumatic Tabes Showing Itself First by Eight Spontaneous Fractures of the Leg and Foot; Cure of the Gastric Crises by Subarachnoid Lumbar Injections of Cocaine.—Abadie reports the case of a patient of forty-three years, who was attacked by tabes, the origin of which was unknown. There were no traces of infection, of intoxication, or of syphilis, either hereditary or acquired. The first pain appeared after a violent traumatism, by which the pelvis and left hip were injured, causing a fracture of the neck of the femur with œdema of the whole leg. The apparent beginning of the tabes was ushered in by a series of eight spontaneous fractures of various bones of the leg and foot All of these fractures were painless, and were cured after an immobilization of normal duration. These injuries had caused a curving of the bones of the leg, which proved an obstacle in walking. The posterior part of the bones was consolidated and extremely hard—a great contrast to the extreme fragility of the anterior surface of the same bones. Another feature was the occurrence of gastric crises during five months. These grew more frequent and intense, but they disappeared for three weeks immediately after a subarachnoid injection of cocaine. A second injection caused them to disappear entirely.—*Journal de Médecine de Bordeaux*, February 16, 1902.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held February 20, 1902.

Charles L Dana, M.D., Vice-President, in the Chair.

Symposium on Vaccination.—This was the special subject for the evening's discussion.

The Action Taken by the Health Department on Report of a Case of Smallpox.—Dr. Alonzo Blauvelt, Chief Inspector of the Division of Contagious Diseases of the Health Department, presented a communication on this subject. He said that whenever a case of smallpox was reported to the Health Department a diagnostician of the department was detailed at once to investigate the case, and the captain of the precinct was asked to have a police officer meet the diagnostician at the address given. An effort was made to ascertain the names and addresses of all who had been exposed to the disease, and a note was left for the disinfector regarding the number of rooms to be disinfected and just what was to be done. A policeman then accompanied the Health Department vaccinator to the place, and vaccination was offered to each one there. The schools attended by the children in the house were notified of the existence of smallpox at that address, and the children were not allowed to return to school for a period of three weeks. During this time the house was kept under surveillance, but, with the exception of the children, the occupants were allowed to go about their usual occupations. Patients ill with smallpox are removed to the department hospital without regard to the stage of the disease, but if a person had completely recovered he would not be taken away. A smallpox patient is taken to Riverside Hospital either in an ambulance or a coupé, according to the judgment of the diagnostician. A surgeon from the hospital accompanies the former but not the latter. The vehicle is disinfected with formaldehyde in a special room immediately after having been used, and before being sent out for another case. After having been kept under observation until certain of the diagnosis, the patient is taken to North Brother Island.

Dry Points Versus Glycerinated Virus from a Bacteriological Standpoint.—Dr. M. J. Rosenau, Director of the Hygienic Laboratory of the Marine Hospital Service, presented this paper. He said that human virus, although distinctly more potent in its protecting power, had been almost discarded because of the danger of the transmission of syphilis and other infections of the human family. In 1842 the use of bovine virus had been begun, but many years had elapsed before it became popular. In 1891 Copeland suggested that glycerin be mixed with the vaccine pulp as a sort of preservative. Glycerin could hardly be said to be a bactericide, because it kills bacteria only by a slow process of dehydration, requiring eleven days for streptococci and twenty days for diphtheria bacilli. In diluted form glycerin was well known to be a very favorable culture medium. While glycerin gradually dehydrates and destroys bacteria, it also gradually destroys the potency of the vaccine. The glycerin points do not keep their potency as long as dry points. Dr. Rosenau then described the bacteriological experiments that had been made with the glycerinated virus, and with glycerin suspensions from the dry points, the colonies being examined and counted on the third day. There were altogether ninety-two samples obtained in the open market, representing the products of eight different manufacturers. The forty-one dry points gave an average of 4,807 colonies per point, while the fifty-one samples of glycerinated virus gave an average of 2,865 colonies per point, an unnecessarily great contamination for glycerinated virus. Staphylococci, pus cocci, moulds indicating stable contamination, and other impurities were found. The glycerinated virus of some manufacturers was found to contain a great many more colonies than the dry points. Some of the tubes of glycerinated virus contained only a very minute portion of vaccine, while others contained a great deal of vaccine, a fact which might partly explain the figures obtained with this kind of vaccine. The glycerinated virus if placed on the market while "green" would be found to contain a large number of bacteria, while a few months later this same virus would contain a very much smaller number. The speaker said he believed that many of these impurities in glycerinated virus would not exist were it not that the manufacturers placed too much confidence on the preservative properties of glycerin. Pus cocci and staphylocci were found in both the dry and the glycerinated virus. Dr. Rosenau said that his opinion, based on the results of this investigation, was that government control should be exercised.

The Value of the Dry Point Compared with that of Glycerinated Vaccine Virus.—Dr. F. S. Fielder read a paper on this subject, based upon tests made since December 1, 1901. He said that glycerinated virus had now largely superseded the older virus on ivory points. Several lots of vaccine were prepared in different ways at the Health Department laboratory, viz., one lot of points was charged with the serum exuding after having curetted away the pulp for the glycerinated virus, and one lot was charged with the serum obtained after simply removing the top of the vesicle. No great difference was observed in these two lots, and what little there was seemed to be in favor of the points charged with the serum obtained after having removed the pulp for the glycerinated vaccine. The glycerinated virus from tweny-one consecutive calves and the ivory points from the same animals were tested and the results compared. Fourteen ivory points from eight private manufacturers were also tested. Of the twenty-one lots of glycerinated vaccine seventeen gave perfect results. Of 304 insertions with the dry points from the Health Department animals, ninety-five were successful, or 25 per cent., while of the 137 insertions made with the dry points of private manufacture, eighty-three, or 60 per cent., were successful; in other words, the 571 insertions made with dry points from all sources gave 168 successful vaccinations, or 33.6 per cent. On the other hand, of the 315 insertions with the glycerinated virus, 296, or 92.9 per cent., were successful. The number of good-sized vesicles was decidedly in favor of the glycerinated virus. Four lots from one private firm gave the following results: Ten insertions with seven successes; nine insertions with four successes; nine insertions, all of which were successful, and ten insertions with seven successes. Another firm which charges points with the pulp from the bottom of the vesicle, furnished another series of points. The first lot of these gave eight insertions with eight successes, and two other lots also gave very good results, but a third lot, with which twenty-two insertions were made were all failures.

Constitutional Symptoms.—The cases were inspected from nine to eleven days after vaccination. Of the sixty-two cases vaccinated with Health Department ivory points, thirty-seven were successful, and none was severe. Of the forty-four cases vaccinated with the dry points of private manufacture, thirty-three were successful, one being severe, three marked, and twelve showing only moderate constitutional disturbance. Of the forty-one cases in which the glycerinated virus was used, in two the symptoms were severe, in six they were marked, and in fourteen were only moderate. The severer constitutional symptoms observed with the glycerinated virus the speaker thought could be partly explained by the fact that large vesicles occur in much larger proportion of the cases than where the dry points are used; moreover, these experiments had been carried out with what is called "green" virus.

Eruptions.—Of 282 cases vaccinated, nine, or 3.3 per cent., presented eruptions. Five of these cases occurred in children who had been vacinated only with ivory points. Most of the rashes were erythematous; one or two were urticarial; all were of a mild type and lasted only a few days. One case presented an eruption resembling varicella quite closely. The eruption was exceedingly discrete, and the lesions very few. Two weeks later the sister of this child was seen. and she presented the typical eruption of varicella, thus settling the diagnosis of the peculiar eruption in the first case.

Rapidity of Healing.—Of seventy-nine cases vaccinated with the ivory points prepared by the Health Department, sixty-two, or 78 per cent., healed promptly, while of 162 cases vaccinated with the glycerinated virus, 108, or 66 per cent., healed promptly. Of those which were slow in healing, 8.8 per cent. belonged to those done with the ivory points of the Health Department, and 17.2 per cent. belonged to the cases vaccinated with the glycerinated virus. It seemed evident from this investigation that the points charged with the serum exuding from the vesicle were weak in vaccine. He could not explain why it was that the ivory points of the private firms gave so much better results than the ivory points charged by the Health Department. He had had as yet no opportunity to test the actual time that ivory points remained potent, but some years ago he had studied this question with regard to the glycerinated virus of the Health Department, and had demonstrated that 100 per cent. of successes could be obtained with this virus after it had been kept for an average period of 7.7 months.

Tetanus and Vaccine Virus.—Dr. J. H. HUDDLESTON was the author of this paper. He said that no proof had yet been adduced to show that tetanus had ever been inoculated with vaccine. While the calves used by the Health Department were old enough to have been fed on hay before coming to the laboratory, after their arrival they were fed on sterilized milk, so that after coming into the possession of the Health Department there was no danger of their becoming infected with tetanus through hay. It was well known that tetanus bacilli were found in horse manure, but it was not known whether this was so to the same extent with calf manure. He had examined the feces of twenty-five calves that had been fed on hay, and by inoculation experiments on animals had demonstrated that in only two instances was there infection with tetanus. His studies also pointed to the fact that calves were so little susceptible to tetanus that they would not present any symptoms of this disease even though the vaccine drawn from the animals were contaminated with tetanus bacilli. Experiments in the laboratory showed that glycerine exerted a distinctly inhibitory influence on the tetanus germs. Bone points and glycerinated virus might both carry tetanus, and experiments on animals were found not to be quite so delicate as cultural tests in establishing the presence of tetanus. It was found very difficult, however, to detect by cultural experiments the presence of a small contamination with tetanus because of the viscidity of the glycerinated virus. The author pointed out the possibility of contaminating vaccine with tetanus, and at the same time that it practically never occurs. His conclusions may be summarized as follows: (1) The feces of calves fed on hay may contain tetanus germs; (2) These germs do not develop with glycerinated virus; (3) Any form of vaccine virus—dry points of tubes of glycerinated virus—may be infected with tetanus, and may convey it, but no form of vaccine increases the amount; (4) Cultural tests for the presence of tetanus germs are somewhat more delicate than animal tests; (5) Inoculation by scarification is not a favorable method of inducing tetanus; (6) It is probable that the greatest precaution against the production of infected vaccine virus lies in the maximum of cleanliness observed in a vaccine laboratory.

Dr. FRANK P. FOSTER said that he must confess at the outset that he was an opponent of glycerinated virus, though open to conviction. He had been delighted with the paper of Dr. Rosenau and the manner in which he had presented his results, which was in such marked and pleasing contrast with much of the literature of the day, which proclaimed loudly that "glycerinated virus is absolutely aseptic." Such immoderate statements as that just quoted tended to make people careless in the use of vaccine. The strange and almost grotesque figures presented by Dr. Rosenau made it clear that there is a good deal of glycerinated vaccine on the market which does not possess the characteristics alleged to belong to glycerinated virus. It was safe to say that the ivory points which Dr. Fielder used were exceedingly poor, and the results reported by him with glycerinated virus were such as should be expected from good dry points. According to his own experience, the vaccine obtained from calves six or eight months old was superior to that obtained from younger calves. Regarding the length of time that dry points retain their potency, he could say most positively that dry lymph would not deteriorate in seven or eight months if properly made and kept Dry lymph would not deteriorate even at the temperature of the blood if kept absolutely dry. It was not enough for such lymph to be dried spontaneously; it must be dessicated He did not know just what was meant by the term "pulp." Probably it was a whitish pulpy layer found beneath the epidermal portion of the pock. This he had always looked upon as consisting of the necrosed tips of the papillæ of the derma, arising from the fact that the form of pock in this instance was what had been described by Rindfleisch as "the diphtheritic pock." Of course, the latter term had no reference to true diphtheria. Dr. Foster said that he had always regarded this as an abnormal condition in the calf, and had invariably discarded it. If the term "pulp" included still living but softened tissue lying more deeply, there was no harm in using the lymph which exudes from that structure.

Dr. J. J. KINYOUN of the Marine Hospital Service said that about five years ago he had made some experiments at the Hygienic Laboratory in collecting lymph. He had found that the first part of it was quite rich in vaccinal material, and the last part comparatively weak. This might be because the lymph washes away some of the vaccinal organisms. If this were true, it would explain why points charged with the last part of the serum are unsatisfactory. The speaker said that he had been a consistent advocate of the superiority of the glycerinated virus over the dry points, and had been led to this belief because of his association with Dr. Copeland in 1891. Since that time he had had the privilege of inspecting most of the vaccine institutions of Europe and of the Orient, and he could say without hesitation that the superiority of the glycerinated lymph over the dry point could not be questioned. Quite recently he had inspected the vaccine institute of Japan. In that country smallpox hardly exists because of the systematic vaccination and revaccination of the people. The Japanese think no more of smallpox than of measles because the disease is so thoroughly under control. In the Philippine Islands it was found exceedingly difficult to preserve the glycerinated virus for any length of time; hence it became necessary to send it out immediately after its collection and preparation. There were very many sore arms there, and yet only 60 per cent. of primary vaccinations were successful. It was also said that the vaccinations were not as thoroughly protective as elsewhere.

Dr. HUDDLESTON said that one cause of the remarkable differences in the number of bacteria found in the glycerinated virus was to be found in the fact that it was practically impossible to make a very homogeneous vaccine emulsion, and hence one portion would contain more vaccine particles, and perhaps more bacteria, than another portion. There must be some solid matter in all good vaccine, for if the serum be passed through a filter which would remove all solid matter, the filtrate would be found perfectly inert. The white pasty matter referred to by Dr. Foster was curetted out and used in the manufacture of the glycerinated virus. Both dry points and glycerinated lymph had been known to retain their potency for two years or more, but this was only a matter of general scientific interest, and did not indicate the practical life of the vaccine under ordinary conditions. The Health Department made use of 50 per cent. glycerine, *i. e.*, half glycerine and half water, in the manufacture of the glycerinated lymph. He felt that there was a decided difference in the character of the vaccine obtained for dry points from a cow and from a calf; the material from the older animal could hardly be curetted away so thoroughly and leave such a clean surface.

Clear Human Serum Effective.—Dr. A. JACOBI took issue with the statement that the clear serum is inactive, for, he said, clinical experience long ago had taught us that it was the clear serum which is especially to be relied on. Forty or fifty years ago the mode of vaccination in New York City was by taking a clear serum from a vesicle on the arm of a child that had been vaccinated eight days before. The physicians of those days were very particular to take only the clear serum, and they often had to make a number of visits before they struck just the right time for taking the vaccine. If this time were properly selected the vaccine would prove good to a certainty. Sometimes they were compelled to use the scab moistened with water, for, in those very early days even glycerin was not at hand.

Differences in Dry Points.—Dr. ROSENAU said that after listening to the discussion he had come to the conclusion that confusion had arisen from the fact that all dry points are not made in the same way. Some manufacturers charge the points with a brush dipped in the serum exuding from the old cross-hatch scarifications; other manufacturers mixed the lymph with glycerin, and after keeping it some weeks, mixed it with normal blood serum and allowed it to dry on the bone points. There can be little doubt that vaccinia is an epithelial infection, and that the glycerinated pulp by taking away vaccinal elements showed that the epithelial layer contained the maximum of the bodies.

Dr. HUDDLESTON said that he had seen in London vaccinations made in exactly the way described by Dr. Jacobi. The vaccinations were made with a fluid or serum which looked perfectly clear, but this seemingly clear fluid still contained very minute particles, and if they were removed by filtration the filtrate would be found to be inert.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, Held February 18, 1902.

E. FRANKLIN SMITH, M.D., CHAIRMAN.

A Consideration of Some Points in Regard to the Etiology and Diagnosis of Endo- and Pericarditis.—Dr. FREDERICK A. PACKARD of Philadelphia read this paper. He said that the heart acts well when acting naturally and in proper regulation to the vascular system. This organ was frequently looked upon as a pump, and the rest of the vascular system as merely an arrangement of tubes connected with this pump, but such a narrow view was apt to lead to mistakes in therapeutics. The heart should not be too much considered to the exclusion of the rest of the vascular system. Even in the heart itself mural endocarditis could reach a high grade without serious consequences, whereas a much less extensive endocarditis of the aortic valves would lead to much graver results. From an anatomical standpoint, the lining membrane of the heart was of greater importance than that of the rest of the vascular system. Any inflammatory process occurring in the body in a part which could not rest was apt to become chronic. The exact agent producing endocarditis was not always demonstrable even at the present time. He believed that degenerative changes in the valves and their endothelial coverings were too frequently spoken of as endocarditis. If in fatal cases of active endocarditis microorganisms were found, corresponding to the bacterium causing the primary infection, it was reasonable to assume that cases of endocarditis not terminating fatally had a similar origin. Too much weight should not be attached to the absence of microorganisms in lesions produced by a former endocarditis. The term, chronic valvulitis, it seemed to him, was too often applied to what should be looked upon as the results of a valvulitis.

Referring to pericarditis, the speaker said that in 1899 the interesting suggestion had been made that the pericardium served as a protective covering for the heart, preventing its overdistention as does the leather covering of a foot-ball. Delirium had occurred so frequently in his experience with pericarditis that he made it a rule when this symptom was present to carefully examine the pericardium. No very satisfactory explanation of this delirium had been offered. While it was comparatively easy to make the diagnosis of pericarditis when the latter developed under observation, it was another matter when the case was first seen after the friction sound had disappeared, owing to the increase of the effusion in the pericardial sac. Little reliance could be placed upon the apparent displacement of the apex beat. It was not unusual to find a double apex beat, one in the fifth intercostal space near the nipple, and another in the third or fourth intercostal space close to the sternum. The cone-shaped area of cardiac dulness, usually said to be characteristic of pericarditis, could hardly be said to be diagnostic. Extension of the cardiac area to the right could not be relied on because in fatty degeneration of the the heart, owing to the dilatation of the auricle, the cardiac area often extended considerably to the right of the sternum. In the vast majority of cases of pericarditis a valuable sign was dulness in the fifth intercostal space to the right of the sternum. The occurrence of dulness beneath the manubrium of the sternum had been claimed to be a useful indication of pericarditis, and experiment on the cadaver had shown that whereas the injection into the pericardial sac of 150 c.c. of fluid would cause dulness in this prolongation of the pericardium over the great vessels, increase in the area of dulness at the base was not noted until 250 c.c. had been injected.

The Pathology and Treatment of Endo- and Pericarditis.—Dr. WILLIAM H. PORTER presented this paper. He said that a common appearance at the necropsy on a case of pericarditis was the "milk patch," a white glistening appearance of the pericardium due to the formation of new connective tissue in or underneath the pericardium. By some these were looked upon as the results of a previous inflammatory action; by others as a disturbance in the nutritive activity, and in no way connected with an inflammatory process. The speaker thought the latter was probably the correct explanation. Occasionally, a large hemorrhage was met with, non-inflammatory in origin, due to rupture of one of the large vessels. Of the non-inflammatory lesions there was the occasional involvement of the pericardium by new growths, such as sarcomata and gummata. Tubercular involvement of the pericardium was generally considered to be an inflammatory process. In the early stage of a simple acute pericarditis there would be found simply a congestion of the membrane, most marked around the great vessels. The inflammation usually results in a more or less abundant exudation of the constituents of the blood into the pericardial sac. In the non-suppurative type, under favorable circumstances, the fluid would be gradually absorbed. Most commonly certain bands of adhesions formed, and these might become so numerous as to almost obliterate the cavity of the pericardium. In endocarditis the membrane became congested, and subsequently there was usually more or less cell formation. Vegetations may form on the valves and, owing to the changes of nutritive activity, might undergo degeneration and be washed away by the current of blood, thus giving rise to emboli of distant parts. The simple acute endocardial inflammations were not distinctly bacterial in origin, as in the case of the malignant form. The main thing in the preventive treatment was the dietetic and hygienic management of diseases likely to result in such inflammation. The diet should be highly nutritious and most digestible, and the hygiene should be of the best. The treatment of the acute inflammation of the endocardium or pericardium should comprise absolute rest. Locally, for the relief of the pain and tachycardia, heat or cold applied directly over the precordial region, would give prompt relief. The question of tapping the pericardium was an interesting one, but there was a great diversity of opinion on this point. If the quantity of the effusion were so great as to seriously embarrass the heart's action, the imperative indication would seem to be the removal of the fluid by tapping.

Dr. S. S. **Burt** agreed with Dr. Packard that many of the cases of so-called valvulitis were in fact only the scars of an old inflammatory process which had long since come to an end. It was for this reason that he had long maintained that some of these cardiac cases were really good life insurance risks. There were many cases of pericarditis in which it was difficult to make the diagnosis. He had heard the friction sound in some cases in which there was a good deal of fluid present in the sac. The great point in the treatment was absolute rest, and as for drugs, an experience of twenty-five years made him positive that digitalis does more good than any other one drug in disease of the heart.

Dr. **Lewis A. Conner** said, concerning the diagnosis of pericarditis with effusion, that it was one of the most difficult things in the whole realm of cardiac diagnosis. Sometimes every sign seemed to fail. He recalled one case in which the dulness to the right of the fifth intercostal space had failed him as a sign of pericarditis. He had at present under his care a case of pericarditis with effusion in which the inequality of the pupils was peculiarly well marked.

Dr. **Alexander Lambert** said that the fact that malignant endocarditis might occur without the presence of any germs had been forcibly impressed upon him last winter. In this case both ærobic and anærobic cultures were made from the blood on five different occasions, and they remained absolutely sterile, yet at the autopsy there was abundant evidence of the existence of malignant endocarditis. He had found a helpful diagnostic sign in pericarditis to be the alteration in the level of the fluid in the pericardial sac on causing the patient to lean forward.

Dr. **Charles E. Quimby** said that many years ago a German book on physiology had given him a new insight into the action of the mitral valve. According to this description the mitral valve is not a valve in the ordinary acceptation of that term, but, being held with its tips down, the action of the columnæ carnæ was to drive the valve deeply down into the apex of the heart. This valve then acted as a cone-shaped plunger, and in doing so left the ventricle filled with blood at the end of systole, the blood from the auricle being held in the valve as in a cup. He felt that every case exhibiting a persistent high arterial tension should be put down as a possible case of endocarditis, and should be treated prophylactically in accordance with this view.

Dr. **James J. Walsh** said with regard to the possible implication of the recurrent laryngeal nerve, that some cases of supposed very late development of hydrophobia were, in reality, examples of death from pericarditis. As to the detection of pericardial effusion, he would recall the fact that in one of the Vienna hospitals it was the custom to examine the patients in the knee-chest position, and with the patient in this posture it was possible to make out certain small effusions which could not be detected by other means.

Pneumonia in the Light of Modern Research.—Dr. **Stephen S. Burt** was the author of this paper. (vide page 368.)

Disinfection of Pneumonic Sputa.—Dr. **W. Gilman Thompson** said that a large number of observations had borne out the statement that pneumonia is becoming more prevalent. Thus, in an edition of Watson's "Practice of Medicine," published thirty years ago, that author, despite his enormous clinical experience, makes the astounding statement that he saw only five or six cases of idiopathic pneumonia each year. The precautions laid down in the paper were interesting, but he doubted, even if they could all be carried out, if they would accomplish much in the way of staying the march of the disease. For example, the diplococcus of pneumonia was known to be ubiquitous; hence, as it was frequently present in the mouth, what difference would it make if there were a few more or a few less? We did not know what made some of these organisms virulent while others were not. He did, however, firmly believe in the importance of disinfecting the sputa, a point which was very commonly overlooked by physicians. He had met with two or more epidemics of pneumonia in hospital practice, and had promptly checked them by isolating all of the pneumonia patients, emptying the ward and disinfecting it.

Contagiousness of Pneumonia.—Dr. **Beverley Robinson** said that he had been interested in the measures suggested by Dr. Burt for the prevention of pneumonia. No doubt our city would be healthier, now that the streets were to be kept cleaner, but people would still continue to go to the theatres and to other crowded and badly ventilated places, such as the New York Academy of Medicine, and hence we must not look for brilliant results immediately from such efforts at prophylaxis. About fourteen years ago Dr. Henry F. Walker read a paper before the Practitioners' Society of New York city, in which he pointed out the apparent contagiousness of pneumonia. This had greatly impressed the speaker at the time, and he was personally disposed to believe that not only pneumonia, but even ordinary colds, were, to a certain indefinite and unknown extent, contagious.

Creosote Treatment of Pneumonia.—Dr. **Robinson** said that four years ago he also read a paper on this subject, and had expressed the belief that by the use of inhalations of pure creosote the pneumonia patient could be benefited and the attendants protected. At the present time he was not prepared to admit that creosotal possessed any advantages over creosote, nor could we legitimately hope that any medicine given internally could be expected to successfully combat toxæmia of the nature of pneumonia. He was in thorough accord with Dr. Charles E. Nammack, who, in a paper published a few days ago, stated that his main reliance was on the proper use of four things, viz., strychnine, nitroglycerine, oxygen and alcohol. Of course, the creosote inhalations should be begun very early in the disease. He was working at present with a view to finding some means by which the heart's action could be kept up for twenty-four hours or more in the critical periods of a pneumonia, and if he succeeded in finding this great desideratum, he would take pleasure in imparting the information to the profession.

Dr. **Andrew H. Smith** said that the different decades of life present different mortality rates from pneumonia. It was well known how much more dangerous pneumonia was, for example, in a person with impaired kidneys, and also that as life advances there is greater liability to such impairment of the kidneys; hence, the increasing gravity of pneumonia late in life. The micrococcus of pneumonia was peculiar in the great variations in virulence which it displays. It seemed to be established that a mucous surface, *i. e.*, ciliated epithelium, does not afford a favorable nidus for the propagation of the pneumococcus; on the other hand, this organism would grow readily on a serous surface. When, for any reason, the pneumococcus was carried down into the air cells, it would find a congenial soil for its growth. Even then, if the person's vitality was good, it was probable that no harm would result, but if the vitality were lowered, pneumonia would develop. His own opinion was that from the moment an active, propagating pneumococcus is present in an air cell in the lung the person has pneumonia. As a result of the growth of the pneumococcus, toxins are developed and are absorbed, and from these arise the well-known phenomena of pneumonia. So long as the process of consolidation extended, just so long would toxins continue to be formed. He was strongly of the opinion that it was possible to so act upon the whole mass of blood that the air cells in the lungs could be made an unfavorable nidus for the propagation of the pneumococci. The beechwood creosote would probably do this, while creosotal should accomplish the same result with more comfort to the patient. By such treatment the disease would be so altered that defervescence would take place in about 90 per cent. of the cases by lysis instead of, in a similar percentage, by crisis. This was a very significant fact. Mention had been made of the use of nitroglycerine, and this always pleased him. Whenever a pneumonia patient appeared cyanosed, nitroglycerine should be given rather than digitalis.

Dr. F. A. PACKARD said that he had felt for a long time that we were making a mistake in placing pneumonia among the constitutional diseases. One of our greatest functions was prevention. Pneumonia was primarily an infection of the lung, and if we were to prevent it we must look upon it as a constitutional disease with a local manifestation.

Dr. ALEXANDER LAMBERT said that the recent epidemic of pneumonia in the school at Groton, Mass., was merely an epidemic among a number of school-boys who had been careless in their out-door sports during a spell of changeable and inclement weather. These cases had nothing peculiar about them; they were frank cases of ordinary pneumonia. He could not agree with Dr. Packard about pneumonia being a constitutional disease with a local manifestation. He had made bacteriological experiments on upwards of 200 cultures, but had learned that the pneumococcus is not usually found in the blood until shortly before death. The disease was apparently a local inflammation in the great majority of cases, and eventually became a septicæmia.

Dr. MORRIS MANGES said that the reason the pneumococcus was not found in the blood of pneumonia patients earlier was that too small a quantity of blood was taken for the examination. The prevalence of influenza would explain not only the increased frequency, but the higher mortality from pneumonia in the last decade. According to his experience, pneumonia was much less fatal in hospital than in private practice, and hence one should be slow to accept the statement that pneumonia is more dangerous among the poor. Coolidge had taken the statistics of the Massachusetts General Hospital for ninety years, and had shown that there had been practically no change in the disease. He would like to know whether Paris, with its clean streets, had less pneumonia than other cities not kept so scrupulously clean.

Dr. S. A. KNOPF said the method of collecting ashes in our city was certainly calculated to injuriously affect any one suffering from disease of the respiratory organs. Spitting in the streets was a nuisance, but people must spit; hence they should be provided with pocket flasks for that purpose, and the municipality should furnish public spittoons and keep them properly flushed out.

Dr. BURT, in closing the discussion, asserted positively that pneumonia was remarkably prevalent, and that many of the milder cases passed entirely unrecognized. He was not yet satisfied that pneumonia begins in an air cell and spreads from there throughout the body. He had seen patients walking around with one lung completely consolidated by a pneumonic process, and he had even seen persons with double pneumonia who were not apparently very ill. Others, again, with only a small area of consolidation, became extremely ill, and even succumbed to the disease. Dr. Manges was right in the statement that if the pneumococci were not found in the blood during the course of the disease, it was because of a faulty technique.

NEW YORK COUNTY MEDICAL SOCIETY.

Stated Meeting, Held February 17, 1902.

PARKER SYMS, M.D., PRESIDENT.

Lever Axis Traction Forceps.—Dr. REUBEN CRONSON presented an instrument of this kind which he had devised, and which he claimed would compel the fœtal head to travel in the axis of the pelvis. It consists of two long curved levers, an anterior and a posterior one. The former fixes the head against the posterior plane of the pelvis, and the latter is used to make traction downward in the axis of the pelvis. The pelvis curve of the instrument is the result of observations on the cadaver.

Symposium on Obstetrics.—This was the special order for the evening.

Management of Normal Labor.—Dr. BERNARD COHEN of Buffalo read the opening paper in this symposium, taking the above for his theme. He said that, aside from the introduction of aseptic practice, nothing, perhaps, had done so much towards reducing the morbidity of the puerperal woman as medical supervision during pregnancy. Physicians should educate their patients to the necessity of such supervision. The urine should be examined once a month up to the eighth month, and then every week, the examination including not only the testing for albumin, but a quantitative determination of urea and indican. If the daily quantity of urea fell below 300 grains, the patient should be watched closely, and appropriate treatment instituted to avert the possible attack of eclampsia. The physician should inquire minutely into the diet and the general habits of life of the pregnant woman; should see that a proper nurse is engaged, and that a suitable room is selected for the confinement. The patient should also be examined from time to time. At the time of labor, before making the usual examination, the physician should be most careful to scrub the hands with a brush and green soap, and afterwards immerse them in a 2-per cent. solution of lysol. The finger should be introduced carefully under the guidance of the eye, the labia being separated first. The instruments should not only be made sterile, but should be so placed as to be kept sterile. He was in favor of using an anæsthetic in moderation during labor, and believed it did no harm. Aside from holding back the head and aiding slow distention of the perineum, it was often of decided advantage to apply to the perineum cloths wrung out of hot water until the perineum was sufficiently thinned and softened. Attention was directed to the necessity of quickly cleansing the eyes of the newly-born infant, and to the importance of keeping the hand on the fundus uteri for an hour after delivery in order to secure good uterine contraction and prevent the accumulation of blood clots in the uterine cavity. The patient should be kept in bed for twelve days; she should not be allowed to go about the house until the third week, and should not resume her work until the sixth week.

Use and Abuse of the Forceps.—Dr. EDWARD A. AYERS, in discussing this subject, expressed the opinion that the forceps were more often applied too soon than too late. About one case in every twenty or twenty-five was benefited by the proper use of the forceps. Their application presupposed a knowledge of the presentation and position, a fairly accurate estimate of the relative size of the head of the fœtus to the birth canal and of the amount of available uterine power. An almost unexceptional indication for the application of the forceps was a slowing and weakening of the uterine contractions, as was also a rise of the pulse to 150 or its fall to 120. The first effort with the forceps should not be to bring down the head, but to secure its passage through the cervix. The traction should not last longer than the uterine contractions, and the blades of the instrument should be relaxed at the end of each traction. The forceps should be applied, if possible, in most cases so that one blade is over the posterior parietal eminence, and the other over the anterior malar bone. With the ordinary forceps it was possible to make 90 per cent. of the traction in the axis of the inlet, but in a difficult forceps case, in which the head is not engaged, this extra 10 per cent. was desirable, and hence he favored the use of the Tarnier axis traction forceps in such cases. The forceps should almost always be removed before the delivery of the head, and the patient's limbs should always be extended at the time the hand reaches the vulva, because it is easy to show that the flexed thighs increase the tension on the outer portion of the perineum.

Diagnosis and Treatment of Puerperal Sepsis.—Dr. Frederick Holme Wiggin read this paper. He said that while our knowledge that wound infection is the essential thing in puerperal fever had led to great improvement in the statistics of lying-in institutions, it was strange that wound infection, in the ordinary daily obstetric practice of physicians was almost as frequent, and was followed by almost as high a rate of mortality as fifty years ago. When the pulse of the puerperal woman rose above 90 and the temperature above 100.5° F., and remained so for twenty-four hours, it should call for a most searching examination to ascertain its cause. When septic endometritis passed beyond the uterus there would be chills and daily variations of temperature, and a bacteriological examination of the secretions would probably show the presence of staphylococci. The presence of general peritonitis might be the first to attract attention to septic infection if the physician were not constantly on the alert. It usually made its appearance between the third and seventh day. Phlegmasia dolens ordinarily developed in the second week. Malarial infection could be excluded by an examination of the blood for the malarial plasmodium, and typhoid fever could be ruled out by an examination for the Widal reaction. The treatment of puerperal sepsis should be preventive, and should consist in the aseptic conduct of the labor and of the puerperium. From this it was obvious that not only should the physician be careful about the sterilization of his hands and instruments, but the nurse should be competent to keep herself, the patient and the latter's surroundings surgically clean. A rise of temperature should lead to an inspection of the genitalia, and, if necessary, the uterine cavity should be explored and treated in accordance with the indications. Prompt and vigorous local treatment at this time should be sufficient to check the septic process. The speaker recommended thoroughly emptying the uterus, cleansing with hydrozone and applying Monsell's solution. If pyæmic conditions were recognized before the onset of pneumonia, the patient might be saved by prompt cleansing treatment and the performance of abdominal section. In advanced puerperal sepsis little help could be expected from drugs; our main reliance should be on frequent and copious hot saline infusions and on a generous diet.

Venesection and Transfusion in Puerperal Eclampsia.—Dr. Robert Abrahams said that his attention had been first directed to this subject by a case of eclampsia in which the very grave condition of the patient had improved suddenly, and almost as if by magic by the occurrence at this critical moment of a profuse post-partum hemorrhage. Since then he had made use of this knowledge by resorting to venesection followed by saline infusion in the bowel. His usual practice in these cases was to remove, by venesection, eighteen to twenty ounces of blood, and then inject high up into the colon about three quarts of hot saline solution. Four cases were narrated to prove the effectiveness of this mode of treatment. Venesection, he said, improved the pulse, induced free sweating and urination, and, by causing intense thirst, led the patient to drink freely, thus still further assisting the emunctories. In addition to this, the venesection removed considerable toxic material from the system and relieved the congestion of the brain. Venesection alone had been employed in puerperal eclampsia from time immemorial, but the use of the combination of venesection and saline infusion was of comparatively recent date. In view of our present knowledge, there seemed to be very few contraindications to this treatment. When the patient was on the verge of collapse, it was probably better to inject the saline solution into the vein.

Dr. Ralph Waldo said that when cases of puerperal sepsis were admitted to his hospital service, the first step taken was to examine the parts thoroughly. If the os were open, whether there was a foul discharge from it or not, the presumption was that there was something in the uterus which should be removed. The uterus was accordingly explored, usually without an anæsthetic, and then carefully curetted, but not with a sharp curette. The uterus was then well washed out. If abscesses formed they were opened and washed out with peroxide of hydrogen and afterwards with sterile water, and then the cavity packed. He had never seen a case of puerperal sepsis in which he was willing to do hysterectomy.

Dr. William R. Pryor said that the greater the degree of sepsis the less he believed was the indication for hysterectomy. He believed that most of Dr. Vineberg's cases were examples of the remote, and not the true, immediate results of puerperal septicæmia. Curettage of the septic uterus carried with it a mortality of about 20 per cent.; curettage of the putrid uterus, containing less virulent germs than the streptococcus, was a very different matter. His method of treatment was the isolation of the infected uterus, by packing 5 per cent. iodoform gauze into the pelvis, the uterus having been first curetted. This treatment gave rise to a degree of iodism which would be dangerous were he treatment not associated with saline infusion. This treatment had been carried out in a large number of cases of puerperal infection occurring after the fourth or fifth month of pregnancy, and with no fatalities. Cases occurring in the earlier months belonged to a different category.

Dr. George Tucker Harrison said that it was wrong for this discussion to go on without referring with gratitude to the monumental work of Semmelweiss, a man to whom the medical profession owed a vast deal. This investigator's views were essentially those heard expressed at this time, and his name should not be mentioned without a feeling of reverence. It could not be denied that our means of treating cases of severe puerperal sepsis were still very limited and unsatisfactory. The cases referred to by Dr. Waldo were nothing more than cases of sapræmia; they would get well, as a rule, even without any treatment. In cases of streptococcus infection the fever would usually begin on the second day, and such cases almost invariably terminated fatally.

Dr. S. Marx said that in cases presenting high temperature, a low pulse and a stinking discharge—cases of sapræmia—were the ones in which there was a distinct indication for the curette. It was the height of folly to use either a blunt or a sharp curette in a uterus in which there was no material to be removed. His former experience with Marmorek's antistreptococcus serum had been uniformly bad, but recently he had made use of fresh serum, prepared in this country, and had been pleased with the results. Occasionally heroic doses of this serum—up to 20 c. every three or four hours—would save the patient. He had been deeply interested in the practical and timely paper presented by Dr. Abrahams. He had occasionally employed venesection in cases of puerperal eclampsia up to the point of producing acute anæmia, and had followed this by saline infusion. In the cases in which he felt that bleeding was indicated, the indication seemed to him to be to empty the uterus immediately, and his own preference was for evacuation of the contents of this organ and allowing bleeding to take place from it. In some of these cases it seemed justifiable to consider Cæsarian section. He had employed veratrum viride because it was a medical method of bleeding the patient, but he was compelled to say that he had seen some exceedingly severe convulsions occur while the patient was under the influence of this drug and the pulse down to 60.

Dr. L. ZWISOHN emphasized the importance of accurate diagnosis. This was easy where marked symptoms appeared on the third or fourth day, but in those developing later, and more insiduously, there was a chance for error even with careful physicians. He would direct attention to the symptom that he considered of great diagnostic value—*i. e.*, a peculiar luster of the eye.

Dr. ALEXANDER LAMBERT said that it had been recently shown that the substance which Buchner called alexin is a composite body, made up of substances formed in widely distant parts of the system. An animal might be immunized as highly as possible, and only one of these bodies would be increased—the immune body. A bactericidal serum would not act unless there was a sufficient amount of alexin present in the body. No method was known at present by which the alexins could be increased. Immunization does not do it—in fact, it sometimes seemed to diminish it. Until this gap in our knowledge were bridged over we must be groping in the dark with our bactericidal sera.

Dr. A. ERNEST GALLANT said that the most important observation made by Semmelweiss was that if we left our obstetric patients alone they would do much better, and would be free from fever. Since his time the most important thing we had learned was that we could examine patients if we were careful to sterilize our hands. After all, the great thing was not the particular antiseptic employed, but to "scrub, scrub, scrub." The speaker closed his remarks by reciting a humorous paraphrase of a familiar rhyme by Mark Twain, intended to emphasize this point.

Low Fees Partly Responsible for Puerperal Sepsis.—Dr. B. COHEN said that he believed there would be much less puerperal sepsis if obstetricians were properly paid for their services. He believed that the average fee for an obstetric case in this country was less than ten dollars. Many physicians would attend cases of scarlet fever, measles and various septic cases, and would then go to the lying-in room. We should allow at least twenty-four hours for a case of normal labor. He was in favor of placing the axis traction forceps more in the hands of the general practitioner, though admitting that in very expert hands the ordinary classic forceps could be made to do almost as much as the axis traction forceps.

Dr. E. A. AYERS said that in operative work of general surgery the operation extended over a comparatively short time, whereas in puerperal cases the time of exposure to conditions favorable to septic infection was many times greater. This he took to be one of the great causes of puerperal sepsis. In the treatment of eclampsia there could be no routine method. These patients die either from the coma or from heart failure. He was in favor of using anticonvulsive remedies, and at the same time hastening the processes of elimination. If by such treatment one could gain on the convulsions, it was much better not to immediately empty the uterus, as this procedure in itself was an irritant, and was almost sure to precipitate another convulsive attack. He wished to condemn the common practice of using chloroform in these cases just at the time when the patient most needs oxygen. There was a class of cases in which venesection was useful, *i. e.*, those in which the brain is being overwhelmed by the terrific intracranial pressure. In such cases Dr. Abrahams' treatment was admirable, but it was not applicable to all cases of puerperal eclampsia by any means.

Dr. WIGGIN said that he had found that where abscesses, the result of puerperal sepsis, were simply opened and drained through the vagina, it often became necessary to do a subsequent operation. For this reason he had come to look upon hysterectomy in these cases as being a preferable plan. After studying the treatment advocated by Dr. Pryor he felt that it did not have a rational basis. It was well known that iodine has no action on bacilli, but upon their products, and hence the surcharging of the system with iodine seemed to him rather detrimental than otherwise. The only benefit to be derived from opening the cul-de-sac and packing in gauze was the formation of adhesions. The chief difficulty in the treatment of puerperal sepsis was the rapidity of the process.

New Instruments.

SOME MODIFICATIONS OF THE EARLIER PERIMETER OF DR. SKEEL.

By HERBERT WRIGHT WOOTTON, M.D.,
NEW YORK.
ASSISTANT SURGEON MANHATTAN EYE AND EAR HOSPITAL, AND OPHTHALMOLOGIST TO THE GERMAN POLIKLINIK.

THE self-registering apparatus, devised by Dr. Skeel and attached to the perimeter which bears his name, is undoubtedly of the greatest service in the examination of the field of vision, enabling the observer to record his findings with accuracy and rapidity, during this somewhat tedious procedure. The writer has attempted, by a few simple modifications, to extend the sphere of usefulness of this perimeter, in such a manner as to make it applicable to the angular measurement of strabismus and to the determination and registration of the monocular fields of fixation. The efforts of Mr. E. B. Meyrowitz in these directions have given the writer great satisfaction.

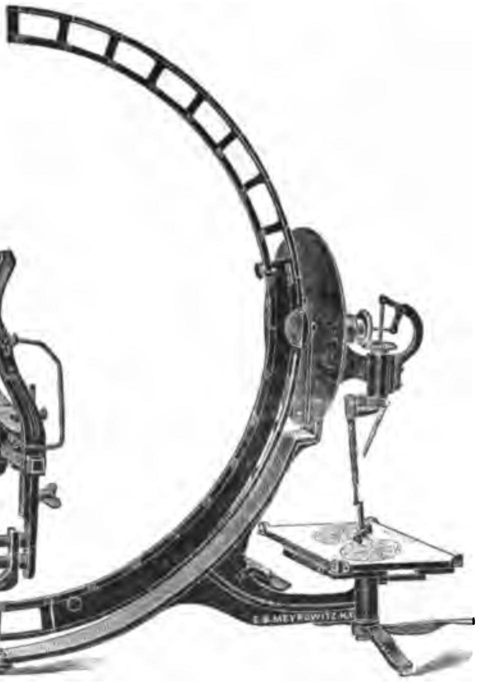

FIG. 1.

Whether we believe that advancements or tenotomies should form our primary operations in cases of concomitant strabismus, it is certainly advisable that we should know the exact degree of deviation before operating, for our opinion of the result and the deductions which we draw therefrom cannot but be materially influenced by the degree of squint which was present. The terms "a slight amount" or "an extreme degree" are hardly expressions upon which we can rely for future guidance. The most accurate means of measuring the degree of strabis-

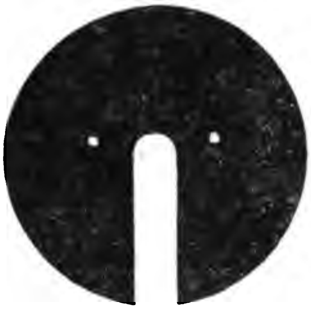

Fig. 2.

mus is by the angular method, which at the same time is so easy and so rapid that there would seem to be no good reason for replacing it by any other. The circular disc placed at the center of the arc of Dr. Skeel's perimeter, while forming an excellent and necessary background in the examination of the field of vision, renders the determination of the angle of strabismus impossible, and the writer has, therefore, caused it to be so constructed that it can be readily removed and replaced. With the disc removed, the observer proceeds to estimate the angular deviation in the usual way. The head being fixed by the headrest, to be presently described, the squinting eye is placed in the center of the arc, and the fixing eye is directed to a candle flame, twenty feet distant. One has now only to move a small taper along the arc, until its reflection shall coincide with the center of the pupil of the deviating eye, to read off from the scale the apparent degree of angular deviation. This apparent deviation is estimated by the pupillary axis, and, if the squinting eye be quite amblyopic, the apparent deviation is all that it is necessary to determine, for in such cases there will be no visual line, but in cases in which the squinting eye possesses good or fair vision the angle formed by the visual line and pupillary axis, designated the angle kappa by Landolt, frequently is sufficiently large to become of some importance in our calculations. It should be estimated by the easy and rapid method which Landolt suggests. The head remaining fixed as before and the disc being removed, a small taper is placed at the central point of the arc, and the patient is told to fix it with the squinting eye, his other being covered. The observer now closes one eye and with the other, placed directly behind the taper, notices whether or not the reflection of the taper coincides exactly with the center of the patient's pupil. If so, there is no angle kappa, and the apparent deviation is also the true one. Most frequently, however, this is not the case, and the reflection will then fall either to the outer or to the inner side of the pupillary center. If to the inner side, the angle kappa is said to be positive; if to the outer side, negative. In either case the taper is held in place and, the patient maintaining fixation, the observer moves his own eye outward if the angle be positive, inward if it be negative, along the perimeter's arc until the reflection from his new point of observation corresponds exactly with the center of the patient's pupil. One-half this distance, expressed in degrees of the perimetric arc, denotes with sufficient exactness the angle kappa of the eye examined. When positive, the angle kappa should be subtracted from the apparent deviation in divergent cases and added in those that are convergent. When negative, we should add it when the squint is divergent, and subtract it when the squint is convergent. A dilated pupil facilitates this examination. The writer is in the habit of measuring the degree of strabismus both before and after the employment of atropine, reserving the estimation of the angle kappa for the latter examination.

In the determination of the monocular fields of fixation, it is absolutely necessary that the patient's head should be immovable and, even when taking the field of vision, some means of fixing the head is desirable when we wish to be particularly accurate. The rest shown in figure 3 answers this purpose very well. It is adjustable for either eye and can be raised or lowered to suit requirements. Rotation on the vertical axis is prevented by fixation by means of the teeth, and this point of fixation, as well as the chin rest below it, is capable of vertical adjustment. Rotation forward on the horizontal axis is limited by the iron arch, which is bisected somewhat above the middle line, in order to accommodate its form to differently-shaped foreheads. By means of the thumb-screws the two segments can be clamped at the angle desired, after the patient's head has been brought into the vertical position. During the examination the patient should keep his forehead constantly in contact with the upper segment of the arch. The angular rod with a bulbous extremity, shown in figure 1, slightly in advance of the head rest, enables the observer to bring the eye of the patient to the correct level and, when this has been done, the rod can then be turned downwards and to one side, and does not interfere with subsequent procedures. In cases possessing fair vision, the best test object to employ in taking the fixation field consists of two small black squares upon a white background, the "double dot" of Duane. Should the eye be extremely amblyoptic or the patient under atropine, a small lighted taper should be substituted. The patient's head being fixed by the head rest, the field of each eye is taken separately, the eye not under examination being covered, preferably by a bandage. The test object is moved along the different meridians from the center to the periphery, the patient being told to follow it with his eye and to exert his utmost power in so doing. When the eye has reached its extreme limit of rotation in the meridian under examination, the two squares will seem to the patient to run together, and the observer can check the patient's statements by noticing the behavior of the eye, which will cease to follow the test object at the point of extreme rotation. When a taper is used, its reflection will be seen to move and the eye to remain stationary when the limit of rotation has been reached. In the examination of the lower part of the field the upper eyelid should be elevated by the finger of the observer. To record these results the writer has constructed the chart shown, reduced about one-half, in figure 4. It is drawn to suit the scale of Dr. Skeel's self-registering apparatus. The scheme of the meridians is that employed by Landolt, and is the one that has been

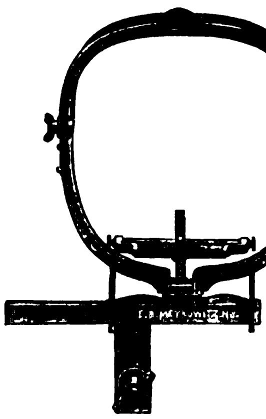

Fig. 3.

found most serviceable. The fields of fixation shown in black are those of the writer, who does not suffer from any muscular anomaly. It will be noticed at once that their downward and outward limits are somewhat more remote than the average tropometric findings. The writer thinks that the fields of fixation, as found by the perimeter, are very generally somewhat larger than when the tropometer is used. Possibly the reason for this is that the test object, by forming a continuous point of fixation for the eye, renders it easier for the patient to maintain an extreme degree of rotation. Be this as it may, fields of fixation vary greatly in different normal subjects, and those shown on the chart are intended merely as a guide, it having been thought better to exhibit one normal field for this purpose, than to depict one constructed from a table of averages. He who takes the field of fixation should be aware of its possible normal variations, and in any case its value is comparative.

As a guide to operative procedure in latent muscular anomalies, it is not the purpose of this paper to discuss the value of the fixation field, but in cases of concomitant strabismus, particularly when convergent, the writer considers its determination as a matter of the greatest importance. In these cases a bilateral restriction of the external rotations, when the squint is manifest both for distance and near, is a very sure indication of the existence of a secondary insufficiency of divergence. It is when this condition is present that advancement of both externi, without tenotomy of the interni, produces the happiest results, and, when the external rotations are reduced to thirty-five or forty degrees, we may attempt this procedure with the greatest assurance. The determination of the fields of fixation is also of inestimable value in paretic conditions, particularly when the muscles of both eyes are involved, in which case it is difficult and, at times, impossible to arrive at a correct diagnosis by means of the diplopia alone. The charts afford the observer an excellent means of keeping his records, and frequently illustrate in a beautiful manner the limitations of muscular action in the parts of the field dominated by the paretic muscles.

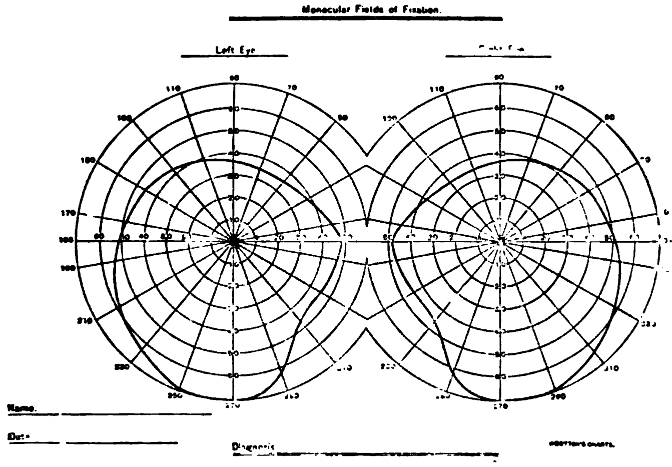

Fig. 4.

35 West Forty-fifth Street.

London's Parks.—London has fifty-six parks and gardens of from one-fourth of an acre to 198 acres, and thirty open spaces and commons from one to 267 acres in size.

CERVIX CLAMP FORCEPS.

By Z. ORTO, M.D.,

PINE BLUFF, ARK.

All instruments are supposed to aid the surgeon in doing his work with neatness and dispatch, and those that combine the above with hæmostatics are to be recommended. The writer recently conceived the idea of the clamp forceps figured in this article, and, with the aid of Messrs. Tieman & Co., the instrument is presented to the profession. As will be seen, the instruments are to be used in pairs, in repairing the lacerated cervix; and, when properly used, the time is greatly reduced, and the operation is practically bloodless. By their use, the author has been enabled to do Emmet's operation in eleven minutes.

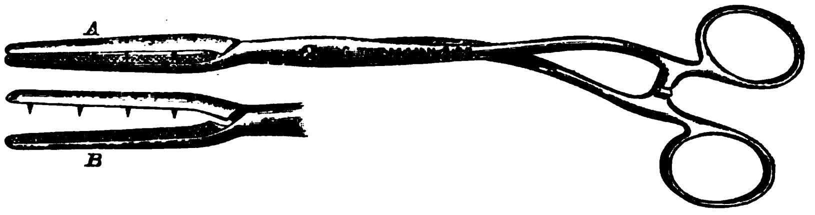

Fig. 1.

The patient should be in the dorsal exaggerated lithotomy position, and a perineal retraction used. Edebohls' speculum is used by the author, and serves a good purpose. After full dilatation of the cervix, the clamps should be passed as seen in Figure 2, clamping them loosely at first. The dotted lines show the lines of incision. These incisions are to be made with a sharp-pointed, curved bistoury, by transfixing the tissues at the apex of the triangle, and with one sweep of the knife on each side the cutting is completed. The clamps are now tightened and turned in such manner as will roll the incised edges outward—from each other—using the clamps *in situ* for counter pressure in stitching, after which they are removed. The sutures should be tied loosely, as there is always some compression of the tissues.

The advantages of these clamps are: (1) Rapidity of operation; (2) The prevention of the loss of blood; (3) Perfect and unfailing coaptation of cut surfaces; (4) Neater and smoother scar line; and (5) More rapid healing. Surgeons who have been accustomed to the old methods will readily appreciate the advantages of the instrument, while the novice will find in it a friend indeed.

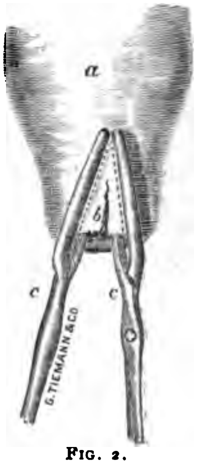

Fig. 2.

I will say, however, some familiarity with the instrument, and a little practice, will be necessary in manipulating the clamps to the best advantage. The selection of a needle is of some importance; it should have a good curve and be of medium size. The Kelly needle serves a good purpose.

Sir George Critchett.—Sir George Anderson Critchett, the only British medical man to be honored with a title in the latest distribution of such distinctions, is reported to be, like the late Sir Morrell Mackenzie, a consistent patron and supporter of the drama. Mr. Sidney Carton, the well-known dramatist, is his brother, and Miss Compton, the actress, his sister-in-law. Sir George is one of the most distinguished ophthalmic surgeons in Great Britain, and has thoroughly earned the knighthood which has been bestowed upon him.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending March 1, 1902:

	Cases.	Deaths.
Measles	1,105	40
Diphtheria and croup	303	38
Scarlet fever	342	33
Smallpox	56	11
Varicella	106	1
Tuberculosis	238	166
Typhoid fever	37	6
Cerebro-spinal meningitis	..	..

Professor E. A. Schäfer on the Structure of the Liver.—At a meeting of the Royal Society of Edinburgh, held on February 3, Professor Scähfer of Edinburgh University read a paper on the "Existence Within the Liver-cells of Channels Which Can Be Directly Injected from the Bloodvessels." He drew attention to papers written by Professor Browicz giving the results of observations on the liver-cells, in which he concluded that in addition to the presence of intracellular-biliary excretory channels there were also special afferent nutritive channels in the liver-cells. Professor Schäfer offered objective proof of this contention. He had found specimens in the Edinburgh University physiological laboratory of infected liver from the rabbit which clearly showed the intracellular nutritive canaliculi. On looking further into the matter he found specimens which had been left to the University by the late Professor Rutherford, some of which were apparently of this same rabbit's liver, while others purported to be from the liver of the cat. Some of these were labeled, "Shows injection within liver-cell," and one of them bore the date 1886. Professor Schäfer wrote to Professor E. W. W. Carlier of Birmingham, who at the date indicated was assistant to Professor Rutherford, to find out whether he could furnish any information with regard to the specimens. Professor Carlier wrote in reply that the specimens were injected by Simpson under his direction, and used for class purposes, and that he had first noted the canals and had shown them to Professor Rutherford, who, however, would not allow him to publish a note of them. Whatever might have been Professor Rutherford's reason in so acting, it was a matter for regret that the fact of the existence of intracellular canals in direct communication with bloodvessels should not have been made public. It was impossible to overlook the importance of the existence within the cells of any organ of vascular canals too narrow to admit blood corpuscles, but doubtless capable of conveying the fluid portion of the blood directly to the cell protoplasm.—*Scottish correspondent to Lancet.*

A Panacea Indeed.—The Surgeon-General's office is constantly in receipt of communications with regard to "sure cures" for disease, most of which are curiosities from both the medical and literary standpoints. One prescription recently sent in by a layman as a specific for dysentery contained opium in poisonous doses. The following letter, the chirography of which should be seen to be appreciated, is a fair type of a certain large class of communications:

"Sirgint of U. S. Army
Washington D C

Sir I seat myself to pen you a few lines.to tell you that I have found the thing sought after this is to take Poison out of the Blood & still not impare what blood is left do do this with Purity & loose none this is the bigest invention in the world I can Cure all kind of diseases now if the government wants this kind of medacine they Can buy it & you know this is what they want yours truly

Prof J—— —— & —— Sts Omaha
write soon neb"

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended February 28, 1902:

SMALLPOX—UNITED STATES.		CASES	DEATHS
Alabama, Birmingham	Jan. 1-31	5	
Alaska, Rooniah	Jan. 29	8	
California, Sacramento	Feb. 8-15	1	
San Francisco	Feb. 9-16	20	
Colorado, Denver	Feb. 8-15	5	
Illinois, Belleville	Feb. 15-22	2	
Chicago	Feb. 15-22	5	
Danville	Feb. 15-22	7	
Galesburg	Feb. 15-22	2	
Indiana, Elkhart	Feb. 1-15	20	
Evansville	Feb. 15-22	14	
Indianapolis	Feb. 8-15	8	
Iowa, Clinton	Feb. 15-23	1	
Kentucky, Covington	Feb. 16-23	6	
Louisiana, New Orleans	Feb. 15-22	2	
Maine, Durham	Feb. 15	5	
Freeport	Feb. 15	1	
Portland	Feb. 15	2	
Maryland, Baltimore	Feb. 15-22	3	
Massachusetts, Boston	Feb. 15-22	19	4
Cambridge	Feb. 15-22	4	
Everett	Feb. 14-21	1	
New Bedford	Feb. 14-21	3	
Newburyport	Feb. 15-22	1	
Quincy	Feb. 15-22	2	
Waltham	Feb. 15-22	1	
Michigan, Detroit	Feb. 15-22	5	
Ludington	Feb. 15-22	7	
Minnesota, Minneapolis	Feb. 8-22	48	
Montana, Butte	Feb. 9-16	4	
Nebraska, Omaha	Feb. 15-22	45	
New Hampshire, Nashua	Feb. 15-22	1	
New Jersey, Camden	Feb. 15-22	3	
Jersey City	Feb. 15-22	23	
Newark	Feb. 15-22	29	5
New York, Binghamton	Feb. 15-22	2	
New York	Feb 15-22	55	13
Yonkers	Feb. 14-21	1	
Ohio Cincinnati	Feb 14-21	19	
Hamilton	Feb. 15-22	1	
Middletown	Feb. 8-15	1	
Youngstown	Feb. 8-15	1	
Pennsylvania, Allegheny	Feb. 15-22	2	
Lebanon	Feb 15-22		1
Philadelphia	Feb. 15-22	63	15
Pittsburg	Feb. 15-22	1	
Reading	Feb. 17-24	1	
Steelton	Feb. 15-22	1	
South Carolina, Charleston	Feb. 15-22	4	
Tennessee, Memphis	Feb. 15-22	6	
Texas, Fort Worth	Jan. 1-31	8	
Houston	Feb. 15-22	12	
Vermont, Burlington	Feb. 15-22	17	
Washington, Spokane	Feb. 8-15	25	
Tacoma	Feb. 8-16	8	
Wisconsin, Green Bay	Feb. 16-23	9	
Milwaukee	Feb. 16-22	2	
SMALLPOX—FOREIGN.			
Austria, Prague	Jan. 25-Feb. 8	12	
Belgium, Antwerp	Jan. 25-Feb. 8	16	3
Brazil, Bahia	Jan. 10-25	2	1
Canada, Halifax	Feb. 15-22	1	
Victoria	Jan. 4-11	1	
Colombia, Cartagena	Feb. 3-9		2
Panama	Feb. 10-17	50	10
France, Nantes	Jan. 1-31	2	
Paris	Feb. 1-8		3
Great Britain, Birmingham	Feb. 1-8	1	
Glasgow	Feb 7-14	6	1
Liverpool	Feb. 1-15	26	
London	Feb. 1-8	1102	82
Plymouth	Feb. 8-15	1	1
India, Bombay	Jan. 14-28		9
Karachi,	Jan. 12-19	10	3
Madras	Jan. 17-24		2
Italy, Naples	Feb. 1-8	11	
Palermo	Jan. 25-Feb. 1		1
Malta	Feb. 1-8	2	
Russia, Moscow	Jan. 18-Feb. 1	32	12
Odessa	Jan. 25-Feb. 8	11	3
St. Petersburg	Jan. 25-Feb. 1	13	4
Straits Settlements, Singapore	Jan. 4-11	1	
Uruguay, Montevideo	Jan. 4-11	65	6
YELLOW FEVER.			
Mexico, Vera Cruz	Feb. 8-15	2	2
CHOLERA.			
India, Bombay	Jan. 14-28		7
Madras	Jan. 11-24		3
Straits Settlements, Singapore	Dec. 28-Jan. 11		4
PLAGUE			
India, Bombay	Jan. 14-28		643
Karachi	Jan. 12-19	26	25

Books Received.

A MANUAL OF OPHTHALMOSCOPY. By J. E. JENNINGS. 12mo, 180 pages. Illustrated. P. Blakiston's Son & Co. Philadelphia, Pa. Price, $1.25 net.

MENTAL GROWTH AND CONTROL. By NATHAN OPPENHEIM, M.D. 12mo, 296 pages. The MacMillan Company, New York. Price, $1.00.

THE PERVERTS. By WM. LEE HOWARD, M.D. 12mo, 388 pages. G. W. Dillingham Co., New York.

INTERNATIONAL CLINICS. By HENRY W. CATTELL, M.D. Vol. IV. 8vo, 293 pages. Illustrated. J. B. Lippincott Co., Philadelphia, Pa.

TRAITEMENT DES MALADIES CONTAGIEUSES DE L'APPAREIL GENERATEUR. Dr. F. BURET. 12mo, 228 pages. Société D'Editions Scientifiques, Paris, France.

Medical Record

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Original Articles.

SPECIFIC MEDICATION.*

BY ANDREW H. SMITH, M.D.,
NEW YORK.

IN a large proportion of cases calling for treatment the whole duty of the physician is comprised in efforts to alleviate symptoms, without any attempt to remove the underlying cause. This course is determined by one of three conditions. First, when we do not know the cause; second, when we know the cause and know it to be irremediable; third, when we know the cause to be transient and of such a nature that it may safely be left to itself.

In any one of these conditions our rôle consists simply in regulating the various functions of the body, so far as may be possible or necessary in order to maintain as nearly as practicable a physiological condition, and then to relieve pain or other distressing symptoms that may arise.

This has been termed treating the patient instead of the disease, and the observing of this distinction is sometimes claimed to indicate special sagacity in therapeutics. But there are morbid states, which evidently are but the working of a foreign agent which has obtained a lodgement in the body, which latter serves merely as the theatre of its operations. The activity of this agent then constitutes the disease, and the disease will continue so long as the morbific agent remains active. Such a disease we call specific, and the disease itself, as distinguished from the patient, calls for treatment.

The treatment in such a case necessarily implies the employment of some remedial agent that has the power of antagonizing the noxious principle at work in the organism. This antagonism may be chemical or vital, in its mode of action. More commonly it is the latter. The subtle relation that exists between the living cell and some forms of dead matter, though most real, defies all analysis, and our knowledge of it is, and probably always will remain, purely empirical. Why cocain should paralyze a sensory nerve, or strichnine should tetanize a muscular fiber, we do not know, and have no means of knowing. In like manner, we simply know the fact that the malarial organism cannot live in blood that contains an almost inappreciable quantity of one of the cinchona salts; but the reason for this we can scarcely conjecture. Other organisms do not show a like susceptibility to the drug in question, nor will this one as readily succumb to other drugs apparently more efficient as germicides. We can only assume that a a peculiar relation, that has a biological rather than a chemical basis, exists between the parasite and the remedy, and is along the line of the reaction between cell life and drug potency already referred to.

As yet, the list of diseases for which universally-accepted specifics exist is very limited, comprising certain infections and, perhaps, some other diseases not of parasitic origin.

It is to be observed that it is not claimed for a specific that its use shall be attended by success in every case. The most required is that in uncomplicated cases, and under proper conditions, a cure may be expected as a rule or, at least, that the disease may be held in check so long as the remedy is continued. Thus, it is rarely that syphilis can be so completely eradicated that the patient is secure against relapse if all treatment is definitively suspended. A pernicious chill may destroy life in spite of enormous doses of quinine. It is a common experience that the salicylates will not complete the cure of rheumatism after having controlled the early severe manifestations, and so on with regard to other specifics. And yet no one would venture to deny that in each of these diseases the remedy exerts a directly curative influence such as no other agent is capable of producing. What practitioner ever thinks of relying in the first instance upon any other than the generally recognized specific treatment in these affections, though we may be forced in the end to accept the aid of additional remedies.

But are we always to remain satisfied with the progress thus far made in the use of specifics? Is the lofty tone justified with which we are so often reminded that we possess no specific for this or that disease, and that the favorable results supposed to have been observed from the use of this or that treatment are illusory, or, at best, depend upon differences in the severity of the disease in different seasons and different localities? It would be well to remember that of the specifics upon which all rely with confidence one is scarcely a dozen years old as yet, and another came into use with the recollection of many who are still active practitioners of medicine. Is there any reason to assume that the list is to remain always as it is? May we not rather say, in general terms, that the prospect is favorable for an increase of the number of the remedies available for use as specifics, as the result of increased knowledge of the phenomena of cell life, on the one hand, and of the action of remedies on the other?

Thus far the field for specific treatment has been confined to diseases in which a foreign morbific element has been introduced into the system. An exception to this is myxœdema and its kindred diseases, the difficulty in this case being the absence of something furnished by the thryoid gland, and which is necessary to a proper action of the economy. The artificial supply of thyroid gland or its extract constitutes an efficient specific treatment for the disease and its congenors.

In regard to diseases having a parasitic origin, the problem is so to act upon the specific microorganisms as to prevent a further production of toxin. Toxin already formed and absorbed into the blood is very speedily gotten rid of. This is shown by the prompt decline of temperature when a focus of infection is done away with. It is the continuous fresh supply of toxin that does the mischief.

Now, in the discussion of this problem we very often meet with the assumption that the remedy employed must be sufficiently powerful to destroy the pathogenic organism. But this is not necessary. What we aim at is not the destruction of the germ, but inhibition of its activity, and these are very different things. So different are they that Sternberg makes separate classes of those that prevent growth, which he calls antiseptics, and those that destroy the microorganism, which he calls germicides or disinfectants. Different strengths of solutions of the same agent may represent these two classes, and the strength of the latter class may require in some cases to exceed enormously that of the former. The mercuric chloride in a strength of 1:300,000 will prevent the development of anthrax spores, while destruction of these spores requires a strength of 1:1000.

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*Read before the Association of the Greater City of New York, February 10, 1902. Previously read in part before the Practitioners' Society.

A further difference in favor of antisepsis within the body, as distinguished from that observed in the laboratory, arises from the fact that blood-serum so long as it is circulating in the vessels of a living animal acts by virtue of its vital condition as an antagonist to bacterial growth. How powerful this action may be we can only conjecture, as it ceases the moment the blood is withdrawn from the circulation. That it is considerable, however, is shown by the observation of Koch that bacterial filaments from a drop of blood in a case of anthrax soon perished in a 1:600 solution of carbolic acid, though if a similar drop of blood were placed in the nutrient broth and the same strength of carbolic acid were added the bacilli lived and grew therein.*

Another assumption which is exceedingly common is that for combatting germs within the body we must look to those agents that are relied upon for use as disinfectants outside the body; and it is claimed that safety in the use of these requires such a degree of attentuation as would make them inoperative. In this connection calculations are made as to the total weight of blood in the body and the ratio that any safe quantity of an antiseptic would bear to it.

But this reckoning involves two fallacies. In the first place, not one of the recognized specifics would be employed outside the body for its disinfectant properties, and, in the second place, quantities of the appropriate agent, amply sufficient for the purpose, are constantly being given as specifics with entire safety. It is to be remembered that attenuation of an antigermic solution is compensated for by longer exposure of the germ to its action, and that the conditions under which specific remedies are employed usually favor this prolonged exposure. As already said, the relation between the specific disease and the specific remedy is rather a vital than a chemical one, and is only remotely suggestive of open wound disinfection, which is almost necessarily chemical in its nature. These arguments are brought forward to show that the case for specific medication outside the few diseases for which it is universally admitted to be indicated is not so hopeless as it is commonly held to be. If dogmatic negation would yield to open-minded weighing of evidence; if hopeful leads would be carefully and persistently followed up; if the bacteriologist and the clinician would join hands in a quest for antagonists to disease, specific medication would perhaps add many new triumphs to match the sombre achievements of pathology.

To illustrate my meaning, let me quote from a recent communication paraphrased in part from the article which it criticises.†

Speaking of pneumonia, the writer says: "This diversity in the death rate has given rise to false conclusions as to the result of various plans of treatment. Aside from such errors, conclusions equally false have been drawn from reasoning by analogy. In a recent authoritative publication it has been assumed that full doses of mercurials and other germicides may favorably influence the course of the attack by rendering the exudate an unfavorable culture medium for the pneumococcus."

Now, this reasoning is not based on analogy. It is based on plainly-stated facts, which the critic simply ignores. Further on he says, "We only know four infectious diseases in which we are able to meet the causal indication. Malaria we can control by quinine alone; syphilis only by mercury and the iodides; rheumatic fever only by the salicylates or analogous substances; diphtheria only by its antitoxin. It would be a remarkable fact if croupous pneumonia—a disease due to a specific microorganism—should yield to a treatment by a number of different drugs selected to meet the cause." . . . "Nor does it seem desirable to repeat the futile experiments already made in regard to pulmonary tuberculosis, scarlet fever, and other acute infections."

Why our critic should insist that there cannot be more than one specific for each disease it is difficult to see. And it is conspicuously untrue in the case of malarial fever, which may be successfully treated with arsenic, salicin, carbolic acid, ammonium picrate, and perhaps some other remedies. However the fact may be, to say that there is no specific for pneumonia, because so many different agents will inhibit the germ upon which it depends, is to argue that a thing cannot be done because there are so many ways of doing it. Our critic continues: "The effect of indifferent antiseptics and germicides upon parasitic microorganisms must bear a definite relation to the mass of the blood in which they are diluted, which may be roughly estimated at twelve to fourteen pints in the adult." But what definite relation does half a drachm of quinine, or of potassium iodide, or two or three drachms of a salicylate, or a dose of antitoxin bear to twelve or fourteen pints of blood? Who asks such a question in the presence of a case of malarial fever, of syphilis, of acute rheumatism, or of diphtheria? If the use of these specifics had had to wait until a definite relation between their dosage and the total quantity of the blood had been established, how much should we have profited by them up to the present time!

Our critic proceeds with quotations to fortify his paralyzing arguments:

"In the long run the expectant method of treatment, which interferes only as occasion requires, is followed by a far lower mortality than misplaced attempts to jugulate the disease." "Pneumonia is a self-limited disease, which can neither be aborted nor cut short by any known means at our command." "There is no specific treatment for pneumonia. The young practitioner may bear in mind that patients are more often damaged than helped by the promiscuous drugging which is still only too prevalent." "The less the physician interferes with the normal course of pneumonia, the greater the probability of a favorable termination."

Our critic omits all mention of the numerous reports of cases treated with sodium salicylate, to which reference will be made hereafter, although many of them were discussed in the article to which he alludes.

He also ignores the fact, plainly stated in the same article, that the treatment in question substitutes lysis for crisis as the habitual mode of defervescence, the lysis, when the treatment is begun early, occurring in advance of the usual time of crisis.

Such testimony cannot be dismissed with a wave of the hand by however august an authority. Nevertheless, pronouncements of this kind are certainly not in the line of progress, and I am glad to note the following reluctant concession: "Notwithstanding these ob-

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*Wigglesworth, *Lancet*, October 23, 1897.

†*Philadelphia Medical Journal*, November 2, 1901.

jections, it must be conceded that thoughtful researches in the direction of specifics are justifiable."

How "justifiable" on purely theoretical grounds, not only in regard to pneumonia, but also in regard to other specific diseases depending upon a microorganism, we have already considered briefly. But it will be interesting to examine, in a very few words, the special *a priori* reasons for regarding pneumonia as a promising field for specific treatment, and how far they accord with the pessimistic attitude which these writers assume.

In this disease we start with a microorganism less hardy than any other we are acquainted with. Indeed, its resistance is so feeble that it is with great difficulty that it can be cultivated in the laboratory. It should, therefore, be peculiarly susceptible to antimicrobic influences. Next, the exudate which supplies the medium in which it grows is separated directly from the blood, and must contain its full proportion of any substance in solution in the blood. Third, the lung transmits, through its lesser circulation, all the blood that passes through the vastly greater systemic circulation, thus bringing a concentrated influence to bear upon the microorganism in the pulmonary alveolus, as compared with the influence exerted in any other portion of the body.

Thus, we have conditions very favorable for acting directly upon the germ, so that, theoretically, the aspect of the case is encouraging. And from the clinical side, accumulating experience, as already stated, seems, in a considerable measure, to support the theoretical deductions.

Quite a number of drugs appear to act more or less specifically in pneumonia, but the one which seems to have accomplished the most thus far is the salicylate of sodium.

So far as I know, the first to report upon this as a remedy in pneumonia was Liegel in 1898. He treated seventy-two cases occurring in miners, many of the cases being very severe and in very unfavorable conditions. There was not a single death, while under the symptomatic treatment alone the mortality had been very great. Ferguson treated 106 cases with six deaths, Sebring collected 125 cases with two deaths. Smaller groups of cases equally favorable to the treatment have been reported by numerous observers.

Now, when we consider that the usual mortality from pneumonia is from 15 per cent. in private practice to 25 to 30 per cent. in hospitals, it is begging the question to say that because in these series so many recovered, therefore the type of the disease in all must have been very mild, or that the diagnosis in the great bulk of them was faulty.

As to mildness of the disease, Sebring says:* "It is not apropos to say that these results came from the nature of the cases, or the mildness of a benign epidemic, for it was not so. The cases were almost without exception severe ones, and some of them extremely desperate. In the same localities, with the same surroundings, and with the regular forms of treatment, my medical brethren had many deaths. I had seen before and have seen since a fair amount of pneumonia, and that series of cases was of more than average severity. More than twenty-five of these cases were in patients over sixty-five years of age. Four of them were over eighty, and one was a man of eighty-four years of age and an habitual drunkard."

So much for the sodium salicylate. The carbonate of creosote, also, is received with a good deal of favor as controlling the action of the pneumococcus, and I have found it nearly as efficient as the salicylate of sodium.

It can be given in quantities of two or three drachms or more a day without the slightest inconvenience, and continued until all disposition to rise of temperature has passed. It will usually bring about a lysis commencing twenty-four hours after the administration is begun. It is not disturbing to the stomach, and is to be preferred when that organ seems inclined to be irritable.

I should select it also in cases of considerable depression, when the sweating caused by the salicylate would be objectionable.

Going back as far as November, 1899, in an article on pneumonia in the *Medical News*, after citing a number of writers and my own experience, I recommended that family physicians keep their families supplied with carbonate of creosote or with a salicylate, preferably the former, so that, in case of indications of pneumonia, such as a chill with pain in the chest, the drug may be begun at once, and possibly the development of an attack prevented.

At the Presbyterian Hospital in this city, there have been, at the time of writing, thirty-one cases of croupous pneumonia treated since December 15, a period of forty-seven days. Of these, twenty recovered and eleven died. Of the latter, five were moribund on admission, one had carcinoma of the liver, one had chronic bronchitis and emphysema, one had stricture (malignant) of the œsophagus, and one died of endocarditis. There were, thus, only two cases in which any expectation of recovery was possible when they entered the hospital.

Of the thirty-one cases, twenty-eight were treated with carbonate of creosote, ten grains being given every two hours. Three received none of the medicine; of these two recovered, and one died three hours after admission.

Of those treated with the carbonate of creosote, eighteen recovered. In thirteen of these the defervescence was by lysis; in five by crisis. This proportion contrasts strongly with the usual termination of the fever, which is, as stated by Osler in his definition of pneumonia, "abruptly by crisis."

In this series we have twenty cases, excluding those already moribund and those complicated with conditions necessarily fatal in the presence of any severe acute disease. Of those twenty cases, two were fatal, a mortality of 10 per cent., chargeable to pneumonia. As to the severity of those cases recovering, one had a temperature of 106.2, one of 106, two of 105.6, three of 105.4, two of 105.2, and one of 105, thus ten of the eighteen ranging between 105 and 106.2. The average time between the invasion of the disease and the beginning of the treatment was three and one-eighth days for those who recovered and four and one-sixth days for those who died.

In March last a paper was published in the MEDICAL RECORD entitled, "Creosote in Pneumonia: A Résumé," by I. L. Van Zandt of Fort Worth, Texas, from which I quote some of his own experiences and some of his citations from European observers:

"In June, 1898, I read a paper on this subject before the North Texas Medical Association. This was received by some with incredulity, they citing the fact that 'all authorities' (whatever that may mean) said that pneumonia was a self-limited disease, and must run its course. Others were willing to make a trial on my report, reinforced by that of several gentlemen present, who had adopted the treatment at my suggestion.

"Quite a number of those present and others who read the published paper, have reported satisfactory results.

"During all this time I have had cases in which the fever was gone in from twenty-four to forty-eight hours, and I am now somewhat disappointed if my patient is not ready for dismissal by the third or fourth day. In cases which persist longer there is generally an amelioration of symptoms, and the coming of an appetite, to which I was formerly a stranger in pneumonic cases. There is generally a gradual decline in the fever, with only slight moisture of the skin, a critical sweat being rare.

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*MEDICAL RECORD, April 22, 1899.

"Another thing I, as well as others, have found, is that if the medicine is discontinued as soon as the fever has ceased, there will likely be a recurrence of all the symptoms. Hence I continue the medicine at longer intervals for two or three days after subsidence of the fever.

"At the Pediatric Congress held in Marseilles in 1898, Dr. Cassouté, physician-in-chief to the Marseilles hospitals, gave a brief preliminary notice of his new method for the treatment of pulmonary affections. The method consists in the continuous administration of fairly large doses of creosote carbonate. In most cases a typical fall of temperature occurred during the first twenty-four hours of treatment; and if the creosote carbonate were continued for a sufficiently long period of time, the apyrexia will be a permanent one. The temperature curve rose again, however, when the drug was discontinued, before the auscultatory signs had disappeared. Relapses and sequelæ, so frequently seen under other methods, were entirely absent.

"Dr. Charles F. Stokes, United States Navy, in the *Brooklyn Medical Journal*, August, 1900, says: 'I have employed it in several cases with excellent results. Early treatment offers most satisfactory results.'

"Dr. J. W. Frieser of Vienna, in the *Aerztliche Central-Zeitung*, says: 'The treatment of acute inflammatory affections of the respiratory passages with the drug has yielded entirely satisfactory and even brilliant results in my hands. Both clinician and practical physician are fully aware that we formerly possessed no remedy that was even half way satisfactory in its action upon pneumonic disease process. Our entire therapeutic armamentarium was symptomatic and expectant in its nature. But it is an unmistakable advance if experience teaches us the employment of a remedy which has an influence on the disease process itself, and possibly upon the specific organisms that cause it. The favorable effects of creosote carbonate upon the various forms of pneumonia have been noticed by others as well as by me; and they are undoubtedly due to antiseptic and antibacterial action of creosote, which, in the form of the carbonate, can be introduced into the body in sufficient quantity and in innocuous shape. Besides this, it has a favorable influence on the heart and the patient's general condition; it causes, as I have often noticed, a rapid fall of temperature and retrogression of the local symptoms. The gastrointestinal canal is in no way injured by its use. In some cases the inflammatory processes in the lungs got well with such extreme rapidity that the method might be called an abortive treatment. The temperature rapidly sank to normal, the general condition noticeably improved, the tongue cleaned and became moist, and the appetite returned.'

"Dr. Wilhelm Meitner, in the *Medicinisch-chirurgisches Centralblatt*, June 22, 1900, says: 'The most important effect of the creosote treatment is the surprising fall of temperature a few hours after its administration is begun; it becomes normal in two days or sooner. With this the general condition improves, the pulse becomes better, the breathing quieter; the cough is lessened, thirst ceases, and the dryness of the mouth and lips disappears.'

"Dr. M. Eberson, in the *Aerztliche Central-Zeitung*, July 7, 1900, says: 'Two things may therefore be claimed for the creosote treatment. In the first place, it cuts short the disease in a most remarkable manner. In the next, and more important, it causes complete resolution of the disease focus, so that the sequelæ, more especially after catarrhal pneumonia, will not be as important in the future as they have been regarded in the past. Nor does it seem to me to be unimportant, considering the bacillary origin of pneumonia, that the sputum and excreta are voided disinfected, so that the contagiousness is reduced to a minimum. It is incontestable that the creosote treatment of pneumonia is a very important advance in practical medicine.'

"Now, with this array of testimony reinforcing my own observations for the last seven years, I trust that the members of this association will not consider me oversanguine when I express the opinion that the use of creosote or carbonate of creosote in the treatment of acute pulmonary inflammations is one of the greatest life-saving discoveries of the century just ended."

Among many other commendatory notices of this drug for use in pneumonia is one by Professor Leonard Weber in the MEDICAL RECORD of November 2, 1901. Within a short time he had treated nine cases with it, with one death.

Since the above was written, Professor W. H. Thomson has published in the MEDICAL RECORD of February 1 the details of eighteen cases treated with creosote carbonate, with one death. He notes what I have remarked above, that the defervescence in these cases, as in the use of sodium salicylate, is much more frequently by lysis than by crisis, the proportion in his series being as twelve to five.

Among the diseases for which it would be most desirable to possess a specific is influenza. Not only is the disease in itself dangerous to life, but, with the single exception of tuberculosis, it probably entails more invalidism than any other with which the community is afflicted. It affects a vast number of persons, and a large proportion of these do not fully recover their health until months or years have passed. How constantly do we hear the complaint, "I have not been well since I had the grippe."

This persistent derangement of health is very suggestive of continued infection with the specific organism, much as is the case in chronic malaria, though it is doubtful if the germ could be demonstrated in the tissues after it has disappeared from the mucous surfaces.

In the treatment of influenza, the relief that is obtained at first from the coal-tar preparations is not continued during the later stages, and we are left to do the best we can with general hygienic measures, tonics, etc. And yet something might be found, perhaps in the most unexpected quarter, which would search out and remove the morbific element in the case. The condition being a somewhat chronic one, the treatment might require to be protracted, but if the almost interminable sequelæ so often observed could be overcome as the result, it would be of inestimable value.

Dr. S. Henry Dessau of this city, as also Dr. Arthur Wigglesworth of Liverpool, seem to have made no small progress toward realizing this desideratum. The former published a paper in the MEDICAL RECORD of September 12, 1896, and another in *The Therapeutic Monthly* in May, 1901, in which he gave the strongest evidence of the great value of large doses of carbolic acid in the treatment of influenza. The latter, in the *Lancet* of April 3, 1899, recommends it with equal emphasis. Both insist upon the safety of the drug even in very large doses.

Another disease which offers a tempting opportunity for specific treatment is scarlet fever. We have had within the last four or five years two or three communications in the *London Lancet* from Dr. Arthur Wigglesworth, the writer already mentioned, in which he has described, in this disease, also, very remarkable results from exhibiting large doses of carbolic acid. The treatment amounts to making this dread disease one of extremely slight mortality, while it prevents in great degree its spread by infection.

He presses the remedy designedly to the point of causing carboluria, and maintains this condition until the fever has fully abated. So far from this proving injurious to the kidneys, he has had only three cases of renal implication in all his experience, and his cases, in other respects, have been exceedingly mild. Moreover, the infection communicated by these carbolized patients is extraordinarily light, but yet sufficient to confer permanent immunity, and he urges that it is better to let children take the disease in this modified form, rather than to leave them to the chance of contracting it later in its normal virulence. When this is refused, however, light carbolization of those exposed gives immunity for the time being.

He has followed this plan for twenty years almost without a failure, in a practice in which he has attended over 3,000 births, and he informs me, in a private communication, that he has never had a single mishap from the carbolic acid. That this practice has not been followed up by other practitioners, is another illustration of the indifference or timidity of the profession, perhaps from discouraging teaching by admitted authorities.

In support of the innocuousness of pure carbolic acid, I have several observations of my own, made four years ago. Dr. Wigglesworth gave to children from one to six grains, according to age, every two hours, freely diluted with water. I gave to adults rapidly increasing doses until the largest amount in twenty-four hours was respectively 154 grains in one case, 112 in one, 108 in one, 72 in one, 60 in six, and 57 in one, while five cases received from 4½ to 40 grains. Not one of these showed any ill effects. Two who had albuminuria previously were not made worse. One with general sepsis died on the eighth day after the administration of the acid was begun. I was encouraged to persevere in this instance by the ultimate rescue of a patient with malignant pustule, reported in the *Lancet* just at that time, in which much larger doses had been given than any I had ventured upon.

It will be remembered that Declat gave very large doses hypodermatically in the treatment of intermittent fever, and that he insisted, as the result of a large experience, that with a pure acid no danger whatever was incurred.

The discoloration of the urine was formerly considered to be due to disintegration of red corpuscles and to require an immediate suspension of the drug. It is now known that this is not the case, and that the remedy can be pushed far beyond this point with safety. This is also true of creosote, and it seems quite possible that the usefulness of these two agents as internal antiseptics, or, if you please, as specifics, may be greatly enlarged by the recognition of this fact.

The damage inflicted by the gonococcus when it has penetrated into the deeper structures of the body calls earnestly for a treatment that shall do more than to leave the infection to itself, while wrestling with a so-called inflammation. We are told that a solution of mercuric chloride, 1 to 20,000, applied for a few minutes, at intervals during the day, is an effective strength for irrigation in the acute stage of "urethretis." This being true, might not a perpetual irrigation through the medium of the blood be effective, after the coccus has worked its way into the deeper tissues, and this without employing an unsafe quantity of the drug? Before the days of antitoxin, our distinguished colleague, Dr. Jacobi, advocated a treatment for diphtheria with this agent, administered by the stomach, in the belief that it would search out and inhibit the bacillus, and he was able to adduce clinical facts in support of his view. Would it not be well carefully and patiently to test such a method, in pelvic or articular gonocosis, employing this or some other alterative drug?

More and more we are losing faith in the chemical theory of gout and rheumatism and incline to the belief that these allied diseases are produced by some infective principle. In the case of rheumatism this belief derives strong confirmation from the therapeutic side. Only less confirmation is afforded by the effect of colchicum in gout. In neither of these diseases has a specific organism been demonstrated. But this may be due to the lack of a suitable culture medium to represent the special tissues in which the poison in either case develops its activity. As the pneumococcus will not thrive in the secretion of a mucous membrane, but will thrive in that of pavement epithelium, so there may be a microorganism that finds its proper habitat in the synovial tissues about the joints, but will not grow in any of the media now in use in the laboratory.

This reasoning applies with equal force to other infectious diseases for which a germ has not yet been found Indeed, there is a growing tendency to refer all this class of diseases to microbic origin. A further development of the magnifying power of the microscope may have to precede the solution of this problem, just as the bringing out of the one-twelfth immersion lens was a necessary preliminary to our present bacteriology.

But in the meantime a survey of the field seems to suggest that all the known pathogenic bacteria should be studied, not so much to learn how to grow them. as to learn how to inhibit their growth. And in the quest for inhibiting agents each germ might be interrogated with a list of articles, perhaps not thought of now as germicides. since no one can tell what unexpected results might not be attained by purely empirical methods.

While the bacteriologist is at work in his laboratory, the clinician, on his side, has a field for action. Carefully-conducted experiments will show that the present dosage of remedies may be safely exceeded in some cases, or that objectionable effects may be avoided by combinations of remedies which yet will leave the specific action intact.

The entire range of infectious diseases, as well as those of which myxœdema is the type. invites us to this kind of investigation; and to urge its importance and stimulate hopefulness as to an ultimate substantial degree of success is the object of this paper.

Automobile Speed Bill.—The Cocks Automobile Speed bill finally passed the Senate on March 6. Originally the offence of driving an automobile faster than eight miles an hour within city and village limits and fifteen miles an hour without was punishable as a misdemeanor by a fine of $50 and imprisonment for six months. The bill as just passed provides that anyone who operates an automobile faster than eight miles an hour within a city or village where local ordinances do not otherwise provide, and faster than twenty miles an hour outside of city or village limits, or faster than four miles an hour on any bridge, is guilty of a misdemeanor and shall be fined for the first offence not exceeding $50 and for the second offence not exceeding $50, or by imprisonment for a term of six months, or both.

MELANCHOLIA SIMPLEX AND MELANCHOLIA TRANSITORIA SIMPLEX.*

BY RALPH LYMAN PARSONS, M.D.,
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OF all abnormal mental conditions, states of depression are undoubtedly the most frequent. In fact, not only is mental depression, at some time, a prominent symptom in almost all cases of mental alienation, but many persons suffer from such depression for longer or shorter periods of time, and in various degrees, who are never suspected of being insane, nor even of being especially depressed in mind. The greater number of these speedily recover. Indeed, the majority of mankind are so constituted that they are not likely to become insane under any mental strain, however great, nor under the most serious disabilities, short of organic disease of the brain itself.

In some of these cases, however, although typical insane delusions are never manifested, the mental depression does so dominate the mental faculties as to constitute the disease commonly known as simple melancholia, or melancholia without delusion. And this type of mental disease is of special importance for the reason that with prompt and judicious care and treatment the ratio of recoveries is greater than in any other, that the sufferings are more intense, and that suicidal impulses, or at least mental suggestions of suicide, are present in almost every case.

Of forty-four consecutive cases of simple melancholia admitted to a single hospital for the insane, no less than twelve had already attempted suicide; six, certainly, and probably two or three of the others, did commit suicide after their discharge as recovered, or as improved, during subsequent attacks or exacerbations; eighteen had fully recovered at the date of their discharge; twenty had greatly improved; and of these last the greater part made a complete recovery after their discharge. Under favorable circumstances and with early and judicious care and treatment, as great a ratio as 90 per cent. of simple melancholia, or even more, may be expected to recover.

That the sufferings of this class of patients should be more intense, and that the disposition to commit suicide should be greater than in most other forms of mental alienation, may be explained, in part, by the fact that the brain deterioration is less; and so that there is greater capacity for a full realization of their sufferings; and it should not be forgotten that the physical distress experienced by these patients, while overshadowed by, is hardly less than the mental. The normal sense of well-being is lost; the whole nervous system is in pain; the vital functions are disturbed and impeded; the whole body is sick. Even in cases of agitated melancholia there can be little doubt that the intensity of the suffering is less than in cases of simple melancholia. In the former the expression has become more or less automatic, and the consciousness of self has become more or less blunted by the exhaustion of the nerve centers. Patients who have recovered from melancholia with stupor, and who had manifested an expression of overwhelming misery, sometimes speak with the greatest equanimity of the condition from which they have recovered, showing, at least, that their sufferings did not make a lasting impression.

Now it will not be claimed that every person who becomes greatly depressed in mind has lost the use of his reason. Some even conceal their mental suffering from their nearest friends. Their nervous system is so strongly constituted that they successfully resist the action of depressing influences which would overwhelm those more feebly constituted. After a short struggle against adverse influences and feelings they recover from their depression and find themselves, possibly, stronger than ever, as a result of the successful contest.

Nor is it true that all persons who commit or attempt to commit suicide are insane. The fact that the instinct of self-preservation is the strongest of all our instincts has led many to think that all suicides are insane. But this is not the case. It is not even probable that the majority of those who commit suicide are insane. With some the instinct of self-preservation has been overcome by a course of dissipation and wrong living. Some are influenced by example. Epidemics of suicide in communities and in armies have arisen chiefly from this cause. Some deliberately and philosophically, as they think, have adopted the doctrine that suicide is a legitimate and rational resort whenever the ills of life press too heavily. Others have never learned to control their emotions, and so are liable to commit a foolish and desperate act on the impulse of the moment. Some commit suicide through cowardice, or through simple lack of fortitude to endure an impending evil. In some cases the suicidal act is committed with revenge as the chief impelling motive. This is probably true of many cases of child suicide. A child has suffered some real or fancied injury from a parent, for instance, pictures to itself the agonizing grief the parent will feel on learning of its death, and commits suicide for the purpose of causing such grief. Suicides are sometimes deliberately committed for the benefit of others, as to save life; or, as when a person secures an insurance on his life and then commits suicide for the benefit of another.

But, after all these and similar cases are eliminated, there undoubtedly remain a large number of suicides who are either in the early stage of simple melancholia, or who may be considered as in a state of transitory melancholia. In order to facilitate the early recognition of these cases of simple melancholia, it might be of advantage if the term melancholia transitoria simplex were added to the nomenclature of insanity, as the designation would naturally call attention to the fact.

These attacks of transitory melancholia, which are for the most part unrecognized, or, at least, unrecorded, unless they culminate in a suicidal or homicidal act, are liable to occur in persons who have suffered a sudden and severe shock, as from loss of property or friends, from disappointment of the affections, from domestic infelicities, from great and prolonged anxiety, from physical and mental exhaustion, or from similar causes.

Considerations such as these should serve in some degree, at least, to bring about the early care and treatment that are so important in these cases. Intimate friends, it is true, may be the last to recognize the gravity of the situation; but, the skilful medical adviser may discern the impending danger, and so bring the matter to their attention.

It may be objected that no such type as melancholia transitoria has ever been differentiated; that melancholia is chronic in its nature; that what appear to be sudden accessions of the disease are only manifestations of a condition that has already existed in a latent state for a considerable period of time. While these objections may be well founded in most cases that come under our notice, there are undoubted cases of extreme mental depression, with strong suicidal impulses, which are sudden in their onset, and which prove to be of limited duration. They are simply unnoticed, forgotten, and unrecorded, on account of their limited duration. A considerable number of cases have come under my own observation, in which an attack of simple melancholia was almost instantaneous in its accession. In like manner, sudden recoveries have been observed after the melancholia had existed for longer or shorter periods of time, even for several years. Such sudden attacks and sudden recoveries, if separated by only a short period of time, constitute the cases to which attention is here directed as of great importance in regard to recognition and management, and as proper to be included with simple melancholia, and classified as melancholia transitoria simplex.

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* Read before the New York County Medical Society, February 24, 1902.

It is well to note, in this connection, that many cases of simple melancholia cannot be considered as insane, in a strictly legal sense, while they do need the strictest medical care, supervision, and control; that is, they are able to make a rational and equitable will, or to manage business affairs intelligently, whenever they can be brought to give their attention to such matters at all; while, at the same time, they would fail to take proper care of their own persons, or may need to be restrained from doing themselves an injury. And so, these two questions, the medical and the medico-legal, require a separate consideration in each individual case.

But in saying that many cases of simple melancholia are quite competent to transact ordinary business with a good degree of judgment, and to converse on the topics of the day with intelligence, it is not to be implied that the reasoning power and the will are not involved in the breakdown. On the contrary, all the mental faculties are involved. While, on the one hand, there is no such condition as total insanity, on the other there is no case of insanity that does not involve all the mental faculties to a greater or less degree.

Nothing has been said thus far of the differential diagnosis between simple melancholia and other forms of melancholia. It has already been suggested that many cases which are usually considered and treated as simply laboring under a slight and temporary mental depression, ought really to be considered and treated as being in a state of melancholia. In these cases the diagnosis, which may be involved in no little difficulty, will often be a matter of judgment in which expert diagnosticians would disagree; for it should be remembered that there is no exact line of demarcation, no unmistakable symptom, on which such diagnosis can be founded. But the following considerations will be of value as aids in distinguishing ordinary mental depression from simple melancholia, as that, in the former case the depression is not extreme; that it does not dominate the reason, the will, nor the actions; and that it holds a natural and usual relation to an existing cause. In melancholia the depression is extreme, and is disproportionate to any existing cause.

Since the distinction between simple melancholia and delusional melancholia depends upon the existence of delusions in the latter case, and since certain kinds of delusions are of no weight whatever in determining the existence of insanity, while others are of great weight, or may even be pathognomonic, it becomes of importance to define, as clearly as possible, the characteristics of these different sorts of delusions.

Delusions are simply false or erroneous beliefs. For study and comparison, they may be conveniently classed in three categories: (1) Those which are not evidences of mental unsoundness at all; (2) Those which are pathognomonic of the existence of insanity, and (3) Those which may or may not be evidences of insanity. To the first class belong those false beliefs which are adopted on the testimony or teaching of others; such as are founded on a faulty observation of actual conditions, occurrences, or events; and such as are the simple outcome of ignorance, and which may be corrected by a more extended knowledge. And so, erroneous beliefs in regard to doctrines in religion or politics, or in regard to history or natural science, are not, in themselves, evidences of insanity. All men, however intelligent, may entertain and do entertain such erroneous beliefs.

It may be stated in a general way that erroneous beliefs which are entertained on account of the teaching, authority, testimony, or in accordance with the beliefs of others, and beliefs in matters which are not susceptible of scientific demonstration, cannot safely be considered as evidences of insanity.

To the second class belong those false beliefs which originate in the subject, which for the most part concern the subject, which are held by the subject alone, which to men of ordinary intelligence are evidently false, and which the subject cannot correct by investigations and reasonings of his own, nor by the advice, the assurances, and reasonings of others, as, for instances, the delusion that the throat is so contracted as to prevent the passage of food or drink, or that the brain has quite wasted away, in the case of melancholics. Delusions such as these may be considered as pathognomonic of the existence of insanity.

The third class of false beliefs, in melancholics, spring from and have their foundation in the depressed state of the feelings, and are, to some extent at least, adopted as an explanation of the mental and physical depression from which they suffer. These beliefs, such as that the subject will be an inmate of the poorhouse, that he is an intolerable burden to his friends, that he is causing disaster to their reputation or business, that the future is hopeless, or that he has committed the unpardonable sin, are not pathognomonic of any type of insanity. Indeed, they may be, and are, held by persons who cannot be considered as insane. They may be so deeply seated, so dominant, so utterly without reason, and so at variance with the habitual way of thinking of the subject, that they should be classed as typically insane delusions, or they may be so trivial and changeable in character as to justify classing them with ordinary false beliefs.

It should not be forgotten that as there is no fixed line of demarcation between normal mental depression and simple melancholia, nor between simple melancholia and delusional melancholia, so also there is no exact point of distinction between the different grades of delusions. Hence, in this regard, borderline cases frequently arise about the nature of which skilled experts honestly differ.

The average duration of attacks of simple melancholia is probably longer than is usually supposed, for while many recover in a few weeks, or even days, and while the majority of cases may be expected to recover in from six to twelve months, in other cases the melancholia may continue for three, five, or even ten years before recovery takes place.

It being the especial object of this paper to call attention to states of mental depression with reference to their frequency, early diagnosis and curability; to the great danger of suicidal attempts, not only during the height of the disease, but also before the seriousness of the patient's condition is usually recognized, and also before convalescence has been fully established; to the fact that melancholia simplex is sometimes sudden in accession and brief in duration, without doubt including many cases of suicide which have not been recognized as insane; and to suggest the adoption of the term melancholia transitoria simplex as a means of especially directing attention to this class of cases—a few suggestions only will be made in regard to management and treatment.

The medical adviser who finds his patient in a state of decided mental depression should make an early and exhaustive study of his condition and of the circumstances in which he is situated, in order that there may be no delay in adopting such methods of management and treatment as may be required. The preliminary safeguards, management, and treatment must usually be conducted at the home of the patient, whether the attack be gradual or sudden in its onset. In the former case there may be difficulty in the diagnosis; and the latter may be one of transitory melancholia, from which a speedy recovery may be expected. But while an unnecessary or premature removal from home should be avoided, such removal will usually be found advisable, for the reason that home influences and associations have an intimate relation to the causes of the depression, that the relations of the patient to the other members of the family have become changed and restricted, or that the relatives, by the very reason of their relationship, are least of all fitted to continue in intimate association with the patient. They may be too sympathetic or too weak to exert a favorable influence, or they may be too intolerant of conduct which they think the patient might avoid, if he would. And then it must be taken into consideration that, wherever hereditary influences exist, others of the family may suffer from the hereditary taint, and so be themselves injured by too close association with, or by undertaking the management and care of their relatives.

Whether, in case it is found advisable to remove a patient from his home, the choice of a domicile should be a public hospital, a private hospital of large capacity, a private hospital with accommodation for a small number of patients, or private care as a single patient, will, for the most part, depend upon the pecuniary resources of the patient; but there are important considerations in favor of treatment in a well-equipped hospital, with its trained service and with competent physicians in constant attendance.

During the early stages of the disease, what is known as the rest cure, thoroughly practised, as taught by Dr. S. Weir Mitchell, is often of great service; but this mode of treatment should not be too much prolonged, lest the monotony and the limited associations give rise to delusional ideas or to still greater depression, as sometimes happens.

Later on, or when the rest cure is not indicated, the time should be as fully occupied as possible; at first in a passive way, with things that can be done to or for the patient; afterwards by things which can be done in association with others, or entirely by themselves. Those occupations are most beneficial which have the accomplishment of a definite object in view, useful occupations being most beneficial of all, when the condition of the patient and his previous habits permit. As an open-air life is in itself beneficial, occupations in the open air are especially advantageous. Relaxations and amusements have their important uses, and should be judiciously prescribed.

After an attack of melancholia has become established, traveling is rarely advisable. The opportunity for such rest and treatment as may be required would be lost, while a suitable hospital might not be at hand in case of an exacerbation of the symptoms. Traveling, to be of service, should be undertaken under suitable attendance and with proper medical supervision, if possible, either before the mental depression has become a state of melancholia, or after the condition of the patient has so improved that convalescence has already fairly commenced.

But, whether the patient be treated at home or at a special hospital, the prevention of suicide demands immediate and careful attention; and it is not to be inferred that because melancholic patients are quiet and may make no mention of wishing for death there is no danger of suicidal attempts. On the contrary, those who openly threaten to destroy themselves seldom make a determined attempt. Still, those who do threaten to injure themselves may make the attempt under a sudden impulse, or when suitable means may be unexpectedly offered. A favorable opportunity is a strong incentive to the suicidal act, and especially when the patient is left alone, even for a limited period of time. The melancholic patient may cunningly seek the opportunity of sending his nurse or attendant away, on some plausible pretext, and then embrace the opportunity thus offered. The presence of other insane patients, even, may be an efficient preventive. Hence, melancholic patients should be under efficient supervision at all times, at least until it has been established that suicide is not likely to be attempted. Suggestive means for a suicidal attempt should, as far as possible, be removed.

It should be remembered that the suicidal impulse is usually much stronger at certain times than it is at others; as, during the early morning hours, especially after what may seem to have been a more than usually refreshing sleep; on retiring at night; during the catamenial nisus, in women; and in certain sorts of weather. In this last regard it has been observed that dull or even inclement weather is more in consonance with the feelings of melancholic patients than weather which is exceptionally fine. In like manner, it has been observed that while music of a jolly or lively character has had a tendency to deepen the depression in melancholics, music of a more quiet order, but still in the major key, has had a favorable influence.

The methods to which melancholics resort for self-destruction are varied and numerous, viz., by suspension, by submersion, by swallowing poison, broken glass, or other injurious substances; by precipitation from heights; by means of cutting instruments, by suffocation, and in many other ways. A strip of cloth attached to a nail in a wall or to the bedstead, or a basin of water may suffice for a suicidal attempt. Any and all such means should, as far as possible, be foreseen and removed, and especially those to which the patient has already shown a disposition to resort. And yet, strict supervision by and companionship with others is the only efficient safeguard.

As a preliminary to medicinal treatment, a thorough physical examination should be made, lest some obscure ailment be overlooked, and in order that all obstructions to the general health may be removed as soon as possible by appropriate treatment. Even if no organic disease should be discovered, it will usually be found that the digestion is impaired, that the bowels are sluggish, that some degree of autoinfection exists, and that the general innervation is defective. A mere mention of these points is sufficient to indicate the nature of the remedies required.

Assuming that the digestive organs are in a healthy condition, these patients require to be well fed. Feeding to repletion, even, may be of the greatest service, at least until the normal weight has been attained. In order that no mistake be made, the weight of the patient should be taken at frequent intervals.

All the means at our disposal should be used to secure prolonged and refreshing sleep, and without the use of drugs, if possible; such as an open-air life, baths, massage, properly ventilated sleeping rooms, a light meal on retiring at night, and again in the early morning, or in the middle of the night, if the patient becomes wakeful and restless. The patient should take a recumbent posture, at a suitable hour, whether feeling sleepy or not, and should remain in bed during the usual hours of normal sleep. An hour or two of sleep or of recumbency, during the day, will promote rather than hinder sleep on the succeeding night. The theory that persons who suffer from insomnia may as well sit up, walk about, or read, if they do not feel like sleeping, is usually a mistake in practice. The habit of sleep is best secured by sleeping; and for this a suitable posture and surroundings are important aids. If the use of hypnotic drugs should sometimes be found advisable, frequent changes of the particular drug or combination of drugs used should be made, lest a drug habit should be established, or their influence become impaired or lost.

Especial regard should be had to the moral treatment. In many, if not in most cases, this is even of more importance than the purely medicinal treatment. The patient should at all times have a suitable companion, an important part of whose duty it should be to engage the patient's attention with objectivities. If possible, he should be actively employed; and, it may be repeated, that of all employments those which accomplish some useful object are the best. The general tone of the patient's associations and surroundings should be encouraging and elevating in character, but not too much above the plane of the patient's own feelings. While the associates should be cheerful in manner and conversation, they should not indulge in hilarity.

With all this, the attending physician should have and should appear to have a lively and hopeful interest in the welfare of his patient. His expressions of hopefulness, his cheerful demeanor, assurances of ultimate recovery, his insistance that physical disease, a state of nerve exhaustion, is at the foundation of his patient's malady, from which in due time a full recovery may be hopefully expected, is of the utmost importance. The moral influence of the physician, added to that of those persons who are more constantly associated with the patient, will oftentimes prove as beneficial as any and all other means employed.

The Poisonous Properties of Mountain Laurel.—H. H. Rusby reports a case of the poisoning of twenty-seven sheep, in which only the leaves of mountain laurel could have been the agent. The symptoms observed in the animals indicate that the poison is a stupefying narcotic and a depressor of the motor system, the centers chiefly being affected and the respiration especially suffering. The sheep owner found the best treatment to consist in digging a small trench to accommodate the lower part of the body, and in the bottom of this holes for the front and hind feet, respectively. The sheep is thus maintained in an upright position, and its kicking and pawing against the earth appear to favor recovery. He was advised in future cases to use fifteen-minim doses of the tincture of nux vomica, repeating it twice at two-hour intervals, and afterward less frequently, as the symptoms required. The poisonous principle contained in the leaves of mountain laurel is andromedotoxin.—*The Druggist's Circular and Chemical Gazette.*

A FEW REMARKS ON DISEASES OF THE SKIN, WITH RELATION TO GENERAL AND SPECIAL THERAPY.*

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GENTLEMEN:—In the few minutes that I shall ask your patience, while endeavoring to outline the subject as above given, it will be evident that time will be afforded only for what appears to me to be practical suggestions: and these will be considered as addressed to fellow practitioners and colleagues, and not as to college under-graduates.

Surely when a man has been pegging away pretty much on a single line or subject for over thirty years, and has bestowed some honest work and thought on it, he may be allowed to have the courage of his conviction and opinion, in regard to what seems to him lacking or excessive in the treatment of skin diseases, by his colleagues, as aforesaid.

Firstly, then to consider general therapy of skin diseases it would seem to me that what is most evident and striking in my experience, is their excessive treatment by the ordinary medical man—"strenuous treatment," one might say.

The particular disease may have been correctly diagnosed by the medical man in attendance, and as to type, naturally and oftenest is found to be of the eczematous variety; it is then subjected very frequently to treatment of the fiercest, immediately on its recognition; this, too, as if it were an entity, alone entitled to consideration, and not a condition; and as one on which the general health has little or no bearing. Now, this is, in my opinion, generally not so; all conditions of the body, non-physiological in character, may, if not directly causative, be either predisposing or more remotely predisposing. Diathesis, any unhealthy condition of the body or bodily functions, or even of the mind, can be factors; and, as far as possible, these causes should be eliminated, or at least corrected, simultaneously or consecutively. I insist that this is frequently forgotten or neglected, or not acted on by the average general practitioner; sometimes even, I am sorry to say, by the more skilled specialist; though of late it is evident and a cause of satisfaction to myself and others how very much more attention has been given in practice to this point by special workers, and in the literature on the subject, as a glance at the text-books of to-day, and comparison with those of, say twenty years ago, will show very plainly. To say that a strumous or lymphatic child, or individual, a constipated person, or one rheumatically disposed (or indisposed to put it more exactly), or a psoriatic, or a diabetic, is not the more quickly relieved by appropriate constitutional treatment, is in my opinion a great mistake.

A slight course of hydrarg. c. creta or other alterative in the one, antilithic and purgative medicine in the other, appropriate diet and remedies in the third, or in all, will surely help appropriate topical treatment the sooner to a successful issue.

All this seems very trite, but to my mind needs insisting on, so often do I find it that my brethren call upon me for my assistance to relieve special conditions of the skin for which they have already used orthodox and proper treatment—often, as before said, too strenuously, but have neglected the quite "as weighty matters of the law," as of effective eliminative measures, and depuration in a general sense. This holds good in eczemas, psoriasis, the lichens, acne, and a number of kindred or allied conditions.

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* Read before the Associated Physicians of Long Island.

For one thing, and with all due respect of and to our enlarged special drug armamenta of to-day, I have a great respect for the old practice of the old school physicians of giving a purge in every case, and at the beginning of every treatment almost—to wipe the slate and begin afresh, as it were—and as certainly and *a fortiori* do I believe in it in country practice, for the reasons I am about to give, certainly they will apply to the great North and West. To come down to this prosaic and yet delicate ground, how true it is, as you know, that a farmer will, in winter, clear a way for his cattle to the water trough, or the barn, or out-house, but it seems quite a secondary consideration for him to make the approaches and surroundings of the "retirade," used by his family, equally convenient.

In this connection I would further add, that, to my mind, there is a great opportunity for some distinguished medical man, or journal, whose rank would place them beyond ridicule, as to being fœcal or cloacal apostles or missionaries, in advocating this doctrine of physiological and ethical improvement, in its application to the farming and agricultural communities especially, and, as said before, especially of the North and West, where this evil, so far as my observation goes, particularly exists. Such a person or instrument might be of great benefit to the nation, and save many from many evils—from insanity, up or down to an eczema.

It should not be so, but, I think, even in the cities, we see more clear-skinned and fresh-looking women than in various parts of the country districts, where there should be, and as a rule are, all the hygienic advantages, except this one.

To come back to our proper topic: a large proportion of eczematous affections, especially of the acuter forms of that trouble, are, by these judicious eliminative and depurative methods, in combination with the simplest and most innocent local alterative treatment, or even with simple protection alone, readily cured.

Another simple fact or element is, as I am convinced, true. We are taught by various authorities, and some old precedents, not to use water or baths in these eczematous conditions; so that I frequently find, on being called in consultation, that the infant, child, or older individual, is absolutely rancid and stinking, for want of detergents or ablutions. This is, in my opinion, all wrong.

True, I believe that a soaking with water for any length of time, so as to macerate the epiderm, and to bring into play the osmotic action of the skin, is improper; but that effete matter and secretions should be removed once a day at least, in almost if not every case, is with me an axiom.

A light and cleansing application of soap and water, possibly an inunction of olive or sweet almond oil having preceded it, is beneficial, and as æsthetical as beneficial. The oil in these cases making in your own hands an "über-fettete" soap, as the Germans call it. This is a simple matter, gentlemen, but important, comforting to the patient, and desirable in every sense. This is particularly useful and necessary when unguents have been applied, and butyric acid decomposition has necessarily followed from the heat of surface. Sometimes, in the cases in which lotions have been used, a wiping off with a warm wet cloth will suffice.

While in an eczematous frame of mind, I would say that, in the immediately foregoing remarks, I have considered more especially the eczemas of children and tender-skinned young people, and adults. There is, however, a chronic variety, common to robust and usually elderly people, which, I take it, but few among you have not seen, and been bothered with, and you will recognize the type. It occurs in robust males of the class mentioned, as a rule. The lesions thereof are horny, pseudo-psoriatic, slightly scaly; indurated patches situate very frequently on one or both legs about the ankles, sometimes extending up the leg, four or five inches or more, but with no ulceration. The individual is well nourished, healthy; possibly and usually of rheumatic type, though equally possibly never in his life having had an acute attack, or anything but slight manifestations. The urine is relatively scanty, often high colored; he is a man of rapid ingestion of food, and, though not an invalid, of poor or imperfect digestion. He just feeds his stove with furnace coal, having a plentiful deposit of ashes and clinkers, which he neglects to rake down regularly and properly. There's your analogue, gentlemen.

Such a one will bear deobstruent and depurative treatment well, and often, shall I say almost always, antirheumatic treatment for a while, as Epsom salts, colchicum, or the salicylates and alkalies, with great benefit, in combination with a more stimulative local treatment; you need not be afraid to wash, aye, and even rub with tincture of green soap, or like detergent; thereafter applying, in the interval, more or less modified ungt. hydrarg. ammoniat, the tarry oils, salicylic acid, resorcin, and what not.

It is hard work to generalize treatment; here you see, in this frank talk, I have already come down to considering a special form, so I will go back to recapitulation of what I earlier asserted, that no skin disease can or should be treated as a separate entity; the individual before all.

Most drugs and medicaments used in dermatological therapy have been abused in using, from sulphur up or down to arsenic, and all may be said to be good, when used with judgment, but, like the artist's colors, they have to be mixed with brains, as part of the ingredients.

One will even find authors pleading against the use of arsenic, a drug which, in its way and appropriate place, is one of the most beneficent of remedies.

There are few weeks, I was going to say days, in which cases are not brought to me, or occur in my practice, in which arsenic, in the form usually of Fowler's solution (one of the best preparations of the drug, it may here be said), has not been injudiciously or excessively used. We all know how Hunt of England used it, internally, externally, eternally, and for all things; but, used judiciously, and generally in small doses, in strumous, lymphatic and cachectic children and in combination with the iodide of iron, also in small dose, I believe it to be the best tonic that can be used in such cases; with that, and mild fractional doses of hydrarg. c. creta or even calomel, often nothing else but protection to the skin, you will find cases rapidly recover, and the general health return.

The above has no reference to lues or syphilitic affections, which naturally would receive their proper care and special treatment.

Again, people from malarial districts, of whatever age, can almost certainly be benefited, both constitutionally and locally, by the use of arsenic. One must also be blind or bigoted to deny its action, though not always mathematically regular, in diseases of the epiderm and upper layers of the corium. The crime of its use or abuse consists, in giving it in all skin diseases, especially those of an inflammatory and easily-irritated type, as, for instance, acnes, rosaceas, etc., and expecting it to do good. As to special or particular local remedies for the diseases under consideration, a few words: I have, in various monographs, given as my opinion that almost all pharmacopeial preparations for topical use are too strong. I mean by this, of course, not for individual cases, but as a general proposition.

I would, in this sense, say that, even about that bland and mildly stimulative application, the oxide of zinc ointment, used, as I frequently see it, on the soft and weeping skin of a babe; or on the tender flexor surfaces of older individuals, or on a sensitive erythematous surface. It is too strong; it is better far to soften it with a certain percentage of a more lenitive ointment, such as cold cream or fresh lard. Often, too, this ointment has been kept a long time in pharmacies, and has become more or less rancid in spite of the benzoic addition. It is always better to write for your own compounds, taking care at least that they are gentle enough; it is better and far easier to advance in strength than to recede. The faults of excessive strength are most manifested in the official mercurial ointments; they are intended for the average (or as near that as may be) adults, they should not be used without discrimination, but nearly all should be modified as above. Especially is this true in regard to the unguentum hydrargri nitratis.

Time is too short, and the list too long, to further particularize. I would like, however, to mention and deprecate the use of one non-official drug, that is to say, in excess. I refer to chrysophanic acid or chrysarobin, an active remedy, and one very efficient, used rightly, but sometimes used with great recklessness. I would like to say that the cases in which I apply this in unguent form, bearing a strength of over 2 per cent., are excessively rare. Skins differ; the brunette skin is ordinarily of a tougher and more resistant type than the blonde, and the strength may be increased in the former, but even then rarely.

For most of the diseases in which this remedy is found so useful, as in psoriasis, and eczemas of the type that simulate psoriasis, etc., ½ per cent. to 1 per cent. is ordinarily strong enough; to increase its penetrative or more efficient action, a small amount of salicylic acid, with a little alcohol, about the same amount, may be rubbed up with it.

I think it is ordinarily believed that vaselin and glycerin are always and under any circumstances soothing to the skin. That is far from being a fact. I believe that the first named (even when of the purest quality) is more or less of an irritant to 10 per cent. of the community. I use it only as a base for stimulant unguents, or when its non-rancidifying qualities are especially desirable.

As to glycerin used in its purity, while some bear it with apparent impunity, other skins do not. I think it injudicious so to use it, on account of its extreme affinity for the water of the tissues; it has the tendency to excite osmosis, and while it is apparently a smoother of, and lenitive to the skin, I believe it tends to make it harsher and more irritable in the long run.

No one would think it very soothing on applying it to the abraded surface, and seeing the serous flux that ensues therefrom.

The same may be said of many alcoholic preparations, as bay rum, etc., used freely on sensitive skins they at first appear to do good, but often when used in full strength and continuously they are liable to cause irritation of serious character in some individuals. . . . .

There are a number of these minor dermatological points on which I should have liked to have freed my mind, and, since I am permitted, will mention briefly one or two which now occur to me as happening not infrequently in my consultation practice, and which I think should not so do.

The first, an important and grave one, both to the individual patient as well as to the family physician, is, for example, a patient brought to me, who often is apparently a fairly well-nourished and, even, florid person, ordinarily of mature age, perhaps even further advanced, who has a history of a series of phlegmonous eruptions, either furuncular or more distinctly and seriously carbuncular in character, occurring by preference regionally; as, for instance, on nucha or gluteal region, or lower limbs, persistent, and the region of election, as before said, often well defined. I always think of diabetes in this class of cases, and have the urine carefully examined for sugar—and that not alone of one sample of the urine, taken, as is the usual rule, in the morning on rising, but a sample of all that voided during the day, or even, preferably, of that voided at night, the heaviest meal of the day having been taken just a few hours before that time; this commonly shows a more distinct reaction than that of the urine of fasting, micturition possibly having occurred once or twice during the night. The skin trouble is often, in my opinion, one of the first noticeable symptoms of the diabetic diathesis, and just the state of things pointed out should always excite suspicion. Naturally it would be a work of supererogation for me to take up your time considering treatment of this class of cases, it suggests itself.

Another and more simple affair often causes annoyance and trouble to the physician and family respectively, is so common and matter-of-fact that I almost hesitate to speak of it, did it not occur so often. A patient, a child usually, and oftenest a girl, has an obstinate so-called eczema of the nucha and occipital region, is brought for treatment.

Now, as a matter of fact, I think nine-tenths of these irritative eczemas of the nucha and thereabouts are due to the present or past work of pediculi, though they may have been so few in number as to have escaped observation, or the family so ultra respectable, and the child so well cared for, that the thought of their presence, to the house-mother or nurse, would seem like a sacrilege. Ordinarily, however, on a careful examination just below the occipital ridge a few discouraged-looking pediculi, or on the shafts of the hairs a few of their ova, or nits, will be found. The zinc or other unguent which has been prescribed by the family medical man for the relief of the condition has, as before said, not done the insects any good, but, to use a sporting simile, "though somewhat disfigured, they are still in the ring," to the annoyance of the family, and sometimes to the discredit and mortification of the family physician. These things I have seen when a mild antiparasitical ointment would have quickly cleared up matters.

The Yale Medical Course.—The announcement has been made that hereafter a student in the academic department at Yale University who intends to take up medicine can so arrange his studies in the last three years of his academic course as to cover the work required in the first year in the medical school, thus shortening the time actually spent in the latter to three years.

A CASE OF OTITIC BRAIN ABSCESS, AND THE LESSONS WHICH IT OBVIOUSLY TEACHES.*

By ROBERT LEWIS Jr., M.D.,
NEW YORK.

AURAL SURGEON, NEW YORK EYE AND EAR INFIRMARY; INSTRUCTOR IN OTOLOGY, MEDICAL DEPARTMENT, COLUMBIA UNIVERSITY.

This patient, R. C., the history of whose ear and brain disease I have the honor to present for your consideration, was admitted to the New York Eye and Ear Infirmary, in the service of Dr. Gorham Bacon, on the twenty-third day of January, 1901. From her and from her friends the following history was obtained: Since her childhood (the patient is now twenty-three years of age) she has had an almost constant purulent discharge from her left ear. This discharge has, at times, been thick and foul-smelling, and has contained small, granular masses, doubtless of cholesteatomatous character. Ten months ago, at a time when the discharge had apparently ceased, she complained of pain in the ear. An ice coil was applied by her physician and the pain subsided. At the same time the discharge reappeared. On several subsequent occasions she complained of headache, which was of a general character and not located at any particular point.

The attack which caused her to visit the Infirmary for relief began on Sunday, January 13, with a cold. On January 14 the discharge ceased, but she had some pain and tinnitus in the affected ear, as well as headache on the same side of the head. There was no dizziness nor nausea. The patient continued to grow steadily worse, and on Thursday, January 17, complained for the first time of chilly sensations and of pain in her back. Her medical attendant made the diagnosis of "grippe."

On January 18 the patient had a severe chill, which lasted twenty minutes; her teeth chattered and she shook convulsively. Temperature rose to 104°F., but was not followed by any perceptible perspiration. The pain in the left side of the head became severe and extended down the side of the neck; the mobility of the latter was normal. The lower extremities were rigid. Some vomiting occurred, but it was not of a projectile character.

On Saturday, January 19, at 1 P. M., the patient had a chill lasting eight minutes, which was followed by a rise of temperature and sweating, with much exhaustion. At 7 P. M. she had a second chill, which lasted twenty minutes.

January 20. Another severe chill lasting twenty minutes. This was followed by fever and sweating, muttering delirium, and a tendency to drowsiness. Previous to this time her mind had always been perfectly clear.

On January 22 a slight left facial paralysis was noticed. No chill occurred on this day, but the patient was very weak. Amnesic aphasia also appeared on this day for the first time. The drowsiness continued.

On January 23 the patient was admitted to the Infirmary and I saw her for the first time. A physical examination showed the left mastoid to be slightly tender over the antrum and tip, and over the opening for the emissary vein. There was no œdema over the mastoid. The external auditory canal contained an abundance of foul discharge. On the posterior wall of the cartilaginous portion there was a circumscribed area of inflammation. There was no tenderness in the neck, nor did the jugular vein seem to be thrombosed. No ocular paralyses; no optic neuritis; no motor paralyses. The retinal veins of both eyes were paler than usual. There was slight general anæsthesia, but with no difference between the two sides. The knee-jerk was normal. The patient complained of being unable to keep her eyes open, and she answered questions very slowly, although rationally. The amnesic aphasia was marked. She used the word "fan" indiscriminately, spoke of her physician as "Dr. Fan," asked for her "fan" when she meant her wrap, etc. She realized that she used the wrong word and manifested annoyance over what she called her stupidity in making such mistakes. She could not name the objects which were held before her, but she would correctly state the purpose for which each was used. Thus, for example, while she seemed unable to call a key by its proper name, she stated correctly that it was something used for locking and unlocking a door; a pencil, something to write with; a watch, something to tell time by. The only exception was with money, the denomination of which she appeared to have no difficulty in correctly recognizing. The temperature was 103.5° F., the pulse 108, and the rate of respiration 24.

A diagnosis of mastoiditis and brain abscess was made, and it was believed that the latter would be found situated in the temporo-sphenoidal lobe and involving the third and ascending frontal convolutions.

Operation.—The patient was prepared in the usual manner, and a curvilinear incision behind the auricle was made and was extended forward in such a manner as to expose the entire squamous plate of the temporal bone. Another incision was carried upward from the summit of the curvilinear incision toward the vertex of the skull, and a third incision backward from a point opposite the external auditory canal. The mastoid vertex was found to be normal in appearance and of ivory-like hardness. When the antrum was opened a very foul-smelling discharge appeared, and the cavity itself, which was very large, was found to be filled with cholesteatomatous material. Bone necrosis extended downward to the tip and sufficiently far backward to involve the wall of the sigmoid sinus. I exposed the latter for a distance of about one inch and found it to be covered with a foul-smelling pus and with granulations. The pus kept oozing out from the region near the antrum, and, on exploration with a probe, there was found a fistulous opening that led from the tegmen tympani for some distance into the cranial cavity. On the removal of the tegmen a tablespoonful of foul-smelling pus flowed out. The posterior upper wall of the external auditory canal was removed, the tympanic cavity was thoroughly curetted, and all granulations and remnants of necrotic ossicles were removed. The greater part of the squamous portion of the temporal bone, together with some of the anterior border of the parietal bone, was removed. The exposed dura was blackish in spots, and everywhere covered with lymph or bathed in pus. This extradural abscess was situated fairly far forward and was spread out over that part of the dura which covered the temporo-sphenoidal lobe. At the same time it was walled off, by adhesive inflammation, from the healthy dura. It was at this point, where the tension of the dura was greater than normal, that I made an incision into the brain to a depth of about three-quarters of an inch in an upward and forward direction. The incision afforded escape to some disintegrated brain material and pus. Exploration revealed the fact that the abscess cavity was about the size of a large walnut and was lined with a distinct membrane.

Syringing was not resorted to, but instead the cavity was wiped out with pledgets of gauze. An annoying hemorrhage occurred from one of the meningeal vessels. Sterile gauze packing was used. Sutures were employed for closing the upper portion of the wound. Firm pressure, by means of dressings and bandages, was applied. The operation lasted one hour and fifteen minutes, and was followed by little or no shock. The temperature after the operation was 98.4°F; pulse 100 and of good volume and strength. During convalescence the temperature never went above 100°F., nor below 98°F. For a period of about one week following the operation the patient was restless and, at times, nauseated, and she suffered somewhat from retention of urine.

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*Read before the Medical Society of the State of New York, at its semi-annual meeting in New York City.

On January 26 the facial paralysis was found to be scarcely discernible. The aphasia had grown somewhat less noticeable, but the patient still complained of much headache. When the wound was dressed, no irrigation was used; the cavity was simply wiped out with cotton pledgets soaked in a weak bichloride solution, and the wound was then packed with sterile gauze. The wound was dressed every other day.

On February 20 it was found that the aphasia had entirely disappeared.

On March 7 a small abscess developed in the anterior extremity of the wound. The patient was etherized, and an incision was made over the point of fluctuation. A discharge of pus followed, and, on probing, a small point of necrosed bone was found. This was removed with a rongeur and curette. The patient was discharged from the hospital on March 21.

By the middle of April, twelve weeks after the operation, epidermization of the tympanic cavity had taken place, and the external wound had entirely healed. The patient's general physical condition, as she declared, had never been better.

My chief object in reporting the history of the present case is, not so much that I may furnish a fresh illustration of the successful results which are obtainable from fearless, yet rational, surgical skill, as that I may draw attention to and emphasize the fact that the organ of hearing receives far less consideration at the hands of the medical practitioner than does that of the hardly more important organ of sight. It seems to me that it would be scarcely possible to find a more striking example of the dangerous and destructive complications that may arise from neglect of the proper treatment of a chronic purulent inflammation of the middle ear, than that which is afforded by the case of which I have here, very briefly, given the history. And in this connection I beg to make the following quotation from that classical work on "Diseases of the Brain and Spinal Cord," by Dr. William MacEwen:

"When the tympanic cavity has become the seat of chronic suppuration, with ulceration of the mucous membrane extending into the antrum and mastoid cells, it becomes a standing menace to the safety of the patient.

"The disease progresses insidiously, and one cannot be certain as to when and where it may end. A person might as well have a charge of dynamite in the mastoid antrum and cells, as one cannot know the moment when accidental circumstances may arise which may cause the infective matter to become widely disseminated all over the cerebrospinal system. Chronic otorrhœa is much too lightly regarded, and is frequently considered as a mere inconvenience, instead of a menace to life. It is true that many affected with chronic purulent otitis media pass through a long life without suffering obtrusively from it, and may die from causes neither directly nor indirectly associated with it. On the other hand, the disease is one which advances insidiously, often without pain, until very extensive destruction of the middle ear and the mastoid antrum and cells, with thinning of their osseous walls, and serious invasion of the meninges, the blood vessels and the brain itself, occurs. The mere localized suppuration, continuing for many years, is a source of weakness, tending to waxy or amyloid degeneration of the tissues. As long as the middle ear and its recesses are the seat of pus secretion, they are liable to become a focus for pathogenic organisms, which may find their way into the general circulation, or by extension invade the meninges and brain. From this very small focus the brain and cerebro-spinal meninges may become affected. One who had a chronic purulent otitis media is liable to have, with very little warning, a most serious or even fatal illness. Besides those who succumb to such diseases recognized during life, others do so from disease directly or indirectly the result of chronic otitis media and its extensions, but which are registered under the heading of its prominent sequelæ—pneumonia, pleurisy, meningitis, etc.

"It is a fact that the records of most aural hospitals show that their patients are all confined to the earlier decades of life. This may be variously interpreted, but it is probable that many people die from such sequelæ before they reach forty years. Under these circumstances all persistent purulent discharges from the middle ear ought to be regarded seriously, and the medical attendant ought not to rest satisfied until the discharge is cured. If this cannot be accomplished after sufficient trial by the ordinary means at the disposal of the aurist, applied through the external auditory meatus or Eustachian tube, then recourse ought to be had to operative treatment, directed first to arresting encroachments of the disease toward the cerebral and cerebellar fossæ; secondly, to opening the various recesses of the mastoid process and removing therefrom diseased membrane, granulation masses, cholesteatomatous débris and bone erosions contained therein; thirdly, to affording a free outlet to discharges which are otherwise pent up; and fourthly, to filling up these parts with fresh, fibrous tissue, or to forming a permanent opening to the middle ear through the antrum."

These cases, of which Dr. MacEwen speaks, ought seldom to occur. The simple fact of the occurrence of the disease *generally* means culpable neglect of an acute otitis media, for, if proper therapeutic measures are carried out in these primary inflammations, a secondary or chronic form of the disease will not follow. Of course, grave complications, such as mastoiditis, acute cerebral and cerebellar abscesses, and septic sinus thrombosis, may occur in the course of an acute inflammation of the middle ear, for the development of any of these complications is at times perfectly unavoidable, and may take place under the most careful and skilful treatment. When they develop, however, as a complication of the chronic form of purulent inflammation of the middle ear, their occurrence can no longer be termed "unavoidable." They should have been prevented. And this suggests the question, How may we prevent the acute form from lapsing into the chronic form, and, to go still further back, how may we prevent many cases of the acute disease from arising?

Nearly all disease of the middle ear has its origin in some pathological change in the nares or nasopharynx, through extension along the Eustachian tube or along the lymph channels of this tract. So here is the first point of attack. We should not let such pathological conditions pass without treatment.

Among the various nasal affections, the one which plays the most important part in producing inflammation of the middle ear, especially in childhood, is indisputably hypertrophy of the pharyngeal tonsil. Owing to this fact, I feel warranted in saying that every child born into the world should be examined a number of times, during its early life, for this hypertrophied condition, and when it is found to exist, either alone or associated with hypertrophy of the faucial tonsils, as is frequently the case, the mass should be removed, as should also the hypertrophied faucial tonsils. Children who have such a growth of adenoid tissue are much more prone than other children to contracting the exanthemata, tuberculosis, diphtheria, acute coryza, etc.—pathological processes which are accompanied by a purulent secretion in the nares or naso-pharynx. It is an easy and short passage for the bacteria to make their way from this point, along the Eustachian tube, to the middle ear, where, owing to the rigid surroundings of this small cavity, they may do much damage.

Again, if acute otitis media does arise in the presence of this growth in the vault of the pharynx, it is much more difficult to treat the attack successfully, for the mechanical obstruction presented by the latter interferes most seriously with the reestablishment of natural drainage, and thus favors the development of chronic conditions in the middle ear. The mechanical interference referred to is brought about by this growth in two ways: first, by pressing on the pharyngeal opening of the Eustachian tube; and, secondly, by the participation of the tubal mucous membrane in the same phenomena of congestion and swelling which are taking place in the enlarged tonsil.

To recapitulate, it is the physician's first duty to properly care for the pharyngeal and nasal cavities of his patients, especially children, for by the adoption of this course he will materially diminish the frequency of attacks of acute otitis media. Secondly, he ought never to neglect a case of acute otitis media, but should, at an early stage, freely incise the membrana tympani in order to secure good drainage, and should effectively cleanse the parts at short intervals. Absolute rest should be enjoined, and the intestinal tract should be kept freely open. It is by these measures, in the main, that we may expect to effect a cure. But if, after the lapse of a reasonable length of time (not more than four weeks at the longest), it is found that the inflammation still persists, the case should be put into the hands of an expert, and not allowed to drift into a chronic condition, as it almost surely will if the criminally ignorant statement is made to the patient that he "will outgrow it in time."

Finally, it should be made plain to the patient who is affected with a chronic discharge from the ear, that such a discharge points, in the majority of cases, to the existence of a diseased process in some part of the middle ear, and that the ultimate issue of this process is oftentimes death. On the other hand, there has been accumulated, during the past decade, a mass of evidence which makes it no idle boast for the specialist to claim that nearly every one of these cases is curable—in some instances by skilful local measures, and in a still larger number by a suitable surgical operation.

No. 48 West Fortieth Street.

A Leper Reservation in the Philippines.—An uninhabited island about two miles long by one mile wide, well watered, and lying north of Luzon, has been selected as a place for a Philippine Leper Colony. The name of the place is Barri Island.

APPARENT CURE OF MALIGNANT ULCER OF BREAST AFTER OOPHORECTOMY.

By WM. H SIMMONS, M.D.,
BANGOR, ME.

Mrs. A. B., between forty and forty-five years old, married, never pregnant, had always suffered from dysmenorrhœa. She noticed, in the early summer of 1897, a hardening of the left breast; the disease slowly progressed, and after a year, during which time the nipple retracted and the induration increased, an external ulcer formed. This ulcer persisted, and when I first saw her in April, 1900, measured about two and one-half by one and one-half inches in area. There was an extensive and very hard induration surrounding the ulcer, all the tissues being matted solidly together and firmly adherent to the chest wall, which formed the floor of the ulcer; the surface of the ulcer was gangrenous with a profuse fetid discharge.

Although no involvement of the axillary glands could be felt, in view of the depth of the ulcer and the infiltration of the surrounding parts, I thought operation was not advisable, and so informed the patient's husband. He requested me to use a mode of treatment, which consists of the injection into the tissues surrounding the growth of a thickish phenol-smelling liquid, which is sold for thirty dollars a bottle of about two ounces. This treatment is supposed to cure cancer, and a formidable list of favorable reports has been made. The treatment was persisted in for about a year, during which time the disease steadily progressed, when it was discontinued, and the operation of oophorectomy was advised, I having heard of the success which sometimes follows that procedure.

The operation was done September 30, 1901. On that date the ulcer measured about four and one-half by about three and one-half inches, occupying the site of the left breast which had been destroyed; its edges were indurated, elevated, undermined; its floor was the chest wall; its surface was in places gangrenous, with a profuse purulent, stinking discharge. No marked involvement of axillary glands could be felt. The ulcer had at this time been progressively enlarging for about three and a half years. The ability to use the left arm was very much impaired. Below the lower border of the ulcer, and about one inch distant, were two nodules about as big as filberts, dark red, very hard, firmly attached, apparently, to the chest wall. The ulcer had been kept covered with a simple dressing of vaselin, which dressing alone was used after the operation.

At the operation the ovaries were found small, prolapsed, very fragile, and densely adherent, with a troublesome adhesion of the left ovary to the sigmoid flexure, which necessitated considerable deep suturing to control bleeding. There was no marked evidence of salpyngitis on either side.

Recovery was quite uneventful, the dressing being removed on the tenth day. The wound was found perfectly united and the patient was up in three weeks. In just eleven weeks from the date of the operation the ulcer was completely healed, being covered with a firm, smooth, dry scar, which condition still continues. The two nodules in the skin are now smaller, softer, freely movable, and apparently undergoing absorption. The function of the left arm is almost completely restored.

Granulation was first observed about four weeks after the operation, and from that time the healing process went on rapidly. It was especially interesting to watch the filling up of the deep excavations, one of which would have held more than a drachm of pus, and the flattening down of the elevated indurated edges. No portion of the growth was excised for examination, the clinical evidence being considered quite sufficient to establish the diagnosis of scirrhous carcinoma.

Some Newer Aspects of Heredity in Tuberculosis and the Sanatorium Treatment.—E. R. Baldwin calls attention to the fact that patients may inherit a certain weak place in the body, as, for instance, in the lung, so that the disease in the child breaks out in the same place as in the parent. Certain statistics of patients under his own observation reveal the following facts: About sixty-three families containing one hundred and sixty-six tuberculous persons, 70 per cent. first developed the disease in the corresponding lung. Ninety-four of these patients came under his observation. In the remainder, the history was obtained from their relatives. In twenty-eight families where parental tuberculosis existed, 78 per cent. had children with corresponding disease. In one family the father and four children had the same lung first affected. In thirty-five families with one or more tuberculous brothers or sisters (parents not affected) 63 per cent. had corresponding disease. These proportions are large enough to suggest, incidentally, a practical point in diagnosis. The family physician knowing the location of the disease in one member of a family should be alert in seeking for signs in the corresponding lung of others in the same family. Again, it has long been known that small hearts were characteristic of tuberculous individuals, and this also may be an inherited condition. It is probable that the inheritance of vulnerability in a point of least resistance in the lungs belongs to the same category. The fact that the inherited characteristics are not necessarily the product of tuberculous disease in the parent, of course, does not contradict the observation that where the mother suffers from tuberculosis before the birth of offspring, the infants will probably have a very weak constitution as a direct result of the poisons produced in the tissues of the mother. It is not so clear that this occurs in the case of the father, but such children die of marasmus or of indefinite diseases, and usually survive but a short time. If, however, the tuberculous mother has no acute symptoms, and has good nutrition, there are many instances of very healthy children being produced, and were it not for the presence of infection after their birth, more might grow to strong maturity.—*Yale Medical Journal.*

A Contribution to the Study of Amœbic Dysentery in Children.—Samuel Amberg quotes the comments of Harris as to the relative occurrence of this disease in children and adults, as being about ten persons above to one under twenty years of age. There seem to be only about half a dozen cases on record under ten years of age. In the five cases reported in this paper, two were members of the same family exposed to the same influences, and two others were playmates living in close neighborhood, and drinking from the same contaminated sources. A third child of their company was also taken sick with the same symptoms, and probably suffered from the same disease; but the writer was unable to secure control of the case. The clinical type to which these cases belong is that of moderate intensity. There is almost no fever or acceleration of pulse. The number of stools varies from two to six in twenty-four hours. One of these cases, however, was of a more severe type. In these mild cases it is rather surprising to note the small amount of discomfort that the children suffer. In two cases there occurred a prolapsus recti. In none of the cases was any sign of affection of the liver. Abscess of the liver seems to be of very rare occurrence in children. The reaction of the fæces was mostly alkaline. The odor of these was always very offensive. The diagnosis was based upon the finding of motile amœbæ containing red blood corpuscles. The Charcot-Leyden crystals were present in the fæces of all but one case. The number of neutrophile elements in the passages was mostly very small. They seemed mostly to be less numerous than the eosinophile elements. In four of the cases there was a varying degree of anæmia. The number of blood examinations in these cases was not sufficiently numerous to allow definite conclusions.—*Bulletin of the Johns Hopkins Hospital.*

What Bearing Have Skin Diseases upon Longevity?—Charles Warrene Allen says that the most important class of cases for consideration is that including the tuberculides, syphilides, leprides, diabetides, and scrofulides. Subjects of tuberculous cutis and lupus vulgaris cannot be regarded as free from danger of grave internal tuberculosis. Of themselves these constitute grave diseases not without danger to life. As to lues, while the individual who has been properly treated may live as long as one never infected, still, as a class, those who have once had lues do not make the best risks. Leprosy in its early stages is difficult of recognition, and as the period of latency is extremely long, a leper may secure insurance while he himself is still ignorant of his impending fate. Diabetides are of extreme importance as indicating the underlying grave glycosuric state. Scrofulides form an indistinct class, but strumous subjects with ulcerations, lymph nodes or lichen scrofulosorum cannot be considered as gilt-edged risks. On the whole, skin eruptions have a very decided bearing upon life prospects, and should receive more consideration and attention from all branches of the profession than they have done in the past.—*The Medical Examiner and Practitioner.*

Plague in India.—The plague figures in India have again risen, and the epidemic is now more widely distributed than ever, and in the majority of the provinces it is steadily increasing. The recrudescence in Bombay City is unmistakable, and Poona City is in the throes of another severe outbreak. There are also signs of development in Calcutta, and the quarter of the city hitherto first affected is returning more cases. For 1901, up to the end of November last, the official returns for the whole of India give 307,000 seizures and 233,000 deaths, and up to December 14, Bengal had 90,000 seizures and 78,000 deaths, as compared with figures of less than half these for the previous year. This shows the generally unrecognized increase of the epidemic during the past year. —*Lancet's Indian Correspondent.*

Potassium Permanganate.—It can ignite glycerin or alcohol and detonates when rubbed up with confect. rosæ. An unlucky apothecary attempted to dispense the following:

Pot. permangan. and alcohol, āā 10 parts; distilled water, 15 parts.

Scarcely had the bottle been corked when an explosion took place, and the boiling liquid spurted into the face of the surprised pharmacist. He nearly lost the sight of one eye, and was disabled from work for more than a month.

—WALTER G. SMITH *in The Practitioner.*

White Illiteracy in the South.—The census reports have revealed that the number of illiterates in the South is very large. The *Atlanta Constitution* commenting on this says:

"There is no more humiliating fact that an intelligent Southern man has to face than this: that among the white people of the South we have as many illiterate men over twenty-one years of age as we had fifty-two years ago, when the census of 1850 was taken."

The Salt Pack in Rheumatic Gout.—Mr. Jonathan Hutchinson says, in the January *Polyclinic*, that he knows of no remedy so effectual in getting rid of irritation and synovial effusion in connection with rheumatic gout than the salt pack. This consists of flannel soaked in a saturated brine of common salt, which is wrapped round the affected joint, covered with oiled silk and a bandage, and kept on the whole night. It should be applied every night until the cure is effected.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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A UNIFORM SYSTEM FOR THE REGISTRATION OF DEATHS AND THE COLLECTION OF MORTALITY STATISTICS.

THE need of uniformity in the law regulating registration of deaths and the collection of mortality statistics is obvious. No accurate statistics of mortality can be gathered unless the methods in vogue for this purpose be uniform throughout the country. At the present time the law governing these matters differs in points of detail in various States, while some cities and States are non-registration areas.

The Census Office of the United States has made, for some time, efforts to remedy this state of affairs—and with a degree of success—but there still remains the greater part of the work to be accomplished ere complete order be evolved out of partial chaos.

The Committee on Demography and Statistics in their Sanitary Relation to the American Public Health Association, at their recent meeting, decided to take up the subject, and thereupon the Census Office determined that its wisest course would be to cooperate with this body.

The Committee has published a paper in which is set forth its conclusions as to the essential requirements of a law for the registration of deaths and the collection of mortality statistics.

An epitome of these provisions are as follows:

1. Deaths must be registered immediately after their occurrence.
2. Certificates of death should be required.
3. Burial or removal permits are essential to the enforcement of the law.
4. Efficient local registrars are necessary.
5. The responsibility for reporting deaths to the local registrar should be fixed.
6. The Central Registration Office should have full control of the local machinery, and its rules should have the effect of law.
7. The transmission and preservation of records should be provided for.
8. Penalties should be provided.

These provisions seem to cover the whole ground so far as is feasible under existing conditions, but, as the Committee state, "It is not practicable to draft a complete law that can be adopted, without modification, in the States or cities which may wish to enact such legislation. The paper must, therefore, be considered as furnishing the accepted view of the general scheme for registration, and as affording interested parties an authoritative basis for constructing a law adapted to local conditions. The Committee further declare that it is desirable that Congress, the United States Census Office, the medical departments of the Government, the legislatures of all the States, their boards of health and registration bureaus, municipal boards of health, and all sanitary, medical, statistical, and economic associations, should unite in efforts to extend in this country the practice of accurate registration of deaths, and the publication and utilization of the valuable data resulting therefrom."

To bring about this much-to-be-desired end, a thorough reform must be effected in the slip-shod methods now practised.

The United States stands almost alone among the civilized nations of the world in that she has no national uniform system of registration, and, in consequence, it is impossible for her census officers to collect data as to the movement of population, and other facts which are extremely valuable, considered from every standpoint.

Registration has been left in the hands of separate and independent States, and has been done well or ill, or left undone, in accordance with the will of each State, and with no reference to the utility of registration as regarded from the broader point of view of the Federal Government.

An alteration of this condition of things upon the lines suggested by the Committee of the American Public Health Association, endorsed by the Census Office and the Commissioner of Labor, would have the effect of rendering available most valuable statistical information.

The question of a national uniformity of systems will be brought by the Director of the Census to the immediate attention of the Governors and Legislatures of the non-registration States, and every effort will be made to procure the introduction and passage of the desired laws.

The movement is one in praise of which it would be impossible to say too much. Therefore it is to be hoped that medical men in all parts of the country will use their utmost endeavors to bring to pass a uniform and efficient system of registration throughout the United States.

FOREIGN BODIES ACCIDENTALLY LEFT IN THE ABDOMINAL CAVITY.

DR. August Schachner, Professor of Surgery in the Louisville Medical College, read before the Louisville Surgical Society on June 10 a paper on this subject, in which he points out that no matter how careful an operator may be such accidents are on occasions unavoidable, and records numerous examples in support of this statement, procured from many surgeons whose opportunities for observation in abdominal surgery were known to be large. In addition, he gives a list of 101 cases contributed by Franz Neugebauer to the *Monatsschrift für Geburt und Gynäkol.* The conclusions come to by Dr. Schachner are as follows:

1. So long as surgery continues an art, so long will foreign substances continue to be unintentionally left in the abdominal cavity.
2. That the recorded cases are not representative of the true frequency of this accident.
3. If the foreign body is of an aseptic character, nature endeavors to care for the same by encapsulating the foreign substance primarily in a fibrous exudate interspersed with leucocytes, and second-

arily enclosing it by the contraction of adhesions between the different abdominal viscera, or the viscera and abdominal wall.

4. In the spontaneous expulsion of a foreign body from the abdominal cavity nature seeks exit through points of least resistance, which are either the alimentary tract or an imperfectly united wound, or less frequently through the reopening of an apparently well-organized cicatrix.

5. A foreign substance may remain quiescent for years in the abdominal cavity.

6. The disturbance which a foreign body creates in the abdominal cavity depends upon its sterility, size, character, *e. g.* regularity of outline and presence of sharp or pointed surfaces; density, point of location, individual tolerance of the peritoneum, and behavior of the individual.

7. The symptoms of a foreign body in the abdominal cavity may vary from nil to that of the most violent abdominal disturbance.

8 The symptoms not infrequently suggest a low and protracted form of sepsis or an ileus.

9. Unexpected circumstances, unusual complications, and diverted attention explain many of these accidents.

10. While the counting and recounting of sponges and pads before and after an operation should and always will be a most important feature in the prevention of this accident, yet the cases are numerous where the accident occurred notwithstanding this count by one and even two nurses or assistants.

11. The plan of attaching tapes or threads to pads and instruments has received the recommendation of many operators, but the fallibility of this is as clearly proven as is the former.

12. In restricting ourselves to the smallest number of pads, sponges, and instruments, we adopt a system of simplicity that must appeal to all as one of the most important elements in the avoidance of this accident.

13. We can only hope to reduce these accidents by the observance of the highest degree of simplicity, system, and watchfulness.

14. If the surgeon at the close of the operation asks for a count of sponges, and this is made, and an assurance given that all sponges and pads are present, his responsibility upon this point ceases; for it is neither prudent nor fair that he should leave his, the most important part, to do duty that justly belongs to the nurse.

15. The real factors in the avoidance of this accident are the recognition of system, simplicity, and watchfulness to the most exacting degree.

16. At the bottom of most of these accidents, we find a diverted attention, a defective system, or a dangerous degree of complexity.

17. We are obliged to conclude that to a certain extent the surgeon is responsible for things about the operation, and after that the responsibility must rest elsewhere.

18. No hard and fast rules can be made regulating the responsibility in every case, but each will be required to be decided upon its own merits, and the responsibility be fixed accordingly.

19. There are risks that the patient must assume and that cannot rightly be transferred to the operator (Sanger of Leipzig).

20. In other vocations it is reasonable to assume that, unless properly prepared, one should not act; but in surgery one is occasionally compelled to act, even though it is known that he is not prepared; and in these conditions to adopt any other course than that it would be attended with the loss of more lives than if we did not make the best of circumstances.

Dr. Schachner has dwelt with the subject exhaustively, and his conclusions are fair and just.

The main point in an abdominal operation, is to the greatest care compatible with needful celerity, and to use the simplest methods possible.

The placing of responsibility as a very difficult question to decide; in fact, virtually impossible; so that it may be taken that each case, as Dr. Schachner remarks, must be decided upon its own merits.

The patient must take his share of the risks attending an operation, the surgeon his share, and the nurse the same.

The patient has the right to expect that every precaution to ensure safety will be taken, and beyond this the responsibility will first fall upon the surgeon and then the nurse or assistant.

Dr. Schachner's view that to a certain extent the surgeon is responsible for things about the operation, and that after that the responsibility must rest elsewhere would seem to be the right stand to take.

A well-defined apportionment of responsibility is, in perhaps the majority of operations, impossible to assign, although, of course, the greater part must necessarily fall upon the surgeon.

THE SURGICAL TREATMENT OF MITRAL STENOSIS.

In expressing an opinion as to the prognosis in cases of valvular disease of the heart, the clinician is often compelled to admit that while he may be able to relieve the symptoms present and restore cardiac compensation he is powerless to exert any curative effect upon the underlying lesion. Although there are now on record a respectable number of cases in which life has been preserved for varying periods of time as a result of prompt surgical treatment of wounds of the heart, the suggestion of a possibility of treating mitral stenosis by surgical methods is nevertheless startling, and this is all the more so as the suggestion emanates from a clinician rather than a surgeon. It is no less distinguished a therapeutist than Sir Lauder Brunton (*Lancet*, February 8, 1902, p. 352) who discusses such a proposition in a preliminary note. Having been struck by the ease with which the constricted mitral orifice could be divided after death he was led to undertake some experiments upon lower animals. As between enlarging the mitral orifice by elongating the mitral opening or cutting through the valves at the middle it was concluded that although the former were the better plan the latter is the more easily performed. Instruments like tenotomy knives were employed, and it was thought better to enter the heart through the ventricle rather than the auricle in order to avoid hemorrhage. The knife should be introduced during diastole to diminish the danger of wounding the opposite wall of the ventricle. The pericardium should be not only opened but also kept open. In the cadaver the heart was exposed by making two incisions from the left edge of the sternum outward to the left, the one along the lower border of the third rib and the other along the lower border of the fifth rib, and connecting their outer extremities by a third incision, and dividing both the soft structures and the fourth and fifth ribs. The window thus made was forcibly reflected upon the sternum, the lung pushed back, the pericardium divided and the knife introduced into the ventricle. If one desired to enter the heart through the auricle, it would probably be necessary to make an incision along the lower border of the second rib, although by pulling on the heart it might be displaced sufficiently to allow the introduction of a knife into the auricle, even if the incision were made at the lower border to the third rib.

There are few clinicians who would recommend such a radical procedure as that here presented, and few surgeons bold enough to carry it out, even if there were patients willing "to balance the risk of a shortened life against the certainty of a prolonged period of existence, which could hardly be called life, as the only conditions under which it could be continued might be worse to them than death."

The Water Supply of London.

That the water supply of the British metropolis has been for long inadequate in quantity, whatever may be its merits with regard to quality, is a too-obvious and palpable fact to all of its disinterested citizens. Rumors have been current, from time to time, for many years, that at length steps were to be taken to relieve the situation, but temporizing has always taken the place of action.

Mr. Long, President of the Local Government Board has finally introduced into Parliament a "Bill for establishing a water board to manage the supply of water within London and certain adjoining districts, for transferring to the Water Board the undertakings of the metropolitan water companies."

The London water question is said to be a most intricate one—a statement easily to be credited—but into that part of the matter it would be no concern of an American to delve.

The remarks of the *Lancet* on the needs of London, from the water standpoint, will, however, commend themselves to everyone as applying to every large city of the world.

The *London Medical Journal* says: "We must insist once more on the fact that an ideal supply of water for London would ensure that the quality of the water should be pure and derived from sources beyond the suspicion of pollution, and that the quantity should be adequate, not only for domestic supplies, but sufficient to give an unstinted amount for municipal purposes.

The public fountains should not be allowed to run dry, the ornamental waters of London and the canals should be clear and bright, a state of things which could only be made possible by frequent changes of the water, necessarily involving a supply greatly in excess of that which obtains to-day."

It is the undoubted right of every large city to have an abundant and pure supply of water at a moderate charge.

Private individuals or companies should not be allowed to make an enormous profit out of one of the prime necessities of life.

The experiment soon to be undertaken by London will, therefore, be watched with interest by civilized communities throughout the world.

Is Diphtheria Due to Fowls?

Lately, the question has been several times seriously raised as to whether certain infectious diseases can be communicated to the human race by the agency of animals and birds. The declaration has been made that cats can disseminate both scarlet fever and diphtheria to men. Now the suggestion comes from a remote part of Wales, that there may be some connection between a disease which is frequently epidemic among fowls and known as roup and diphtheria.

According to the *Sanitary Record*, January 23, Dr. Herbert Jones, Medical Officer of Health to the Rhondda District, when investigating fresh outbreaks of diphtheria, in different localities, found that in several instances there had been, immediately preceding and running concurrently with a diphtheria outbreak, a very fatal epidemic among fowls. A bacteriological examination was, in three cases, made of material obtained from the throats of fowls, but without any satisfactory results following, in so far as determining the question of direct infection is concerned. "Some diseases of fowls, such as roup," Dr. Jones proceeds to say, "are so very contagious, and the symptoms so very much resemble those of diphtheria, that there may well be some connection between the epidemic among the fowls and the outbreaks of diphtheria we have so frequently had in our midst during the past few years. In considering whether any practical steps could be taken in the light of the possibility indicated, it appeared to me that it might be advantageous to circulate among poultry keepers a description of the fowl disease, with instructions how to deal with affected birds." The fear of disease being directly communicated from fowls to man, is one so far remote as not to be worthy of serious consideration. However, for the sake of the fowls themselves, and in order to keep up the supply of so succulent and nutritive a food as chicken, it is well that breeders should know how to treat a disease of the nature of roup.

The Value of Age and Sex as Etiological Factors in the Differential Diagnosis of Gastric Ulcer and Carcinoma.

Dr. William Murrell, Physician to the Westminster Hospital, in the *Medical Press and Circular* October 23, 1901, published statistics he had collected from his own experience and that of others, bearing upon the above subject. As to the relative frequency of gastric ulcer in men and women, he finds that of 3,114 cases treated by Welch, Fenwick, Lebert, Habershou, Martin, Anderson, and Steiner, 1,003 occurred in men and 2,111 in women, giving a ratio of one man to 2.10 women. When, however, Welch's autopsies are excluded, the ratio is one man to 3.38 women. With regard to the ages at which gastric ulcer occurs, Dr. Murrell finds that a consideration of the figures of four observers gives the preponderance of cases in the decade 20–30, which is in accordance with the view commonly entertained. Respecting the relative frequency of gastric cancer in men and women, Dr. Murrell finds that upon analyzing the figures of six observers, the ratio works out at 6 men to 5 women. Brinton thought that gastric cancer was twice as common in men as in women, but Welch, with his much larger statistics, places the ratio at 5 to 4. The age at which gastric carcinoma occurs, was found from the statistics available to Dr. Murrell, to be between the ages of fifty and sixty.

The conclusions, therefore, at which we arrive are that gastric ulcer is from two to three times as common in women as it is in men, and that it is most frequent between the ages of twenty and thirty. On the other hand, gastric cancer is slightly more common in men, and the majority of cases occur after the age of fifty.

Report of the Health of the British Navy for 1900.

The *Lancet* of February 8 contains a summary of the above report, some of the leading features of which may be interesting to our readers, for the sake of comparison with the navy of this country.

The total force serving afloat in 1900 was 95,830. The total number of cases of disease and injury entered on the sick list was 84,550, which is in the ratio of 882.29 per 1,000—an increase as compared with the previous years, but a decrease of 11.22 per 1,000 as compared with the average ratio of the last three years. The death rate per 1,000 was 7.27, showing an increase of 1.86 per 1,000 as compared with the previous year, and of 2.09 in comparison with the ratio of the last three years. The stations which exhibit the highest death rates are the Cape of Good Hope and West Coast of Africa (20.03), China (17.34) and the East Indies (13.92). The total number of cases of wounds among the British Navy in China was 360, with 69 fatalities. There was a large increase in sickness from dysentery and enteric fever, due to the fighting in South Africa and China.

The figures regarding the health of the American Navy, during a corresponding period, compare favorably with those quoted above. In both navies the cases of dysentery and enteric fever have been largely increased by service under war conditions in tropical climates. Under ordinary conditions, however, there is undoubtedly no healthier life than that led on a man-o'-war.

Deformities of Occupation.

The Literary Digest quotes part of an article on the above subject, contributed by M. Gabriel Prévost to *La Science pour Tous*.

The writer of the article to the French journal declares, and rightly, too, that every occupation leaves some deformity—even the state of being without an occupation. Says M. Prévost, "Complete leisure, if such a thing exists, causes fatty degeneration, and will arrest growth. Diderot was right when he wrote, 'It is the daily occupations that determine, not only the whole size of the figure, but the true proportions of each limb, and of their combinations.' Police magistrates, who have practised eyes, are rarely deceived at first sight about the profession of a workman.

Among professional deformities, some affect the health directly, others only alter the normal attitude of the body, to the prejudice of hygiene and esthetics. The first, which fall within the domain of medicine, still await a proper scientific description. Here and there we read of the necrosis of match manufacturers, the cataract of blacksmiths, miner's paralysis, etc., but there remains to be written a whole treatise of the greatest interest, to indicate the means of guarding against the dangers that beset a numerous class of indispensable workmen devoted to various special interests.

The principle at the bottom of it all is that we were not created to be always standing up nor always sitting down, nor always kneeling, nor always bending over; and that, with the exception of climate, we were created to obey the law of variety, as well in movements as in nourishment. The best proof is that, apart from accidents, longevity attaches to just those professions that give the whole organism the most exercise—those of the soldier, the painter, the sculptor, and the actor.

Among instrumental musicians, flutists and clarinetists may be recognized by the position of their lips, and the puffing out of their cheeks. Harpists and players on the guitar have callosities of the fingers. Pianists have a tendency to exaggerated development of the hands—witness Weber, who could stretch nearly two octaves. Grooms and cavalry officers have bow-legs, and tend to toe in; priests and magistrates and all who wear skirts are inclined to drag their legs, in distinction from soldiers, who raise them."

M. Prévost gives many other examples of the deformities of occupation, and ends by advising one and all, where possible, to be careful of the equilibrium of forces, and points to Sweden, where this precept has been closely adhered to, and where evening gymnasium classes have been established for the two sexes—not those places of torture which turn out acrobats or clowns, but real places of amusement, to which people go as they do to the theater.

A Consideration of Smallpox.

Dr. Nelson Dewey Brayton of Indianapolis, Indiana, has contributed to the *Indiana Medical Journal* a paper with the above title.

The author compares the mild forms observed in Indiana with the severe type of the Atlantic Coast cities, and draws deductions from clinical studies of over one thousand cases, observed at the New York City smallpox hospital.

In the present epidemic in Indiana, the initial symptoms resemble more closely grippe or some kindred malady than smallpox.

The etiology of the disease prevailing in Indiana differs somewhat from that of the Eastern States. This is seen not only in the symptomatology and clinical history of the patient, but in the prognosis of the disease as well. In Indianapolis the cases have been mostly negroes, who give a history of non-vaccination.

In New York the same condition obtained, with this exception, that the cases were notably much more severe. Varioloid was often not only much more generalized and diffused upon the person, but it even showed itself by graver systemic effects than is often exhibited by patients with true variola in this region.

Various theories have been advanced to account for these phenomena, one of the most plausible being that the milder form now so prevalent in the West is an attenuated type of the disease; a tail end of a much severer epidemic, which had already run its course, seen its day, and spent its fury in the far South, notably in Mexico and the West Indies.

New York, on the other hand, had been entirely free from the disease, while for a year and a half it had been widely disseminated through the Western States.

The first cases are supposed to have been brought in by European immigrants. The type of the disease compared with that which had prevailed in the West was much more serious and graver in every way, approaching more nearly in symptoms the classic descriptions of the disease.

Dr. Brayton draws attention to the far greater proportionate number of invasions of the palmar and plantar surfaces in the East than in the West; the greater profoundness of the delirium, the prevalency of the eye symptoms, the frequency of delirium and of albuminuria.

In a few words, while the invasion by smallpox of the Western States has been distinguished by its excessive mildness, in the Eastern States the disease has run its normal course.

The latter part of Dr. Brayton's paper is devoted to a consideration of the diagnosis of smallpox, and of protection against the disease.

The MEDICAL RECORD has many times discussed at length both these points, and the chief interest of Dr. Brayton's paper lies in his remarks upon the different type of smallpox in the Western and Eastern States.

As to the cause of this apparently anomalous state of affairs, probably the theory that the epidemic in the West is the tail end of a formerly severe one, is as plausible as any advanced.

The moral to be drawn from the paper of the Indianapolis physician would seem to be, that there is need of more general and efficient vaccination, and of greater care in diagnosing the mild type of smallpox so widespread in the West.

DISEASES OF THE PHILIPPINES.

Major L. M. Maus, Surgeon U. S. Army, Commissioner of Public Health, Manila, reports on the contagious diseases of the Philippines:

Plague first manifested itself in Manila in December, 1899, and since that date 778 cases have occurred, resulting in 618 deaths, or 79.4 per cent. Every case discovered in the city at present is sent to the Plague Hospital as soon as the diagnosis has been verified by blood examination, and the bodies of those found dead are sent there for cremation, unless the friends inter such cases in hermetically-sealed metallic caskets, in compliance with the directions of the Board. In order to exclude the possibility of any case escaping the vigilance of the Board, all deaths reported by physicians in the city, where there is suspicion of plague, are examined by one of the medical inspectors of the Board. Great attention is being paid to the destruction of rats—a corps of native rat-catchers having been organized, provided with buckets for holding disinfecting solutions, the collection of dead rats; vessels for rat-bane, etc. Houses or premises where plague occurs, or where dead rats affected with plague have been found, are subjected to a rigid disinfection—such houses being closed for from thirty to sixty days, or until they are considered safe for re-occupancy.

Smallpox has been very infrequent during the past year, only five cases having occurred in Manila during that period. Vaccination is efficient and universal, and the population is considered at the present time to be practically immune.

Pulmonary tuberculosis is very prevalent among a certain class of the citizens—160 deaths having occurred during the two months previous to the writing of the report. This question is regarded as an exceedingly serious one, and in order to secure proper vital statistics in regard to this disease, a blank form has been printed for circulation by the physicians, sanitary inspectors and others of the city. It is believed that the ultimate organization of a consumptive colony outside of the city will become necessary in the near future, as the disease occurs principally among the very poor, and those who live in the crowded districts and under poor sanitary conditions.

Scarlet fever and diphtheria are very rare in Manila, but measles occur occasionally.

The hospitals for the accommodation of lepers are situated in Manila, Cebú, Palestina and Bacolod, and contain about 500 cases. A number of reports have been received from the Governors and Secretaries of the various provinces regarding lepers requesting assistance. With a view to the support of these isolated cases, an appropriation has been submitted to the Commission for necessary funds. Various estimates of from 10,000 to 30,000 have been placed upon the number of lepers living in the Archipelago, but Major Maus judges, from information received from various sources, that the number is less than 12,000. In order to secure definite statistics, a blank form has been forwarded to the Secretaries of the various provinces, and to medical officers and others, for the collection of data, and it is hoped that within a short time the approximate number will be ascertained.

The care of lepers in the hospitals throughout the Archipelago may be regarded as simply tentative, and it is anticipated that during the coming year a permanent colony will be established for them on some suitable island, sufficiently distant from the mainland, to prevent their return to their homes.

TREATMENT AND PREVENTION OF "SURRA" IN HORSES, MULES AND OTHER ANIMALS.

A circular issued by the Military Governor of the Philippines, dated January 11, 1902, states that an army medical board, ordered to inquire into and investigate a disease of animals known as "surra," has found that liquor potassii arsenitis, injected intravenously, in nearly every case destroys the parasites in the blood, recently shown by Captain A. M. Smith, Assistant Surgeon U. S. A., to produce this disease. Animals so treated are doing well, but the results of such treatment as to permanent cure are not yet conclusive. The circular recommends that this treatment be tried at all points where animals are infected. The board also having found that common house flies taken on sick animals are frequently full of the blood parasites of "surra," the Military Governor, therefore, orders that hereafter all abrasions or wounds of sick animals are to be kept covered, to prevent the possibility of transmitting the disease by means of these insects. As "surra" has become widely prevalent throughout the Philippine Islands, and by its mortality—85 to 100 per cent.—seriously interferes with not only the stock-raising industry and the supply of fresh animal food, but also severely impairs the efficiency of the army transportation service, this latest of the many noteworthy scientific discoveries of the Army Medical Department possesses both a high economic and military importance. Modern medicine is deeply indebted to the recent epoch-making discoveries of army surgeons stationed in the tropics, whose achievements have shown what can be accomplished in a fertile field for investigation by competent observers, backed by a scientific and liberal administration. The medical profession of the country, since the outbreak of the war with Spain, has awakened to a livelier appreciation of the high order of ability and professional zeal which characterizes its representatives in the military service. It is not too much to say that in the last four years a handful of army surgeons, as laboratory investigators and municipal sanitary officials, have done more to advance the science of preventive medicine than all the rest of the medical men of the United States together. It is true that army surgeons, in the nature of things, have unusual opportunity and facility for the pursuit of scientific investigation—that they are making such admirable use of their great opportunities is a cause for the highest praise and encouragement of their efforts by the profession.

News of the Week.

The New York Academy of Medicine.—A stated meeting will be held in Hosack Hall, Thursday evening, March 20, at 8 o'clock. Topic for discussion: Operations for the Relief of Paralytic Deformities, with Special Reference to Tendon Transplantation. (1) Introduction; History; Indications for Operation: by Royal Whitman, M.D.; (2) Deformities, due to Muscular Paralysis; Method of Production; Possibilities in Tendon Transplantation; Combinations that Have Been Made to Correct Deformity: by Wisner R. Townsend, M.D.; (3) Technic of Operation; Results of Tendon Transplantation at the Hospital for Ruptured and Crippled: by Virgil P. Gibney, M.D.; (4) Neurological Questions Involved in Tendon Transplantation, by Joseph Collins, M.D.; (5) General Discussion.

The Late Dr. Henry R. Baldwin of New Brunswick, N. J.—At the meeting of the Society of the Alumni of Bellevue Hospital, March 5, the following preamble and resolutions were passed:

Whereas, In the death of Dr. Henry R. Baldwin our Alumni Society has lost one of its most eminent and respected members, whose noble attributes and high professional character had endeared him to all his friends and to the community in which he lived; be it

Resolved, That we express to his family our deep sorrow and heartfelt sympathy in their sad bereavement; and be it further

Resolved, That a copy of this part of our proceedings be sent to the medical journals for publication.

J. W. S. Gouley, M.D.,
J. F. Erdmann, M.D., } *Committee.*
Irving S. Haynes, M.D.,

The Medical Society of the State of Tennessee will meet in annual session at Memphis on April 8-10, 1902, under the Presidency of Dr. Deering J. Roberts. The meeting will be an important one, as some constitutional amendments involving medical departures from the established policy of the society will then be acted upon. It is requested that members intending to present papers will send the titles of the same to the Secretary, Dr. A. B. Cooke, Nashville.

An Up-to-Date Surgeon.—A British contemporary says of a Parisian surgeon, that he has availed himself of an almost unrivalled opportunity to court publicity by his sensational operation on the Hindoo twins, the details whereof have been obligingly placed at the disposal of the lay Press *urbi et orbi*. To enhance the interest of the occasion the details of the operation were preserved for contemporaneous posterity by the aid of the cinematograph, a device to which this eminent surgeon has shown himself partial on other occasions.

Section on General Medicine of the College of Physicians of Philadelphia.—At a stated meeting, held February 10, Dr. James C. Wilson exhibited "A Case of Osteitis Deformans." Dr. H. A. Hare exhibited "A Remarkable Case of Musical Heart Murmur," in which the symptoms developed suddenly and the adventitious sound could be heard at a short distance from the chest. The condition was thought to depend upon laceration of an aortic leaflet, in consequence of violent physical effort. Dr. Thos. G. Ashton exhibited "A Case of Musical Aortic Diastolic Heart Murmur." Dr. Chas. W. Burr exhibited "A Case of Hysteria in a Small-sized Giant." The patient, a man six feet three inches high, had been apprehended on account of some motor disturbance on the street, the exact nature of which was not understood. When admitted to the hospital he was unable to stand on his feet, and his breathing was excessively rapid—up to 100 in the minute. Under the influence of hypnotic suggestion marked improvement took place. Dr. Howard Fussell exhibited "A Case of Probable Abdominal Aneurism" in a man who, following a fall with injury to the back, presented some spinal rigidity and abdominal tenderness, with a thrill on palpation and a bruit on auscultation. The knee-jerks were exaggerated, the thyroid gland was enlarged, and the man was neurasthenic. Dr. John M. Swan read a paper entitled "A Summary of the Recent Literature on Pneumonia, Bronchitis. Pleurisy and Asthma."

The United States Army General Hospital at San Francisco is nearly filled to the capacity of its 450 beds, and recommendation has been made to the Surgeon-General that such cases as can be moved with safety be transferred to other hospitals, so as to make provision for sick soldiers now returning from the Philippines.

Sickness in the Philippines.—A report from the Philippines covering the month ending January 15, just received, states that the percentage of sick during the month, out of a total strength of 41,116 officers and men, was 6.16. During the month 2,534 cases of sickness were reported. There were fifty-nine deaths, a decrease of eighteen compared with the previous month. The rates for sickness show a steady decrease, in spite of the active operations being carried on in Samar and other islands. Typhoid fever continued at about the same rate, but there was a considerable decrease of malarial disease and affections of the gastro-intestinal tract. Two deaths were ascribed to variola, which disease still continues to attack a few men at isolated stations where the disease exists among the civil population. Among the more important diseases, at the four main hospitals, the sick rates were as follows: Dysentery, 16.7 per cent.; diarrhœa, 6.91 per cent.; typhoid fever, 0.33 per cent.; gastric disorders, 5.07 per cent.; tuberculosis, 1.24 per cent.; venereal disease, 15.54 per cent.; insanity, 2.08 per cent.

Plague in Manila.—Three cases of bubonic plague occurred in Manila during the month prior to January 15, one of the fatal cases being in an American. The Manila Board of Health and army medical officers are making every effort to exterminate rats, and about 500 carcasses are daily brought to the pathological laboratory for examination. Of the total number caught, the percentage of rats affected with plague is rapidly diminishing; up to January 1, the average number found infected amounted to 5 per cent., but during the first two weeks of January less than 1 per cent. were found to be affected with plague.

Filipinos Warned Against American Hospitals.—Near many of the stations held by United States troops in the Philippines hospitals have been established by the military surgeons for the relief of sick and suffering Filipinos, and the benefit of these institutions has done much to favorably impress the natives with the American administration. An insurgent circular, recently issued by insurrecto chiefs, endeavors to counteract this effect by admonishing the Filipinos against the "treacherous Americans." As an example of what the Americans will do the circular says: "In Iloilo the Americans established a public hospital, and then compelled all the very sick people to be taken there for treatment. It was noticed that some of these sick people died very soon. That they might not be bothered with cases that were hard to cure the American doctors administered much poison, and invariably soldiers who had at any time served in the insurgent army died first. In this easy way the Americans meant to kill off all their enemies. For this reason all who were true to the insurgent cause should, under no circumstances, be taken to an American hospital."

Another insurgent circular calls especial attention to the fact that the Americans now have a chaplain with every regiment. This was necessary, so the circular says, because the number of chaplains previously in the Philippines was quite insufficient to receive the confessions of the Americans killed in battle and dying in the hospitals of disease, and the pope had therefore commanded the President to send more chaplains to the islands.

Honors for Professor Von Bergmann.—The *Lancet* Berlin correspondent announces that Dr. Von Bergmann, ordinary professor of surgery in Berlin University and director of the University Surgical Clinic, has been invested with the rank of Wirklicher Geheimer Rath (Real Privy Councillor). This dignity, which is the highest of its class in Germany, carries with it the title of Excellency, and is, as a rule, conferred only on great officers of State and persons occupying important positions at court, very few medical men having been thus honored.

Appropriations in Germany for Scientific Purposes.—The Prussian Government has set aside 20,000 marks for further study of means of prevention and early diagnosis of typhoid fever; 10,000 marks to the Committee for Cancer Research, and 53,000 marks to be applied to the erection and support of a cancer ward and laboratory in connection with the Charité Hospital at Berlin.

Fatal Vaccination.—The *New York Tribune* reports that on March 6 a Miss Copper of Easton, Pa., died from the effects of vaccination performed by James Dennett, a drug clerk.

London to Have Ambulances.—London will soon have horse ambulances in regular service to respond to accident calls and fires, just as in American cities.

Precautions Against Plague in Melbourne.—A despatch to the *London Times*, March 8, states that special precautions against the spread of plague are being taken at Melbourne. Dirty blocks are being cleaned, rats are being destroyed, and garbage is being burned.

Insurance After Smallpox.—After smallpox the British income-tax underwriters are now offering to insure against an increase in the income tax, and quite a number of policies have been issued.

Mayor Low Scores Dark Tenements.—Mayor Low on Saturday, March 8, expressed his views on the subject of dark tenements. A delegation called upon him to urge his co-operation in passing the Ash bill now before the Legislature to amend the tenement-house law so that builders may erect tenement houses for six families. The Mayor, in a letter which he sent to the delegation, recorded his conviction that tenement houses with dark interior halls should not be built, and conveyed his desire that Brooklyn apartment houses should be constructed with a view to convenience and health.

$5,000,000 Left to Charities in Glasgow.—James Dick, the Scotch rubber importer and manufacturer, who died in Glasgow on March 7, has willed $5,000,000 to charities of that city.

Method of Killing Animals at Paris Pound.—A lethal chamber for the destruction of lost dogs has been provided for the Paris pound. Thirty condemned dogs are placed in a cage, which is rolled onto a platform, which, by hydraulic force, sinks about six feet into the earth and is hermetically closed. Carbonic-acid gas is turned on and in the space of forty seconds every dog dies without a struggle.—*Scientific American Supplement.*

Citizens' Union for Public Baths.—Francis C. Huntington, the Chairman of the Executive Committee of the Citizens' Union, has sent a letter to Mayor Low, in which he states that the organization is in favor of the establishment of three more public baths in Manhattan and two in Brooklyn.

Dr. Frank Boas, Professor of Anthropology in Columbia University and Curator of Anthropology in the American Museum of Natural History, has been elected an honorary member of the Anthropological Institute of Great Britain.

Safety Pin Extracted from Girl's Throat.—Some weeks ago a child in Fall River, while eating, swallowed a safety pin, which lodged in her throat just beneath the vocal chords. The local surgeons were unable to extricate it, but by means of the *x*-rays the pin was located in the trachea. Attempts were made to seize the pin, but in the efforts it was dislodged, and fell into the branch of the bronchial tube, where it remained three weeks. The *x*-rays were again applied, and the pin was located in the bronchial tube at the lower end of the third rib. The *x*-ray photograph was then made use of, and an incision was made in the windpipe at its lowest extremity. After several attempts the pin was extracted.

Cholera in Medina.—Cholera has broken out among the pilgrims at Medina. One hundred and ten deaths from the disease have occurred. Medina, otherwise "The Prophet's City," is one of the principal towns of Arabia, and is 248 miles north by west of Mecca, the seat of the Mohammedan religion. Medina stands 3,000 feet above the sea level. Great numbers of people make the pilgrimage to the Prophet's tomb, it being estimated that one-third of the Mecca pilgrims go on to Medina.

The Georgia Journal of Medicine and Surgery.—Dr. W. E. Fitch, founder, and for many years editor and business manager of *The Georgia Journal of Medicine and Surgery*, published at Savannah, Ga., has sold his interest in the publication to his former associate and co-editor, Dr. St. J. B. Graham, who becomes editor and sole proprietor. The *Journal*, under Dr. Fitch's editorial management, from the appearance of the first issue, merited the support of the profession, and gradually, year after year, made for itself a place among the best medical periodicals of this country. The Doctor will devote his entire attention to the practice of his profession in Savannah, Ga.

College of Physicians of Philadelphia.—At a stated meeting, held March 5, Dr. Richard H. Harte read "A Memoir of the Late Dr. John Asshurst, Jr." Dr. A. O. J. Kelly read a paper entitled "On Multiple Serositis—The Association of Chronic Obliterative Pericarditis with Ascites, with Particular Reference to the Pericarditic Pseudo-Cirrhosis of the Liver of Pick and the 'Iced Liver' (Zuckergussleber) of Curschmann."

Meeting of American Electro-Chemical Society.—The newly organized Electro-Chemical Society, which now numbers 294 members, will hold its first meeting at Philadelphia on April 3, 4 and 5.

Plague Mortality in India is still on the increase. The total for the week ending January 30 was 11,445, against 9,204 for the previous seven days. The epidemic is still very severe in Poona, but the weekly figures have not been published. The disease is spreading in Bengal and Calcutta, in the

Punjab, in Bombay City, in the Madras Presidency, and in the Northwest Provinces. It is anticipated that the next two or three months will show the highest mortality from plague that has occurred since its reappearance in epidemic form in India in 1896.

New Medical Faculty Buildings of the University of Toronto.—The $125,000 building which is being erected for the Medical Faculty and the Arts Department of Physiology will have its interior construction based on the unit system, the system of laboratory construction worked out by Professor Minot of Harvard and his colleagues, for the new medical buildings there.

Smallpox in Glasgow.—Smallpox is raging to a somewhat widespread extent in Glasgow, but the cases, up to the present, have been of a mild type. It is stated that some 10 to 20 per cent. of the inhabitants remain unvaccinated, and the Lord Provost has made an urgent appeal to the citizens to adopt vaccination.

Anti-Mosquito Campaign in West Africa.—Major Ronald, F.R.S., Lecturer in the Liverpool School of Tropical Medicine, sailed on February 22 for Freetown, Sierra Leone, to supervise the work which is being prosecuted against malaria and mosquitos in that region. The expedition, the fifth to be sent out by the Liverpool School of Tropical Medicine, is now under the direction of Dr. Logan Taylor.

Obituary Notes.—Dr. CHRISTIAN FENGER, one of the leading surgeons of Chicago, died on March 7 of pleuropneumonia. He was born in Copenhagen, Denmark, on November 3, 1840. At the outbreak of the Franco-German war he became surgeon in the Red Cross Ambulance Corps, and served through the war. From 1871 to 1874 he was at the Copenhagen City Hospital. He went to Egypt as a member of the Sanitary Council, and was appointed surgeon of Khalifa, district of Cairo. He removed to Chicago in 1877, where he had since lived. In 1878 he became a member of the attending staff of the Cook County Hospital, in 1880 curator of the Rush Medical College Museum, in 1884 professor of clinical surgery at the College of Physicians and Surgeons, in 1893 professor of clinical surgery at Chicago Medical College, and in 1899 he took the chair of clinical surgery in Rush Medical College. During his residence in Chicago he was surgeon at one time or another to the Cook County, Presbyterian, Tabitha, Norwegian, Passavant Memorial, Lutheran, German and German-American hospitals. On his sixtieth birthday, November 3, 1900, a banquet was given to him at which 500 physicians were present. He received many memorials and honors. The decoration of which he was the proudest was conferred upon him by King Christian of Denmark.

Dr. FRANCIS W. LEWIS died at Philadelphia on March 2, at the age of seventy-six years. He was graduated from Jefferson Medical College in 1846, and served as an army surgeon in a military hospital during the Civil War. He was identified with the Children's Hospital since its foundation, and was for many years its president.

Dr. GEORGE W. KING, who, since 1886, had been postmaster at King's Station, Saratoga County, and who was in his seventy-sixth year, died in Saratoga on March 7. He was an ex-president of the Eclectic Medical Society of the State of New York, and the Saratoga District Medical Society. He was one of the organizers of the first society of spiritualists.

Mr. WILLIAM MARTINDALE, one of the foremost British pharmacists, died recently at the age of sixty-one years. He had been president of the Pharmaceutical Society.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

DR. KENDALL FRANKS ON THE SOUTH-AFRICAN CAMPS—CANCER RESEARCH—ERASMUS WILSON LECTURES—DISCUSSIONS ON CANCER—ARSENIC IN HAIRS—SMALLPOX—THE LORDS AND THE CONSCIENTIOUS OBJECTOR.

LONDON, February 21.

THE Blue-book on the concentration camps in South Africa was issued on Monday and is full of medical interest. You will remember that, in consequence of the outcry raised against them, Dr. Kendall Franks was sent by the government to inspect and report upon them. The Blue-book gives an account of his inspection of the various camps, and proves that everything possible was done for the comfort of their occupants. Though certain people at home, and many on the continent, have condemned the camps in unmeasured terms, there are few who would do so in Africa, and Dr. Franks says that before indulging in denunciation they should see the camps themselves. Not only are the "rations ample . . . . but in all the camps there is a liberal supply of medical comforts." On this question it is important that the truth should be told. While reckless falsehoods have flooded the continental press, and produced uneasiness at home among credulous persons, it is shown that the Boer children in the camps have been all along faring far better than the thousands of children of the poorer class in England. The rations for children between five and ten years old include a quart bottle of milk *per diem*, and three pounds of meat per week. From two to five years, two bottles of milk *per diem*, and two pounds of meat per week for soup. Flour, vegetables, and butter are distributed on an equally liberal scale.

The ignorance and credulity of the children's parents have often been blamed as contributing to the mortality, and Dr. Franks mentions some curious notions. A nephew of ex-President Kruger wanted a cow-dung bath for his wife on account of rheumatic pains (a cleaner "cure" for this complaint is the tooth of a horse worn on a string around the neck). The fur of a cat was cut off, roasted, and applied to a child's chest for bronchitis. In another case a goat had been killed, eviscerated and a child put inside, with its head protruding through the opening, made by removing the breast-bone; then the doctor was sent for. The Boers rub the body with cabbage seeds and then sow them for jaundice. As the plants come up, the disease, they believe, fades. For toothache they cut the sufferer's finger and toe nails short, put the clippings into a bottle, with a lock of his hair and water, cork and bury the bottle. Other remedies are quoted, which savor equally of the dark ages, and reliance on which has probably contributed to the mortality, but the extremely dirty habits of the people must have been more to blame.

Dr. Franks found in one tent the "phenomenon" of clean, well-clothed, happy children, and found the cause in the mother, who was Scottish, a great-grandniece of the poet Burns.

The highest mortality was at the Mafeking camp, in October, when large numbers arrived, and there was a dearth of doctors, only two Germans being available for a time, and one of these could not speak Dutch or English, and those two had to look after 800 to 1200 persons for about a fortnight.

Cancer in various aspects has been much under discussion of late. The scheme for research, which I recently wrote about as being projected, has made a short step forward. On the recommendation of a committee, the two Royal colleges have appointed delegates to draw up a detailed scheme for investigating the causes, prevention, and treatment of the disease. The King has communicated an expression of "great interest in the prevention and treatment of cancer, and is glad that the Royal colleges (of physicians and surgeons) are taking up the question of cancer research, and hopes for important results from their action." Unfortunately, the millionaire to provide the funds has not yet put in his appearance.

Among important utterances on the disease, I may cite first that of Dr. Powell White in his Erasmus Wilson Lectures at the College of Surgeons on the 10th, 12th, and 14th of this month. He took for his subject the pathology of tumors, and, of course, had to deal with cancer. In his opinion the difference between simple and malignant tumors is found in the way in which they grow.

The growing area of a cell tumor consists of cells not forming a definite tissue. On the other hand, the tissues in a tissue tumor are of primary formation. The mode of growth, therefore, he thinks, accounts for the penetration of cell tumors into the surrounding structures, instead of merely displacing them, and for the cells finding their way into the lymphatics and bloodvessels.

The wasting and cachexia in malignant disease he attributes to the drain on the nutritive material, especially carbohydrate, caused by the rapidly-growing tumor.

Dr. White commented on the imperfect way in which ordinary text-books deal with the clinical features of malignant disease, and said much more information is required on the temperature, urine, blood, and the excretion of nitrogen.

In his second lecture, Dr. White considered the theories which are advanced as to the causation of tumors, and laid stress on the distinction between extrinsic and intrinsic causal factors. He has come to the conclusion that the essential cause cannot be an extrinsic irritant.

This conclusion is fatal to the parasitic theory, which has been prominent during the last eleven years; and he examined at length the views of Plimmer and Gaylord as the authors of the two best papers in support of the theory. He referred to the absence of any agreement among observers as to the nature of the cell inclusions, and as to which are and which are not parasitic. Finding the grounds on which the theory is based inadequate, he also says the theory itself cannot explain the phenomena of the disease. No special extrinsic cause can do so, but they can be explained on the view that the cells take on an independent mode of growth and behave as parasites themselves.

Mr. Plimmer's views thus traversed will be pretty well known to your readers. He restated them at the recent discussion at Liverpool, to which I have once or twice referred. There he showed lantern slides illustrating his "cell inclusions" as well as those organisms which he has isolated from cancer, and the epithelial overgrowth produced by inoculating them.

On the same occasion Mr. H. J. Stiles showed microphotographs in support of his opinion that these cell inclusions originated in degenerations and dropsical changes in the nuclei.

Mr. G. G. Hamilton also showed casts, drawings, and microscopical sections, and controverted some of Mr. Plimmer's views, especially that epithelium is an efficient protective from invasion, instancing the results of feeding animals with tuberculous material in opposition.

Sir Wm. Mitchell Banks, whose paper had given rise to the discussion, also exhibited lantern slides illustrating the development of cancer in breasts affected with chronic mastitis.

Other aspects of cancer have also been under discussion. The subject is always cropping up in some form. The aspect most prolific in suggestions is the treatment, but on this I will only say that with regard to inoperable cases Mr. Henry Morris communicated to the West London Society on the 7th inst. a paper, the tone of which was most pessimistic. His experience at the Middlesex Hospital is unfavorable to oophorectomy. He knew of no permanent benefit from the operation, either alone or supplemented by thyroid treatment. In no case which he had seen had the healing produced by *x*-rays been sound and permanent, and the cases published as "recovering" or "under process of cure" he considered had been reported prematurely, and would be found to retrogress. The rays produced the same sort of effects, though by a totally different process, as that produced in some cases by Chian turpentine. Mr. Morris gave a test of inoperable cases treated by these methods in the Middlesex Hospital.

Arsenic has been detected in the hair of a certain number of patients with beriberi. Major Ronald Ross says that Dr. Dixon Mann examined for him twenty specimens from Penang and found arsenic in six. It can generally be detected in arsenical poisoning at a certain period. In very recent cases it may not have reached the hair, and in later cases the hair may have been shed or cut. Samples should, therefore, be taken near the scalp, and the duration of the case inquired into. Dr. Ross thinks it probable that the Penang beriberi is really arsenical, especially as the people there work in factories, and are brought into contact with arsenic.

Smallpox continues its devious way. The variation in the numbers notified from day to day are not of importance, though the newspapers make much ado about every increase or decrease. That is well, however, as it draws the attention of the public to the necessity of prevention in spite of the absurd rumors continually put in circulation by the anti-vacs.

The number of cases now under treatment is 1245. There were seventy notifications yesterday, but on several days the number was half or less that.

In the House of Lords on Monday, Lord Newton moved the second reading of a bill to amend the Vaccination Act of 1898, by repealing the clause which created the conscientious objector. There was quite a lively little debate, the lords evidently feeling that the clause was a foolish one, but the Government was too enamored of its silly invention, and actually sent out a strong whip to secure the rejection of the bill, which was thrown out by fifty-two to thirty-two.

LETTER FROM BEYROUT.

(From Our Special Correspondent)

CLIMATE OF BEYROUT—HEALTH CONDITIONS—PREVAILING DISEASES—MYTHICAL PLAGUE CASES.

BEYROUT, January 25, 1902.

On this 25th of January we are passing from winter into summer. This may seem an anomaly, but from past experiences, we are sure of it; and those of us who have been born amidst the fogs and snows of our fatherland cry shame upon ourselves, in that we feel chilly at a temperature in which our grandfathers would have been putting on the flimsiest of dressing gowns. Nevertheless, it comes to pass that we are in the very depth of winter and are shivering, more or less, at a temperature of 58° F. in the shade, and by the chill that is upon us we know that summer is at hand. We have studied the problem from every attitude, and we can come to no other conclusion but that the swing of seasons with us is abnormal, not being fourfold as in ancient times, but resolving itself into two—no spring, no autumn; only a hybrid winter (of no climate whatever), and (to make up for it, perhaps) a summer beyond reproach. Reading lately that the sun wears himself out at the rate of half a mile of his diameter a year in giving light, heat and comfort to his dependents, we cannot but think that Beyrout, for at least nine months of the year, must be a favorite of his, as he gives with such an unsparing hand that there is a fear that he may wear himself out before his time. Against the sun we cannot rebel. He is too high above us and too far away, for the matter of that; but we do protest against this Lebanon of ours that, nearly always clad in ermine, leaves us withering here in russet garments from hot and dusty May to sweltering October, and even when our Christmas comes does not shake one snowflake upon us from his hoary locks. Those of us who are the more imaginative do forgive him, however, his monopoly of cool grandeur, in that even in the greater part of our hottest season we are cooled and comforted by the reflection from his icy brow. The underlying villages, too, cannot grumble, as over them he sometimes throws a fold of his snowy mantle.

We are thankful that our principal streets have been reclaimed and made anew, and that when very dusty (which they generally are) they are well watered—so full of dust and so fairly watered that copious, slippery, slimy mud is the result, and that this is never removed, but left to cake and dry and form dust again, we are by no means thankful to the authorities that will have it so. Anyway, there is an elementary assumption of a regeneration that bids well for the future. The lanes and alleys have lost, to a great extent, the flavor of the cesspool, and seem looking forward to a higher degree of thorough drainage. Premising that their cleansing is not a vicarious one (as there has been little or no rain until within a month ago), we are justified in expecting, at an early date, a consummation of cleansing that seemed very far away five years ago, referring more particularly to the holes and corners of our town.

Undoubtedly our past year—taking all its seasons rolled together—with one exception has been a most healthy one; and, speaking with the metaphor of the commercial world, the market in spores and germs has been dull. Typhoid has been in its manifestations spasmodic, intermittent and but sporadic at its best, lacking its usual energy and showing symptoms of decadence. Tuberculosis is always with us, thanks to the alternation of dust and mud, but, having no official statistics to go by, we assume that last year it was not so prevalent, for the reason that it was not so popular as heretofore. From a medical point of view, its market price has certainly gone down. There were many cases of measles, not rising to the dignity of an epidemic, and unaccompanied, as usual here, by the graver sequela of colder latitude. As all, from the highest to the lowest, in the land of the prophet have been educated up to the value of vaccination as a prophylactic, smallpox with us has been reduced to a minimum, and it seems probable that this place will shortly know it no more. Syria does not seem a fitting soil for the cultivation of the weeds of anti-vaccinationists.

The exception we alluded to above was in respect of dengue. In the summer it came upon us as a veritable epidemic storm. In the beginning of summer it commenced a campaign that lasted well into winter. "By many names men call it," and it has as many characteristics as its names are manifold. In the vernacular with us it is designated *Aboo Rikab;* that is to say, "the father of the knee," alluding, no doubt, to one of its earliest and most prominent symptoms. Making itself so generally known and killing nobody, with all its faults we come to look upon it almost as a personal friend. It destroys the popularity of the weather in ordinary greetings. "Good morning, fine day to-day," lapsed into "Good morning, how d'ye do? Have you had Aboo Rikab?"

After serving dengue off the premises, and when we were congratulating ourselves on a good healthy old year and the beginning of a good new one—we had spent just one week of the latter, indeed, in quiet security—on the 7th of January a cry went forth that plague was upon us. Some timid ones forthwith took up their beds and walked, taking shelter among the snows of Lebanon. The veterans of us who had heard the cry before, being doubtful, faced the danger and found it but a scare-crow after all.

It came about this way: "A man" (I translate from the story as told me) "a poor man and a groom came sick from Damascus, walking all the way in the snow and the rain and the cold, coming to Beyrout to seek help for his sickness. When he got to Beyrout he was sick nigh unto death and lay down in a khan (an open space for stabling beasts of burden, with a kind of inn accommodation attached), and, being very tired, fell asleep upon a heap of skins. So the Authority saw him and said, 'This man has been lying on a heap of skins that came from an affected port of Egypt; therefore this man is suffering from plague, and he must be disinfected and sent outside the city to "the Pines" (the inland quarantine quarters), there to be dealt with'; so they sent him, and he died to-day" (the story was related to us on the 9th). And then this unknown and sickly groom, wandering to Beyrout from Damascus (where, by the way, plague was less known than he was, for it was not there and then in existence), became famous, in that his name and circumstances were flashed to Constantinople and back, and all Beyrout was put "under quarantine" for forty-eight hours on his behalf. This segregation was repeatedly imposed upon us like a consequetive sentence until a rumor that the sick man had not travelled from Damascus to Beyrout, but had brought the plague from Bagdad, in company with two others, should be dealt with. As Bagdad was as innocent of plague as Damascus, we hardly see why the city on the Tigris should be amalgamated with the ancient city of Abana and Phaepae in throwing blame upon our Syrian port, and we think it unjust to the man, even with two comrades helping him, who carried a mythical disease from the Persian Gulf to the Mediterranean Sea, that he should die and be buried among us without as much as a bacteriological examination. This was the fact, nevertheless. And so plague entered upon the threshold of our New Year, and so it made its exit.

LETTER FROM CONSTANTINOPLE.

(From Our Special Correspondent.)

END OF PLAGUE AND QUARANTINE—WAR AGAINST RATS—INHERITANCE OF DIPLOMAS—OYSTERS AND TYPHOID FEVER—THE BRITISH SEAMAN'S HOSPITAL—OTHER HOSPITALS IN CONSTANTINOPLE—DEATH OF SPIRIDION MAVROYENNI PACHA.

CONSTANTINOPLE, January 31, 1901.

PLAGUE and quarantine are past occurrences. With the end of the year 1901 the former ceased, and the latter was gradually abolished so far as Constantinople was concerned, though it, of course, is still imposed against Egypt, where plague is, apparently, likely to be of frequent recurrence.

From January 17 to September 14, 1901, twenty cases of plague occurred in and around Constantinople, of which six ended fatally. A few more isolated cases were afterwards noted, though, really, all the cases may be considered as isolated occurrences. Thus far nothing has been forthcoming of the treatment adopted except that isolation was practised after proof of plague by bacteriological processes, and that serum was used. "Pestis Minor" the outbreak was considered—"Pestis Politica" the sarcastic named it.

The Health Delegates, after recovery from fatigues of plague and quarantine, directed their attention to the wholesale destruction of rats and mice, as the probable agents of conveying the infection of plague. The CO_2 process of Mons. P. Apery, a pharmaceutical chemist of repute in Constantinople, has been subjected to trials in presence of the European and native members of the Ottoman Sanitary Council. The experiments were successful, as might be expected, in asphyxiating the animals, but scarcely sufficient to demonstrate the utility of the process in disinfecting cargoes. Stronger evidence on this point comes from Marseilles, where the experiments have shown that cargoes may be exposed to the full action of the gas without damage, and at the same time kill the rats and mice, and, possibly, the fleas upon them. This process of Mons. Apery has been under consideration since the year 1899, and has received the approval of various learned sanitarians and bodies, until the Sanitary Department of Marseilles put it into practice, and reported favorably on the results. The International Congress of Hygiene, held at Ostend in 1901, adopted and recommended the process as the best for destroying rats in the holds of vessels without damaging the merchandise. Finally, on December 30, 1901, the Ottoman Sanitary Council, as stated above, subjected the process to trial, since which time they have promulgated most elaborate regulations for disinfecting cargoes and killing rats, but pass over Mons. Apery's process and recommend a proprietary mixture of various gases with sulphurous acid.

The School of Medicine has requested the municipal authorities to take back the diplomas of doctors, pharmacists, vaccinators and midwives who have died, so that other members of their families may not practice under cover of such diplomas, it having been discovered that this is a common practice.

The new Army Medical School at Haidar Pacha, from which so much is anticipated, has apparently come to a standstill. The stately building has not progressed for some months past, probably from want of money.

The Society of Medicine continues its regular meetings, and there have been some interesting cases of abdominal surgery discussed. A scare of typhoid fever from eating oysters brought Prof. Dr. Remlinger of the Bacteriological Institute to the front. On this highly important subject the Professor dilated in the bosom of the Society and in the daily press, and concluded that oysters should be eaten fresh, with lemon juice, in which scientific conclusion all are likely to agree.

A long-delayed project of rebuilding and enlarging the British Seaman's Hospital at Constantinople is again under consideration, and may become a reality. It is to be hoped that another white elephant, like the new hospital at Smyrna, may not result. The hospital craze exists here as much as in America and in Europe. Almost every nationality has its own hospital—Armenian, British, Austrian, French, German, Greek, Italian, Russian—and all attain a fairly high standard of professional skill and trained nursing. The native hospitals are, in most respects, admirable institutions. His Imperial Majesty, the Sultan, has always shown a deep interest in the development of medical science, and the "Hamadiah" hospital at Chiehli is a standing monument of his benevolence.

The death of His Excellency Spiridion Mavroyenni Pacha, chief physician to the Sultan, at the ripe age of eighty-three years, has removed a notable member of the medical profession. He was the dean of the medical body in Constantinople, and had a distinguished career. He entered the Turkish service in 1846; became physician to the Imperial Palace in 1859; Professor of Pathology, and chief physician to H. I. M. in 1877. He was a man of varied accomplishments, and was associated for good with nearly all the medical and literary movements in Turkey. The medical schools and Society of Medicine owe much to his skill and energy. He died in harness. The Greek literary "Syllogos," of which he was a founder, went into mourning for fifteen days as a mark of respect.

Up to the present time, February 13, there have been no further cases of plague reported in Constantinople. There is little doing in the medical world. From the doctor's point of view, the last few months have been distressingly healthy.

THE TYPHOID DEATH RATE.

To the Editor of the Medical Record:

SIR: As the typhoid death rate is generally taken as the criterion of purity of the water supply, it is well to inquire if it is worth as much as is usually supposed.

Death from typhoid, we all know, as in every other disease, depends on various things, such as the number sick, the intensity of the disease, the resistance of the patient, etc. Since other factors than the number sick enter into the death rate, it is evident that there can be no constant relation between the death rate and the purity of a water supply; if 10 per cent., or any other ratio, always died, such would be the case, but such is not the fact, for the differences between the number sick and the number who die are very great.

Take, for example, a case in which the death rate is only 1.4 per 10,000; all sanitarians would judge this to be a city supplied with fair drinking water. Now, compare this with another city where the death rate is 7.0 per 10,000; this city would be considered to be in poor sanitary condition, yet it is better than the first, for in the latter there were only 15 per 10,000 sick of typhoid, while in the former, with the lower death rate, there were 18.

A death rate of 2.5 per 10,000 is not so very bad, yet what significance does it have when one city with the same death rate has over nine times as many cases! It would be more rational to say that the treatment was better in the one city.

I know of one small city where there were only seven cases of typhoid fever per 10,000, and the death rate was 3.0 per 10,000; another city about the same size had only 6 cases per 10,000, but all died, making their death rate just twice that of the other city, though they had less cases.

In another instance worth calling attention to, there were two cities each with a death rate of 5. per 10,000, yet one had over twelve times as many cases as the other.

With such and even minor discrepancies, it must be evident that the death rate cannot have the same reliability as the sick rate. Why, then, not use the sick rate?

The rates here appended were taken and compiled from the health statistics of a number of cities, and illustrate the great differences which are likely to occur between the death rate and the sick rate.

Harvey B. Bashore, M.D.

West Fairview, Pa.

RATE PER 10,000.

Table I.

DEATH RATE	SICK RATE
1.4	18
1.4	3
1.0	1
1.2	5
1.6	8
1.0	6
1.4	7
1.3	4
1.0	9

Table II.

DEATH RATE	SICK RATE
2.5	38
2.2	17
2.0	10
2.5	4
2.5	10
2.4	6
2.0	9
2.2	10
2.5	29

Table III.

DEATH RATE	SICK RATE
3.0	10
3.0	20
3.0	35
3.0	10
3.3	32
3.0	25
3.0	7

Table IV.

DEATH RATE	SICK RATE
4.0	12
4.0	14
4.0	30
4.0	16
4.0	16

Table V.

DEATH RATE	SICK RATE
5.0	5
5.0	45
5.0	50
5.0	64
5.0	40

Table VI.

DEATH RATE	SICK RATE
6.0	46
6.0	26
6.0	6
6.0	46
7.0	66
7.0	15

Table VII.

DEATH RATE	SICK RATE
9.0	50
10.0	30
10.0	100
10.0	36

Table VIII.

DEATH RATE	SICK RATE
12.0	60
12.0	66
12.0	50

Table IX.

DEATH RATE	SICK RATE
18.0	200
18.0	42

Remote Results of the Bloodless Method of Reduction in Congenital Luxation of the Hip Joint.—M. Redard gives the results in fifty cases, in the greater number of which operation was performed from two to four years ago. No grave sequilæ were noted in any case. Functional results were excellent in eight cases of unilateral luxation, the patients walking with ease and without the slightest limp. In thirty cases, walking was very satisfactory, only the slightest limp being perceptible. In two cases prolonged exercise brought great fatigue. In two cases of bilateral luxation, walking was normal, while in three there was a little stiffness and slightly swinging gait. The author concludes that this method of reduction, in the majority of cases, produces absolutely satisfactory results, and should always be given the preference in children under seven years of age.—*Archivio di Ortopedia.*

Progress of Medical Science.

The Boston Medical and Surgical Journal, March 6, 1902.

Report of Two Cases Operated on for Deformity of the Nose.—J. Payson Clark describes the operation by means of which he removed from a man's nose an overgrowth of the triangular cartilage of the septum. Photographs show the great improvement obtained. The second case was one of old displacement of the nasal bones to the left, and an exaggerated Roman nose. The right nasal bone was found to be extremely thickened, and it was not possible to separate the nasal bones from the frontal at the suture. Moreover, owing to the condition of the skin, the support could not be kept on as long as seemed desirable, but, in spite of all these obstacles, a decided improvement in the shape of the nose resulted from the operation, and breathing through the right nostril, which previously was impeded, is now free.

Contribution to the Study of Spinal Fracture, with Special Reference to the Question of Operative Interference.—G. L. Walton concludes that there are no symptoms which establish (otherwise than through their persistence) irremediable crush of the cord. Total relaxed paralysis, anæsthesia of abrupt demarcation, total loss of reflexes, retention, priapism, and tympanites point to complete and incurable transverse lesion, but the onset of such symptoms does not preclude a certain degree, at least, of restoration of function. Operation, while not certain to cure, is the only resource, and should take place not sooner than a few hours after, nor later than a few days after, the injury. We have no infallible guide to the extent of the lesion. The operation, at the worst, does not materially endanger life, nor affect unfavorably the course of the case, and may, at least, reveal the lesion and lessen the pain; it may sometimes save a patient from death or from helpless invalidism of the most distressing character. Instead of selecting the occasional case for operation, we should rather select the occasional case in which it is contraindicated (great displacement of vertebræ of a high and rising temperature, profound shock, or a moribund condition). The dura should be opened freely; it need not be sutured, and drainage is not necessary.

Journal of the American Medical Association, March 8, 1902.

Symphysiotomy.—E. A. Ayres reports thirteen cases without a death from the operation. Possible objections he enumerates as wounds from the vulva, opening of a joint, hemorrhage, perisymphysial lacerations during delivery, injuries to the sacro-iliac joints, and failure of joint union and subsequent crippling. He states that the following are the requirements necessary to secure the safest and best results: (1) Constant apposition of the pubic bones with even coaptation, but without compression; (2) Ability of the patient to empty the bowels and bladder without disturbance of the pubic joint, and ease of cleansing the genital and anal regions; (3) Freedom of restraint of the body above the pelvis, and of the limbs, whereby lactation can be performed and the great discomfort of prolonged restraint avoided; (4) The avoidance of bedsores. He would consider symphysiotomy justifiable in certain malpresentations (impacted occipito-posterior and chin presentations), and also where there is obstructed delivery due to pelvic incapacity. The operation should give place to premature delivery when the forecast of impossible delivery without major operation is sure, and the patient prefers it, or the physician is not accustomed to major operative work. It should give place to Cæsarean section in cases in which there are obstructions to vaginal delivery by tumors, exostoses, cancer and pelvic contractions greater than the rule given above allows for symphysiotomy.

The Indications for Myomectomy in Young Married Women, with a Report of Four Cases of Strangulation of Fibroids During Puerperal Involution.—Edward Reynolds enumerates the diagnostic points of this condition as follows: (1) The appearance in the early part of the puerperium of severe, intermittent, paroxysmal pains, bearing close resemblance to labor pains, and referred to a definite spot at which there is acute tenderness; (2) The appearance, after a few hours of these pains, of the symptoms of a pelvic peritonitis, and often in an alarming degree; (3) The detection on physical examination of an irregularity in the uterine wall at the tender spot, not necessarily of large size, and possibly to be made out only under anæsthesia. The principles of treatment should be: (1) The control of the pain by morphia, and if this is not promptly successful, by brief but profound anæsthesia, which should be succeeded by relief, and should be repeated whenever the pain reappears; (2) If the preceding measures fail, and the patient is still in good operable condition, an immediate myomectomy is probably the best treatment; (3) If the condition has remained undiagnosticated until the peritoneal symptoms are extreme and an abdominal operation will probably involve a high mortality risk, and if in this case the tumor is in any way accessible from below, its free puncture and the drainage of the contained serum may probably be relied upon to terminate the attack, and permit a safe removal of the tumor at a later date, should that be necessary.

The Rôle of Certain Non-Granular and Granular Somatic Cells in Infection.—Under this heading H. F. Harris includes plasma cells, endothelial cells, eosinophile cells, and mast cells. The first variety are to be regarded as always indicating the beginning formation of cicatricial tissue. It is probable that they are the real fibro-blasts, the collagenous tissue being formed by a process of secretion around their periphery. After a certain amount of fibrous tissue has been formed around them, they seem to be what are commonly, but erroneously, called fibroblasts. As cicatricial tissue develops, these cells undergo retrogressive changes, break up, and the resulting débris is carried away by means of the lymphatics or by the phagocytes. This, however, does not always seem to be the fate of these cells, since a certain number of them become branched, their protoplasm loses its basophilic affinities, and the cells remain in the parts as fixed connective-tissue cells. Concerning the second variety, the author expresses complete ignorance. The third variety are generally regarded as being old polymorphonuclear leucocytes. No significance attaches to their presence in infections. Of the last variety there are four kinds—the mast cells of Ehrlich, of the lymphatics, of the blood and the muscular-fiber mast cell. Inasmuch as these cells have a tendency to disappear in acute inflammatory conditions, their absence under these circumstances is of more or less significance, but in chronic processes they not infrequently considerably increase in number, and their presence under these circumstances may be suggestive of the character of the condition. This peculiarity seems to be of especial importance in differentiating so-called inflammatory conditions from sarcoma.

New York Medical Journal, March 8, 1902.

The Sideroscope.—This article by T. R. Pooley is written especially to show that the author was the first to employ the magnetic needle for the purpose of determining the presence of iron or steel in the eye. He details his initial experiments and the various stages of elaboration of the instrument now used for the purpose and called the Sideroscope.

The Severing of the Vasa Deferentia and Its Relation to the Neuropsychopathic Constitution.—Commenting on the fact that castration has been objected to, although it, of course, accomplishes the desired object of rendering imbeciles sterile, H. C. Sharp advocates the severing of the vasa deferentia as accomplishing the same result without the depressing subjective effect coming from the knowledge of a loss of sexual power. He states that after having personally severed the vasa deferentia in forty-two patients, whose ages ranged from seventeen to twenty-five, he is prepared to speak most favorably of the operation, and to state positively that it does not impair the sexual power of those operated upon, that they improve mentally and physically, in that they increase in flesh, feel that they are stronger, sleep better, their memory improves, the will becomes stronger, and, that while prior to the operation they made no advance in school, their advance is now fairly satisfactory. He advocates the method of operation in which the vasa are severed in the scrotal region.

Nævus Verrucosus Associated with Certain Anomalies of Pigment.—H. Taylor reports the case of a boy of nineteen years without any history of tubercle or syphilis. Only the right side of the body was affected, and the condition was apparently congenital. Over the right pectoral region there was a dense crop of pigmented, non-hairy warts, extending into the axilla, and—though somewhat thinning out—half way down the inner aspect of the right arm. At about the level of the nipples the warts reached the median line of the body, then, gradually disappearing, were replaced by a line of reddish-brown pigment continued down to the umbilicus, where again a few growths appeared.

From the umbilicus to the pubes another faint brown line could be traced, unaccompanied by any warts, but on the right side of the scrotum and penis some could be found, and with them a few reddish scars, the site of previous ones which, the patient stated, had "dropped off." Similar scars could be seen on the right side of the forehead, nose, and chin, the result of treatment by the actual cautery. Down the inner side of the right leg, from the groin to the inner malleolus, was another faint line of pigment which, becoming more marked behind the ankle, was apparently merged into five or six oval-shaped, raised, colorless patches of a leathery consistence, placed along the inner edge of the right foot.

The author considers, as the noteworthy points of the case, the marked manner in which the lesions were rigorously limited to the right side of the patient, their distribution in the track of certain cutaneous nerves, the alteration of deeply-pigmented papillomata, with merely the presence of pigment in the skin, and finally the merging of this pigmented condition into decolorized patches.

American Medicine, March 8, 1902.

Proteosuria.—H. O. Mosenthal and William J. Gies believe, from their experiments with Freund's method for the detection of proteose, that it is not a differential process, and that it cannot be safely applied to the urine or feces as a peptone test. They prove that peptones, proteoses, and gelatins in urine and feces may each give positive results with it. They indicate, also, that sero-mucoid in the urine might affect the final reaction. Improved methods of detecting proteose and peptone in urine in the presence of each other are described.

Tuberculous Pericarditis, with Effusion; Repeated Tappings; Bacilli in the Exudate; Recovery.—Florence R. Sabin reports the case of a boy, aged twenty, who was admitted to the hospital complaining of pain over the heart. Gradually the signs of pericardial effusion developed. Still later, the effusion had increased till it was considerable in amount, as indicated by the following signs: The apex impulse was no longer visible; there was distinct bulging of the precordium; there were signs of compression of the left lung; namely, flat tympany in the left axilla, though not at the back. During the history of the case frequent tappings were made, and proved of great value. Tubercle bacilli were found in the pericardial exudate; and at the fifth tapping a differential count of the leucocytes of the exudate was made, and of 1,000 counted, 98.5 per cent. were small and 1.3 per cent. were large mononuclear forms, while only 2 per cent. were polynuclear forms. This ratio was constant.

Concerning the Hypnotic Action of Apomorphin Hydrochlorate in Alcoholism.—Warren Coleman and John Metcalfe Polk conclude that: (1) To obtain a hypnotic action with apomorphin it should be given hypodermically; (2) The dose cannot be fixed. It is well to begin with a small dose—1-30 gr. or less—and to repeat this, or give a slightly larger dose, within a short time. Further doses should not be given after vomiting occurs, until several hours have passed; (3) Doses repeated in two or three hours have but little beneficial effect; (4) The administration of apomorphin should not be repeated in patients who are weak; (5) The duration of the hypnotic action is only a few hours, and when the patient awakes his condition is practically unchanged, except in "ordinary drunks;" (6) The best results are obtained from apomorphin when it is followed in two or three hours by some recognized hypnotic, as bromid, chloral, paraldehyd, etc.; (7) Solutions of apomorphin are unstable and should be freshly made. Old solutions should never be used; (8) Apomorphin may be employed as a hypnotic in selected cases of alcoholism. The best results in the experience of the writers were obtained in "ordinary drunks" and in cases verging on delirium tremens. But in some of these cases the drug had no effect whatever; (9) The administration of apomorphin to patients in delirium tremens is without beneficial result, and may even be attended with danger from its depressing action. The writers have given, in the main, the results obtained with apomorphin in 300 patients presenting alcoholism, who have been under their care.

Medical News, March 8, 1902.

One Way to Fight Contagion.—Charles V. Chapin gives most valuable suggestions about teaching cleanliness to children. Teach them not to spit. To spit on a slate, floor, or sidewalk, is an abomination. Not to put the fingers in the mouth. Not to pick the nose. Not to wet the fingers with saliva in turning the leaves of books. Not to put pencils into the mouth or moisten them with the lips. Not to put money into the mouth. Not to put pins into the mouth. Not to put anything into the mouth except food and drink. Not to swap apple cores, candy, whistles or anything that is habitually put into the mouth. Teach them to wash the hands and face often. Teach them to turn the face aside when coughing and sneezing. Children should be taught that their bodies are their own private possessions and that personal cleanliness is a duty.

Somnolence and Loss of Memory Resulting from Cholesteatoma of the Middle Ear.—Francis R. Packard reports this case. His patient was a man twenty-three years old, who for upwards of twelve years had had a discharge of foul-smelling pus from the left ear. For the last year he had noticed that his memory was failing, and that he was subject to attacks of intense sleepiness, alternating with occasional headaches. At the operation, that was undertaken a few days after, he was referred to the author, the mastoid was opened, and there was removed a great quantity of dead bone in immediate proximity to the middle-ear cavity, with huge cholesteatomatous masses in the interior of the mastoid process. The patient made an uninterrupted recovery, and after the operation had absolutely no return of headache or of somnolence. The writer believes that the cerebral symptoms in this case were the result of at least a congestion of the meninges and possibly of a slight recurrent meningitis.

Urticaria of the Upper Respiratory Tract.—Lewis S. Somers states that it is difficult to explain why the mucosa is not involved more frequently in urticaria. This is probably due to the absence of irritation of the mucosa such as is produced on the dermal surface by the clothing and unwarmed air. Still there must be some more subtle factor which exerts its prophylactic action in those cases in which the derma alone is affected. He reports the case of a girl of eighteen in whom urticaria appeared simultaneously on the dermal and mucous surfaces, and which was due to eating almonds. In this attack, there was great dyspnœa, inspiratory efforts were short and feeble, the face was cyanosed, there was supra-sternal retraction, and the mouth was widely open in the effort to obtain air. The face was unrecognizable from the urticarial wheals which covered it. There was great physical prostration and burning and itching of the whole body. The tongue was much swollen. The voice was almost aphonic. The uvula was lobulated, due to two huge wheals, and the mucous membrane of the mouth, pharynx, epiglottis, and the ary-epiglottic folds, as far as could be seen, were swollen. The oro-pharynx was sprayed with a solution of cocaine, and, as the swelling subsided, the larynx was then seen to be extensively involved, but there was apparently no eruption below the false cords. The patient was given small pieces of ice in the mouth, a dilute carbolic wash was used on the dermal surface, and the bowels were freely moved by high injections, followed later by a large dose of salts. The cocaine and ice rapidly reduced the swelling of the respiratory tract, and within an hour the mucous membrane had resumed its normal appearance. There was nasal stenosis from the presence of wheals, but this also subsided. During the height of the attack there was apparently complete deafness, due to the occlusion of the tympanic cavity and Eustachian tubes by wheals. The predisposing cause as regards the liability to attack of the respiratory tract is apparently unknown. No difficulty should be experienced in recognizing urticaria of the upper respiratory tract when the lesions are also present upon the cutaneous surface, and it is only in cases where they are limited to the mucosa that the diagnosis will present any difficulty.

Philadelphia Medical Journal, March 8, 1902.

The Identification of the Colon Bacillus by Reactions Produced in Culture Media Containing Neutral Red—Observations on Reactions of Other Bacteria on the Same Media.—Randle C. Rosenberger concludes: (1) That, while not affording a specific reaction in the case of the bacillus coli communis, neutral red agar should be classed as a valuable differentiating medium; (2) The typhoid bacillus, while it does not cause a fading of the color of the medium, never gives rise to the fluorescence noticed in some cultures of the bacillus coli communis; (3) Further, the test medium should not be depended upon as the only differentiating one in the examination of water, as several very common bacteria found in the water give the same reaction.

An Outbreak of Chickenpox Among Children Convalescent from Smallpox, with Remarks upon the Relationship of These Two Diseases.—J. F. Schamberg reports this epidemic. A child suffering from chickenpox was sent to the smallpox hospital as the result of incorrect diagnosis. The child was vaccinated, and did not contract smallpox, but chickenpox remained in the children's ward for three months. The attacks were in most cases mild. The chickenpox efflorescence appeared in the majority of the patients from the twentieth to the thirty-fifth days of their smallpox eruption. Most of these children did not enter the hospital till the third or fourth day of the smallpox eruption; so it will be seen that many of them did not contract chickenpox until about a month after their exposure. Most of these patients received the chickenpox infection during the desiccation stage of smallpox, or at about the end of two weeks of the eruption of smallpox. Although certain acute exanthemata may exist simultaneously in the same subject, it is far more common for the second infection to develop during the convalescence from the first. Varicella and variola are, as a rule, easily distinguishable, but, they may, in rare cases, closely resemble each other. They are, however, totally different diseases.

The Lancet, March 1, 1902.

Certain Diseases of the Blood-vessels.—In the first Lettsomian Lecture, A. Pearce Gould considers varicose veins, their nature and importance and the value of Trendelenburg's operation. The author regards the condition as one of venous overgrowth, a superabundant development of venous tissue. His objections to the usually accepted theory of obstruction as a cause of the condition are, the age at which varices are first discovered, the general good condition of the tissues of varicose subjects, the conspicuous absence in cases of varix of the usual symptoms and consequences of venous obstruction, the result of excision of varicose veins and also of ligature of the main superficial vein into which they empty their contents, the influence of pregnancy and the matter of sex. Positive arguments in favor of the theory of causation accepted by the author are: (1) The occurrence of cases in which we have a combination of undoubted venous nævus and varix; (2) The capricious irregular distribution of varices; (3) The early age at which varix usually develops; (4) The fact that varicose veins seem to be distinctly hereditary; (5) The striking harmlessness of the condition in the majority of cases, and (6) The minute structure of a varicose vein. Several operative cases are narrated illustrating the value of the Trendelenburg position for operations.

Hypostatic Albuminuria of Splenic Origin.—H. D. Rolleston calls attention to the fact that in some patients with considerable splenic enlargement rest in bed or in the recumbent position may be accompanied by albuminuria, and that the albumin may disappear from the urine when the patient assumes the erect position. While the albuminuria is probably due to the mechanical pressure of the spleen on the left renal vein in the recumbent posture, the occurrence of this intermittent or hypostatic albuminuria is very far from being constant in cases of splenic enlargement. In this it resembles albuminuria from chronic venous engorgement induced in other ways, as, for example, in the backward pressure of mitral disease. It does not depend on the size of the spleen, for hypostatic albuminuria may be, and, indeed, usually is, absent when the spleen is very large, and may be present where the spleen is relatively smaller. It is possible that its occurrence or absence may depend on some difference, such as elongation, in the condition of the suspensory peritoneal ligaments of the spleen, which thus determine or prevent direct pressure on the left renal vein. On this point there is as yet no anatomical evidence. It is also conceivable that the appearance of albuminuria is dependent on an underlying want of vitality or nutrition in the kidney, which, though not sufficiently marked to induce albuminuria under ordinary conditions, does so when chronic venous engorgement is superadded. This is, to some extent, supported by the observation that in one case albuminuria disappeared from the night urine after the patient had been some time in hospital, and had somewhat improved under treatment; subsequently after a slight attack of influenza the night urine again contained albumin.

The Anatomy, Physiology, and Pathology of the Imperfectly-Descended Testis.—In the Hunterian Lectures this subject is considered by W. M. Eccles, who enumerates the causes of the condition as follows: (1) Conditions associated with the mesorchium: (*a*) The mesorchium may be too long, the testis would, therefore, probably hang too freely in the abdominal cavity, and would thus be prevented from engaging the ostium of the processes vaginalis; (*b*) adhesions between the peritoneum forming the mesorchium and the adjacent portion of the serous membrane, generally the outcome of intrauterine fœtal peritonitis; and abnormal persistence of the plica vascularis; (2) Conditions associated with the testis and its component parts: (*a*) the spermatic vessels may be too short; (*b*) the vas deferens may be of insufficient length; (*c*) the epididymis may be abnormal in size; (*d*) there may be a fusion of the two testes—synorchism; and (*e*) certain forms of hermaphroditism; (3) Conditions associated with the gubernaculum testis: (*a*) absence of the upper normal attachments of the gubernaculum; (*b*) deficiency of its muscular fibers; and (*c*) deficiency or absence of its scrotal attachments; (4) Conditions associated with the cremaster: (*a*) retraction of the testis after it has descended to its usual habitat in the scrotum; and (*b*) want of action of the internal fibers of the cremaster before the testis has reached the inguinal canal; (5) Conditions associated with the route along which the testis has to pass: (*a*) ill-development of the inguinal canal; (*b*) ill-development of the superficial abdominal ring; and (*c*) ill-development of one-half of the scrotum; (6) Other conditions, such as the wearing of a truss preventing the onward passage of the organ into the scrotum. In some cases the body of the testis may be retained in the canal, while the epididymis and vas pass into the scrotum.

Physiologically, we may have one of the following conditions: (1) Arrest of one testis, with complete descent and development of the opposite gland, only very rarely associated with any deficiency in bodily growth; (2) Arrest of both testes, when they are ill-developed, usually accompanied by some more or less pronounced want of development of the body as a whole; (3) Arrest of both testes, but good development of both glands, but rarely followed by, or connected with, imperfect growth of the body; (4) Arrest of both testes with want of development of only one gland not necessarily accompanied by a diminution of bodily growth.

British Medical Journal, March 1, 1902.

Remarks on Congenital Cysts of the Tongue.—John Ward Cousins states that congenital cysts of the tongue are not a common class of tumors. They generally occur in the middle line between the genio-hyo-glossus muscles, or between the genio-hyo-glossus and the mylo-hyoid. Sometimes they remain unchanged for many years. Their contents consist of soft sebaceous matter, and occasionally they contain also hair and solid masses of true dental tissue. The cyst wall is lined with squamous epithelium, and is of delicate structure and easily torn, but it is occasionally thick and fibrous. These tumors do not fluctuate, but feel elastic and tense on palpation. They are generally observed in young adults, and their existence is often overlooked during infancy and early life. They are painless and increase with the development of the individual. Irritation is apt to develop inflammatory changes in them. Congenital cysts have their origin in the accidental displacement of some epithelial structure.

Treatment of a Case of Scirrhus Recurrent in Five Years in a Patient Aged Ninety-three; Improvement.—E. A. Peters reports this case. The original growth was said to have been removed with the left breast thirteen years before. The recurrence had been noticed by the patient eight years later. At the commencement of the Röntgen treatment, the growth measured three by two and three-quarter inches. It had a well-raised margin, covered by thin red epidermis, while the center was occupied by an irregular ulcer. Large tender glands could be felt at the edge of the lesser pectoral muscle. Some of the surrounding veins were distended, and there was pain of the extensor surface of the forearm and middle digit. A ten-inch coil was employed, to give a parallel discharge, four to seven inches in length, with Watson's veil break worked at maximum speed. A "penetrator" tube of medium hardness was used throughout; it gave primrose-green iridescence with no intrapolar flow of violet light. The tube glowed even when discharges were passing across an interval of only two inches on the coil. The exposures were made two or three times a week for ten to twenty minutes; the distance of the tube from the skin varied from two to four inches. The improvement was rapid and marked; the discharge and pain had decreased to a minimum. But, unfortunately, the patient developed croupous pneumonia and died. Only ten applications had been made.

A Clinical Lecture on Feeding in Gastric Ulcer.—Lauder Brunton declares that a gastric ulcer must not be irritated by anything that will do harm to it, either mechanically or chemically. Amongst the things that injure mechanically are hard, indigestible things that really play the part of sandpaper. For example, seeds may be considered absolutely indigestible. Fish bones may sometimes give rise to great pain and danger. Cellulose, which is found in various vegetables, such as cabbage, and in the form of fruit skins, is quite indigestible in the stomach. Strings are found in meat, and it is upon the less or greater size of the strings of meat that their digestibility or indigestibility depends. Anything hard, that is likely to plug the pylorus, tends to increase the acidity of the stomach, which in cases of gastric ulcer is generally over the normal, while it should rather be diminished. Chicken, then, is better than mutton, and mutton better than beef in this respect. Milk sometimes comes under the head of stringy food. Lime water helps to prevent the stringing of milk, as does also the process of peptonizing it. Mastication will do much for these patients. In cases of gastric ulcer begin by giving the patient rest in bed, with feeding by the rectum a few days, then careful feeding by the mouth while rectal feeding is continued. The first food given is generally a small quantity of milk, and a tablespoonful of milk with the same quantity of lime water every two hours. The quantity of the milk may be gradually increased, while that of the lime water is diminished for a few days. Then custard may be tried, and pounded fish, followed by pounded chicken. Chocolate may also be given. When dealing with starchy foods, they must be made into a paste with cold water first, while hot water is added afterward. Stale bread is far more digestible than fresh bread.

Deutsche medicinische Wochenschrift, February 13, 1902.

Death from Paralysis of the Heart, Resulting from Chloroform Narcosis.—L. Laqueur reports a death, at the beginning of chloroform anæsthesia, due, it seems certain, to the paralyzing effect of the drug upon the heart. The chloroform used was of faultless purity and was carefully administered, drop by drop, through an Esmarch inhaler, a sufficient amount of air being admitted. At autopsy there was found the following series of pathological changes: Enlargement of the thymus gland, deep and superficial glands and spleen. No other significant alterations were found, although the bronchial glands showed a small caseous deposit. The author reviews the literature of this subject, and finds that many sudden deaths during chloroform narcosis have occurred in patients who on autopsy showed a similar series of pathological changes. Especially is this true with respect to the enlargement of the thymus, deep and superficial cervical glands and tonsils, and he regards such patients as especially bad subjects for the administration of chloroform. It is generally difficult to accurately diagnosticate enlargement of the thymus during life, although occasionally this can be done, as has been demonstrated by Daut and Biedert. In view of this fact, great hesitation should be observed in advising the use of chloroform anæthesia in persons who show hypertrophy of the deep and superficial cervical glands and tonsils, whether or no such persons possess an enlarged spleen. A careful and detailed examination of these structures should be made in every case in which chloroform administration is proposed.

Infection and Auto-infection.—A. Wassermann advances some new ideas with respect to the nature of infection and auto-infection. In order that infection exist it is necessary for pathogenic microorganisms to gain admittance into the body and multiply therein. The human body, under certain conditions, is provided with means of protection against this infection, and there are present in the blood serum substances which are able to kill infecting bacteria in large number. Such death is brought about by the combined action of two substances, the so-called immune body and complement. The first of these substances is stable and not easily destroyed, while the second is unstable and very easily destroyed. Since the action of the complement is to bind the immune body to the infecting microorganism and thus cause its death, it is evident that a given bacterial immunity is largely due to the amount of complement present in the given serum. Investigation has shown that the blood in certain portions of the body contains more of the complement than it does in other portions. This may occur normally or under pathological conditions. Furthermore, a reduction in toto of the quantity of complement present in the body may be produced by the removal of the liver, chronic lesions of various internal organs and suppuration. Recent observations have shown that in many infectious diseases the site of production of these protective substances is the bone marrow, and also that in numerous instances the infecting bacteria must gain admittance into the bone marrow before the protective reaction is set up. Oftentimes these organisms remain alive in the bone marrow long after the disease has disappeared, but are kept from multiplying by the power of the protective substances there present. If now any cause, such as traumatism, becomes operative in reducing the amount of protective substances in such a location, the bacteria remaining there become active, and local disturbances, such as periostitis, arise. In this manner is to be explained the etiology of many hitherto unexplainable bone lesions.

Berliner klinische Wochenschrift, February 17, 1902.

Plastic Nasal Surgery.—Fritz König communicates a new plastic surgical method for use in correcting defects of the alæ nasi, brought about principally through the loss of tissue as a sequel of lupus. The common practice has been to transplant cutaneous tissue from the neighboring regions, as the cheek or upper lip. This, unfortunately, is only the correction of one deformity by the production of another, as an unsightly scar is left at the place whence the transplanted tissue has been removed. Furthermore, in these defects of the alæ nasi, the cartilage is involved in the loss of tissue, and such cannot be satisfactorily replaced by a simple cutaneous structure. In order to obviate these disadvantages König proposes to use a portion of the concha auris for transplantation purposes. This portion he takes in its entirety from the superior and posterior region of the external ear which, if desired, can be subsequently covered by the hair, and the deformity (if any) arising thus be concealed from view. On account of the shrinking of the tissue during transplantation a slightly larger portion than is necessary to repair the nasal defect is taken. This is properly adjusted to the free margins of the nasal deformity. Experience has shown that this method gives more satisfactory and permanent results than the older procedures The idea of transplanting cartilage from one region of the body to another is not new, as it has been recommended and employed by other authors. A case in illustration of the above-described operation is submitted by the author.

Fracture of the Humerus by Muscular Contraction.—Milbradt reports an interesting case of this rare accident. The patient was a powerful man in the best of health, and had never before experienced a fracture in any bone. He indulged in a contest of strength, which consisted in placing the elbow flexed at right angles upon a table, the hand being directed upwards. His opponent placed his arm in opposition in a similar position and the corresponding hands of the combatants were clasped. Each endeavored at a given signal to forcibly abduct his opponent's forearm. At the second trial something gave way in the patient's arm, and great pain therein immediately followed. Examination showed that the humerus had been fractured about a hand's breadth above the elbow joint. After thoroughly examining into the conditions present Milbradt concludes that this accident was due to a powerful muscular contraction of the brachialis anticus. A picture is added which demonstrates the nature of the contest indulged in.

Plastic Tendon Surgery.—Richard reviews the technic of plastic tendon surgery, and is very enthusiastic over the results thereby obtained. Such operations are of special utility in correcting the deformities and restoring the functions of paralyzed limbs resulting from hemiplegia, Little's disease, and the spinal and cerebral paralysis of children. Good results are also obtained in congenital clubfoot and recurrent flexion contractures of the knee joint. He reports a case of deformity and partial loss of function of the hand and fingers which particularly affected the thumb and index finger, and rendered all accurate manipulation of the hand and fingers impossible. In this case by uniting the extensor longus tendon of the thumb with the flexor longus tendon of the index finger a partial restoration of function was obtained. An interesting fact with regard to these tendon operations, so far as recovery of function is concerned, is that the desired result is very often not obtained until a considerable period of time after the operation has elapsed.

Münchener medicinische Wochenschrift, February 18, 1902.

Treatment of Phimosis.—F. Wenzel says that many cases of phimosis may be successfully treated without the employment of operative procedures. Especially is this the case in the newborn and in boys under four years of age. In such instances he at first dilates the contracted orifice of the foreskin with a small sound, and then introduces a suitable forceps, and, by forcibly separating its blades, carries dilatation still further. This should be repeated in several directions, and the adhesions between the foreskin and the glans broken down. By such methods one is able to dilate the contracted orifice sufficiently to strip the glans. This is then carefully washed with an antiseptic solution and covered with an antiseptic powder, which should be repeated after every urination. By repeating these dilatations two to four times, at intervals, of from eight to ten days, a permanent satisfactory result is obtained. When operation is necessary the so-called oval incision of Witzel is to be strongly recommended as preferable to circular circumcision or dorsal incision. By this method the dorsal surface of the glans-penis and urethral orifice are freed, and a much more sightly result obtained than by the old methods. The operation may be conducted under cocain anæsthesia in adults. In patients from one to fourteen years of age general anæsthesia is preferable. In infants no anæsthesia is required.

Acute Spinal Osteomyelitis.—Alfred Schonwerth thinks that this disease is not as uncommon as would appear from a review of the literature which records only forty-one cases. As evidence of this opinion, he reports the following case, in which a correct diagnosis was only reached post mortem: The patient was a healthy man, twenty-seven years of age, who gave a good personal and family history. He was suddenly seized with spinal pains of moderate severity, unaccompanied by chills or fever. These pains rapidly increased in severity, and within twenty-four hours bodily movements, especially bending of the spine, became very painful. Constitutional symptoms appeared and the temperature rose to 38.9° C. Examination showed the presence of a small furuncle on the dorsal surface of the right hand, which, however, caused the patient no inconvenience. The spinous processes of the twelfth dorsal and first lumbar vertebræ were very tender upon pressure. Pain which radiated backwards was elicited by pressure upon the anterior extremity of the left lower rib. Posteriorly to the left of the lumbar region there was a circumscribed tender region. All the symptoms increased, a probable diagnosis of abscess of the left kidney was made, and an operation undertaken therefore. Upon cutting down it was found that no abscess was present as supposed. The wound was packed with gauze and operative measures were suspended. Following this the pain and general condition markedly improved for a time, and the tenderness on pressure in the regions above noted decreased. Indeed, no pain was thereafter produced by pressure upon the anterior extremity of the left lower rib. This improvement was, however, only temporary, and the patient rapidly became worse, and died with the characteristic symptoms of general sepsis, which was the clinical diagnosis made at death. On autopsy evidences of osteomyelitis were found in the first lumbar vertebra at the junction of the left spinous process and body. None of the other vertebræ were affected. From the purulent exudation at this point pure cultures of the staphylococcus pyogenes aureus were obtained. This microorganism was also cultivated from the blood. The author believes that the origin of the osteomyelitis is to be traced to the furuncle which was present on the hand.

Hypophrenic Pain and Neurosis of the Cœliac Plexus.—F. A. Hoffmann designates as hypophrenic those pains which have their origin beneath the diaphragm and which may or may not radiate in various directions. Such pains are to be divided into two classes—those which occur only as the result of external pressure and those which occur spontaneously and without assignable cause. In our present knowledge the first class is not of any considerable importance from a diagnostic standpoint, since we cannot by eliciting these pains in various locations definitely determine which of the abdominal organs is affected. A careful consideration of the spontaneous pains, is however, of great value as regards accurate diagnosis. Especially does this apply to the direction in which such pains are radiated. In liver, stomach, spleen and pancreatic diseases the pain takes an upward direction, while in pathological conditions of the abdominal aorta, suprarenal capsules and solar ganglion it is radiated downwards. Occasionally in the first-named diseases there may be posterior pains which are radiated downwards towards the sacral region, but as a rule even the posterior pains are directed upwards towards the shoulders; in liver disease towards the right shoulder; in spleen and pancreatic disease towards the left shoulder, and in stomach disease straight up the spinal column. Occasionally in disease of these organs circumscribed hypophrenic pains are present. This is quite frequently the case in disease of the liver, but is rare in disease of the pancreas, stomach and spleen. The pains in hypophrenic abscess in general follow the rules above given in accordance with its location in the various abdominal organs. Usually, however, no pain is present unless the abscess reaches the surface of the organ. This rule also applies to carcinoma and echinococcus of the liver. In recent years neurosis of the cœliac plexus has attracted considerable attention. Hoffmann thinks that this condition is characterized by the following symptom-complex: (1) Spontaneous pains originating in the upper portion of the abdomen and radiating anteriorly downward, but not reaching the genital region or the lower limbs; posteriorly they radiate towards the sacrum and often involve the gluteal region; (2) Moderate constipation, the feces consisting of small hard masses; (3) Polyuria. Two cases are reported in illustration of typical neurosis of the cœliac plexus.

Statistical Examination of the Sequelæ of Syphilis.—M. Matthes says that the present ideas in regard to the nature and frequency of the sequelæ of syphilis are largely founded upon data which have been procured in an erroneous manner, in that patients presenting themselves in various pathological conditions have been questioned regarding a previous syphilitic infection, and such has been determined or not in many instances wholly from the history given by patients themselves. It is certain that this method of obtaining statistics is open to grave objections, and is liable to lead to false conclusions. Matthes has endeavored to clear up the subject by collating a large number of cases in which the diagnosis of syphilis had been established beyond peradventure, and then in such cases ascertaining the ultimate cause of death. Accordingly he has collected 568 cases in which the symptoms of secondary syphilis had been previously established, and 130 in which tertiary manifestations of this disease had been observed. Of these, 114 of the secondary and 46 of the tertiary have died, and the cause of death established by autopsy. In six cases the cause of death was not thus satisfactorily ascertained. Thirty-six of the secondary and seven of the tertiary died of pulmonary tuberculosis. This seems an astonishingly large number, yet when the frequency of tuberculosis in Germany is taken into consideration it would be erroneous to conclude that syphilis predisposes to phthisis. In examining into the age of these patients at death it is seen that on the average this is younger than that given for this disease in the general mortality statistics, and hence it seems certain that in syphilitics who subsequently contract tuberculosis the course of the latter disease is shortened. Twenty of the secondary and eleven of the tertiary cases died of disease of the circulatory system. Ten of the secondary and eight of the tertiary died of apoplexy, and all but eight of these were under fifty years of age at death. Four of the secondary and one of the tertiary committed suicide. Carcinoma was the cause of death in two cases, one secondary and one tertiary. In consideration of the prevailing views, with respect to the syphilic origin of tabes, it is interesting to note that of these cases only three died of this disease, one secondary and two tertiary. Five secondary and two tertiary succumbed to paralytic dementia. The remaining causes of death are distributed among a large number of pathological conditions, none of which seem of special significance. The author next considers the entire number of syphilitics (1,570) coming within his knowledge from the standpoint of the duration of their life after contracting the disease. Taking the expectation of life as given in life insurance tables as a standard, he shows that such is somewhat shortened by the contraction of syphilis.

The Journal of Tropical Medicine, February 1, 1902.

Spirillum Fever (Relapsing or Famine Fever).—Cuthbert Christy reports on an isolated epidemic of relapsing fever in Jeur, India. He raises the question whether the bedbug, which is everywhere found in these houses, may not be the means of transmission of the disease. Using bug-traps (a piece of wood with slits in it, which is placed beneath the bed clothes at night and to which the bugs retreat in the morning), he collected a number of bugs from the beds of persons suffering from spirillum fever. The results of allowing the bugs to bite him were, however, negative. By reason of its strong chitinous exterior the bug, like the flea, is extremely difficult to dissect and examine, and the author would welcome any suggestions tending to simplify the proceeding.

On the Danger of Subcutaneous Injection of Quinine.—J. Preston Maxwell, having by experimentation found that the injection of too concentrated solutions of quinine produced gangrenous patches or cellulitis, now administers the remedy according to these principles: (1) The injection should be intramuscular, not subcutaneous; (2) The gluteal, scapular, and deltoid are the muscles best suited for this method; (3) The injection used consists of six grains of the hydrochlorate to forty minims of boiled water; this solution is brought to a boiling point and allowed to cool; the essential point is a large dilution of the acid salt; (4) After injection, which is always painful, iodine liminent is painted over the point of injection and the surrounding area. The author has never seen any untoward results from this method. He holds that injections are not absolutely safe in the case of those suffering from any form of acute septic ulceration, as there is a possibility of the area of injection being infected from within.

The Part Played by the Fleas of Rats and Mice in the Transmission of Bubonic Plague.—Bruno Galli-Valerio does not endorse Mr. Simond's theory that the plague is transmitted to man from rats and mice through the instrumentality of the fleas of these animals. The initial blebs of which Simond speaks as a point of entry by the bites of fleas have been observed in too restricted a number to be convincing that this mode of infection is the most frequent. Moreover, he says, Simond has taken no pains to find out whether the fleas that live on rats and mice are of the same species as those that live on man. From the author's experiments they do not seem to be the same. The great difficulty experienced in infecting rats by the fleas of plague-smitten rats, raises the query why it should be more frequent from rats and mice to man who is not, as a rule, attacked by mouse and rat fleas. The facility with which it is possible to arrest an epidemic of plague where the hygienic conditions are good, and isolation is properly carried out, also speaks against the theory. The question can be solved in only one way, namely by conveying to the bodies of human beings rats' and mice's fleas that have lived on plague rats.

The Journal of Tropical Medicine, February 15, 1902.

Hemorrhagic Pancreatitis in Acute Malaria.—W. G. Ross reports a fatal case in which he describes the main points of interest as follows: (1) The unusual site selected for the sporulation of the parasites; viz., the pancreas; (2) The hemorrhagic pancreatitis associated with the condition; (3) The absence of any previous symptoms of malaria; (4) The extensive invasion of the alimentary tract by the malaria parasites, and the secondary necrosis of the mucosa, though this must have been mainly due to the bacterial invasion.

Marginal Ulceration of the Gums Occurring Among Natives of East Central Africa.—Neil Macvicar describes a disease, called among the natives Chikusa, which is unpleasant and painful, although not dangerous to life. Ulceration begins at a spot on the alveolar margin of the gum, and in a few days spreads two inches or so along the gum. The ulcerated surface has an eaten-out appearance, discharges dirty pus, and is speckled with blood clots. The roots of the teeth become exposed, and the teeth loosened. The disease lasts for weeks. The cause is probably a specific microorganism, whose nature is as yet unknown. Many patients are well nourished and cleanly in the care of their teeth. A moderately strong solution of the permanganate of potash used as a wash, or applied with a camel's hair brush half a dozen times a day or more, will, in a few days, cure even the worst cases.

The Practitioner, February, 1902.

Scarlet Fever, Measles, and German Measles—Is There a Fourth Disease?—Claude B. Ker takes up the question raised by Clement Dukes as to the existence of a fourth disease, going into the differential diagnosis of the various rashes which are likely to be confounded with the three acknowledged diseases—scarlatina, measles, and rubella. These include drug rashes, septic rashes, and antitoxin rashes. The characteristics of the "fourth disease," as described by Dr. Dukes, are incubation period of nine to twenty-one days, very slight prodromata, then an eruption covering the whole body in a few hours. It is brighter than scarlatina. The throat is swollen, the conjunctivæ are pink, the glands enlarged. The temperature averages 101° F. Weighing the evidence for and against the existence of this fourth disease, the author does not consider the arguments in favor of it convincing, but thinks the matter should be further studied and discussed.

On Floating Kidney as a Cause of Obstructive Jaundice and Hepatic Colic.—J. Hutchinson says that we have the following factors to explain the occurrence of obstructive jaundice with floating kidney:—(1) Downward displacement of the third part of the duodenum, with stretching of the common bile duct; (2) Displacement of the gall-bladder and sharp kinking of the cystic duct; (3) Torsion of the vertical part of the duodenum and, perhaps, even of the bile duct. Weisker's theory of traction through bands of the peritoneal investment of the right kidney connecting it with the liver, the author has not found to be substantiated by the cases he has had under observation. As to treatment, a visit to Carlsbad, with prolonged medicinal treatment, can do no good in cases in which the "biliousness" and indigestion are due solely to the presence of a floating kidney. It may further be suggested that the neurotic or hysterical temperament, which is by some attributed to the subjects of floating kidney, is not infrequently the direct result of the latter condition and of the absence of its proper surgical treatment. The number of chronic invalids would be appreciably diminished by the proper recognition of the effects of floating kidney, and the early adoption of the only satisfactory treatment—nephropexy.

American Journal of the Medical Sciences, February, 1902.

A Case of Ophthalmia Neonatorum Caused by the Diplobacillus of Morax and Axenfeld.—E. Andrade reports a case of ophthalmia rebellious to treatment by protargol instillations, boric acid washings, and nitrate of silver applications. Bacteriological examination of the conjunctival exudate showed a pure culture of the diplobacillus of Morax and Axenfeld. Knowing the almost specific action of zinc salts on this microorganism, the author prescribed sulphate of zinc in 2.5 per cent. solution, to be instilled once a day. Under this treatment the right eye was cured in eight days, the left one in twenty. The disease had lasted in all nearly three months.

Phrenic Nerve Injuries.—W. E. Shroeder and F. R. Green report a case, as well as their anatomical and experimental researches on the subject, from the results of which they conclude: (1) That the diaphragm is not an essential muscle of respiration; (2) That as the symptoms commonly described as caused by an irritation on the phrenic were absent in the operation, and in all experimental work it is safe to infer that they may have been due to something other than simple injury to the phrenic; (3) That while the diaphragm is, undoubtedly, enervated by branches from the intercostal nerves, this nerve supply is secondary to the phrenic, and is insufficient to carry on the action of the diaphragm after a division of the phrenic; (4) That a division of the phrenic nerve, producing a partial collapse of the lower lobe of the lung on the affected side, and an atrophy of one-half of the diaphragm, might predispose to infection of the lung, or be followed by a diaphragmatic hernia; (5) That a division of one phrenic nerve in man, resulting in paralysis of one-half of the diaphragm only, is not necessarily fatal.

The Changes Occurring in Striped Muscle in the Neighborhood of Malignant Tumors.—Frank P. Anzinger, from his investigations, concludes that the changes produced are: A. *Retrograde*—(1) Atrophy; (2) Morphological changes; (3) Changes in protoplasm, vacuolisation, fissuring, longitudinal fibrillation, lacunar erosion, cloudy swelling, simple necrosis, Zeuker's necrosis, polychromatophilia; (4) Changes in nucleus, morphological, proliferation, vacuolisation; (5) Perimysium, atrophy, hyperplasia, leucocyte infiltration, hemorrhage, edema, necrosis; (6) Vascular changes, endarteritis, periarteritis, hypertrophy, and hyperplasia of endothelium. B. *Regenerative*—(1) Hypertrophy (?); (2) Regeneration forms. The changes are not specific, but are produced by conditions other than malignant tumors. The changes produced in muscle by invading carcinoma are more marked than those produced by sarcoma, but do not differ essentially in kind. Those produced by sarcoma are chiefly mechanical; those due to carcinoma are mechanical, nutritive, and metabolic. Evidences of toxic action are more marked in the latter than in sarcoma. Carcinoma acts more as an active, injurious foreign body upon muscle than does sarcoma.

Angina Pectoris.—Beverley Robinson gives as some of the causes which act efficiently in bringing on an attack of angina, exertion, the accumulation of flatus during sleep, cold, or a cold wind and dyspepsia. Angina pectoris is not necessarily connected with any special lesion, but there may be fibrous myocarditis, fatty degeneration of the heart walls, and more or less advanced changes of the coronary arteries. Treatment depends largely on the cause, and strict attention must be given to the laws of hygiene. Nitroglycerin and nitrate of amyl, especially the latter, are particularly useful in relieving pain. Dr. B. Addy considers erythrol tetranitrate superior to nitroglycerin. Where nitrites do not relieve, we must recur to the old stimulants, and apply turpentine stupes, or a mustard leaf or poultice over the chest, or moving a hot-water bag at a temperature of 140° to 170° F., with light touches over the whole chest. We may have to give a hypodermic injection of morphine and atropine, in small, or, perhaps, even in large doses. Chloroform inhalations may be needed. In marked heart failure, ether or brandy should be given, hypodermically, in half to drachm doses. Oxygen inhalations are useful. As to exercise, great caution should be used.

A New Factor in the Etiology of Malarial Fever, Indicating New Methods of Treatment.—A. F. A. King adduces arguments to prove that heat is not a factor in the etiology of malarial disease, but explains the undeniable relation between hot climates and malarial fever by eliminating the term "heat" and substituting that of "light." Paroxysms of intermittent fever will not, as a rule, take place at night, in the dark. In places where malarial fever prevails, the disease is increased by bright, sunny weather, and lessened by clouded skies. It has long been a tradition that to prevent the occurrence or recurrence of ague it is advisable to keep in the shade and avoid sunlight. The malarial parasite is a naked amœba. Red light promotes the vital activities of amœbæ, while violet or purple light restricts them. The color of the light diffused through the blood is necessarily red. The relative liability and immunity of different races of men to malarial fever depend upon the relative translucency or nontranslucency of their skin, and probably of their blood. If the etiology given be correct, correct treatment will consist in keeping patients in the dark, or in rooms with purple or indigo windows, and clothing them in garments impenetrable to light; in the tropics, white clothing, lined with purple or black. Drugs that darken the blood, or render it violet, or lessen its translucency, should be given. Quinine sulphate in solution intensifies the violet, and even renders the ultra-violet rays of the spectrum perceptible to human vision.

French Journals.

Sudden Death in Convalescence from Typhoid Fever.—Carles reports a case of convalescence from typhoid fever, in which the patient died suddenly about the twenty-third day of the disease. There were no special visceral symptoms. Preparations of the cardiac muscle were made, and the lesions therein were insignificant, and did not explain the cause of death. The query is made as to whether the condition of the cardiac ganglia could have accounted for this sudden accident.—*Gazette Hebdomadaire des Sciences Médicales*, February 23, 1902.

Congenital Adenomyoma of the Intestine and a Supernumerary Lobe of the Liver.—G. Durante reports an autopsy on an infant born before term. At a point of the small intestine on the surface opposite the mesentery was discovered a small tumor, well defined, but with no pedicle, of the size of a pea, and pinkish yellow in color. In the center of the growth was a canal about as large as that in the appendix of a new-born child, but which appeared to have no connection with the intestinal cavity. This cavity was covered with cylindrical epithelium, like an enormous gland of Lieberkühn. The central cavity was surrounded by a large contractile envelope of muscular fibers. These fibers were disposed on the same plan as that seen in a transverse section of the intestine. It is uncertain whether this was a true adenomyoma or, rather, an atrophied intestinal diverticulum. The same child had a small supernumerary lobe of the liver, having a pedicle, and being the size of a small nut. It was on the upper surface of the right lobe of this organ.—*Bulletins et Mémoires de la Société Anatomique de Paris*, November, 1901.

Calcification of the Skin.—Riehl has a patient, a woman of thirty-one years, who, since the age of sixteen, has had on her hands a large number of subcutaneous tumors, of the size of a pea, which in some places have become confluent, and form areas as large as small nuts. This curious formation is due to the occupation of the woman, who cleaned copper with sulphuric acid. The principal characteristic of the tumors is their hardness. The skin which covers the tumors is movable, and has preserved its normal aspect. The chief seat of the growth is the palm of the hand, and the lateral aspect of the fingers. The patient can no longer work. Now and then one of the tumors becomes painful, and the skin breaks, and a chalky mass exudes. The patient was for a long time considered gouty, but histological examination of the tumors has shown no uric acid, but they are composed almost exclusively of carbonate and phosphate of lime. These concretions are surmounted by a fibrous capsule. It is a case of calcification of the skin, probably due to a dermatitis caused by the use of sulphuric acid.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, February 23, 1902.

Penetrating Wound of the Chest by a Sword; Pleuropneumonia; Persistent Fistula; Pneumotomy.—Rigal reports the case of a soldier who was wounded by a sword thrust at the level of the right axilla. There came at once from the wound a flow of frothy blood, the patient was cyanosed, and there was dyspnœa and subcutaneous emphysema. On the same day, treatment was instituted, consisting of drainage and antiseptic dressings. Soon there developed pleuropneumonia, with intense fever and delirium. The third day, the pleural orifice was enlarged, and abundant pus was found; antiseptic irrigation was practised. Little by little, the fever subsided, and the general state improved. But there was a persistent fistula communicating with a pocket. The fistulous tract was judged incurable, and it was decided to stretch the tract, under anæsthesia, to resect the fourth rib, to the extent of about 8 cm., and to incase the pulmonary wall with the thermocautery. From this time there was a fall in the temperature, progressive improvement followed, and a complete cure was effected forty-seven days after operation.—*Lyon Médical*, February 16, 1902.

Contribution to the Study of Ether Narcosis.—Paul Campiche concludes that: (1) Ether is a specific irritant of the lungs and bronchi, and consequently is absolutely contraindicated in all patients whose respiratory apparatus is in bad condition; (2) Even when taking cognizance of the contraindications to ether, and although the technique be as perfect as possible, the point of entire suppression of ether pneumonia has not yet been reached; (3) A certain number of accidents are inevitable, and in the use of chloroform they are undeniably more frequent than in ether narcosis; (4) The rôle of the responsibility of narcosis for pulmonary complications has been greatly exaggerated; (5) A general defective state (bad for the heart in ether, and bad for the bronchi in chloroform) is responsible for many untoward results in narcosis; (6) But in the great majority of patients there are no accidents, unless the operation is particularly favorable to pulmonary complications, viz., operations for hernia, for goiter and laparotomies; (7) Ether, being less dangerous than chloroform as regards the remote consequences of narcosis (bronchitis and pneumonia), ought to be, excepting its contraindications, adapted as the anæsthetic of choice on account of its great advantages over chloroform, chief among which is its harmless effect on the heart and the circulation.—*Revue Médicale de la Suisse Romande*, February 20, 1902.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held March 6, 1902.

ROBERT F. WEIR, M.D., PRESIDENT.

The Use of the X-Ray in the Treatment of Some Forms of Cancer.—Dr. FRANCIS H. WILLIAMS of Boston, Mass., was the author of the paper of the evening, and the meeting was held under the auspices of the Section on Surgery. Dr. Williams said that either a good-sized static machine or a coil was required for this work. He used at the hospital a static machine of eight plates, of very large size, while he employed a coil at his office. There should be an adjustable spark gap, and the tube should be carefully selected for this special work. For superficial growths tubes of low resistance should be used, and for deeper growths tubes of high resistance. The tube should be placed in a holder, the inside of which is painted with white lead. By means of a lead screen the cone of rays is limited to a size a little larger than the diseased area to be treated. For use in cavities, such as the mouth or the vagina, it was recommended that the rays be passed through a cylindrical glass speculum, the latter being surrounded by a shield of sheet tin. As a general rule, the diseased area should have an exposure of five or ten minutes at each sitting, and this time may be gradually increased to twenty minutes or more. The exposures should be given three or more times a week. The actively-growing tumors should receive very short exposures at first, probably not more than five minutes. Itching, prickling, a drawing sensation or a slight irritation in the new growth a day or two after the exposure should be looked upon as a favorable sign. The sound tissues were not affected by the exposures required for this treatment. If the exposure were properly timed it would not cause any reaction in the recently healed portion, though it would have done so in the same part before healing took place. The speaker deprecated the tendency in some quarters to relegate this important work to non-medical persons. During the past six years, he said, thousands of exposures had been made at the Boston City Hospital for examinations and treatment, and no one had ever been burned by the *x*-rays there, showing that no harm need result from their use. Dr. Williams said that a microscopical diagnosis had been made for him in almost all of his cases. The growths which he had subjected to this treatment included epithelioma, rodent ulcer, carcinoma, papilloma of the larynx, spindle-cell sarcoma, keratosis, new growths looking clinically like epitheliomata of the lip, but appearing under the microscope as inflammatory tissue, etc. The growths had been on all parts of the face, on the ear, tongue, jaw, neck, larynx, arm and breast, as well as in more deeply-situated parts. It seemed probable that most cases belonging to the external class could be made to disappear by means of treatment with the *x*-rays if treatment were commenced sufficiently early. Thus far every case of external new growth that had come under his care early was healing or improving. In the more advanced cases the choice of operation and the *x*-ray treatment would come up. The latter was tedious, and as yet experience with it was limited, though rapidly growing. In a third group might be placed the cases which are inoperable, or those in which the patient declines operation. While operation might be advised in certain cases, there need be no hesitation about using the *x*-rays where this treatment afforded the only chance, as it would usually give relief, to say nothing of encouragement to the patient. It should be remembered that a short period of treatment would suffice to show whether the *x*-rays could effect improvement. Thus, in epitheliomata such improvement would usually be evident in about two weeks. The fact was emphasized that it was not a good plan to operate first and then use the *x*-rays, because after even a slight operation the *x*-rays experienced difficulty in favorably affecting the tissues. All of his cases of rodent ulcer were slowly improving or had healed with one exception. The exception was a case of an old woman, living at a distance, who had shown temporary improvement, but had been unable to come for regular and effective treatment. Some of his cases had been healed for more than a year, and there had only been one recurrence. This had occurred, after about six months, in an epithelioma of the lip. The recurrence yielded readily to treatment. Some cancers of the tongue that he had treated had been difficult of access, and had improved, but had eventually become worse. The speaker said he believed that the *x*-rays would prove beneficial in certain forms of cancer of the breast. Carcinoma would yield more readily to this treatment than would the scirrhus variety. Growths reappearing in the scars following operation had ceased to spread, and had shrunken up and fallen off. Dr. Williams exhibited a number of photographic lantern slides to show the results obtained from the *x*-ray treatment. In a case of Hodgkin's disease the improvement effected by one exposure was very striking. The advantages of the *x*-ray treatment were the absence of any dread of operation, the painlessness of the treatment and the excellence of the cosmetic effect. At present a practitioner was not justified in promising that the *x*-ray would cause deep-seated growths to heal. It might, however, give relief in operative cases. Most superficial or early external new growths would yield to this treatment, and the condition could usually be ameliorated in more advanced external new growths. As soon as it was widely known that there was a harmless, painless and excellent method of treating external new growths, the people would resort to it earlier than they now come under treatment, but the profession should warn them of the present narrow limitations of the method.

Dr. WILLIAM JAMES MORTON said that nothing that could be said on this subject at the present time could be looked upon as more than a report of progress, but this progress was real and rapid. He would admit that he found it difficult to speak so dispassionately and so judicially on this new and most interesting topic as had the reader of the paper. He agreed with that gentleman that it made no difference what form of apparatus was employed, provided it produced a good *x*-ray. He did not think any extended treatment could be satisfactorily conducted without employing one of the self-regulating tubes. In certain matters of technique he would differ from the author. One of these was in the use of the aluminum screen, even though it had the authority of Tesla behind it. This screen was very troublesome, and he did not see that it accomplished anything of importance. It certainly cut off the electrostatic field, but after all this was of no consequence, for it was not the electricity that caused burns. Nor had he seen any advantage in insulating the lead plates, and therefore he made use of ordinary tin foil. The quality of the *x*-ray was most important, and yet he could not speak very definitely on this point. He would divide *x*-ray tubes, as regards their quality, into three classes: soft, medium soft and hard tubes. The medium soft and the hard tubes were chiefly used by him. According to his experience, sarcomata were the easiest to deal with. Next to these came the carcinomata, while the most difficult of all were the epitheliomata. His *x*-ray work had taught him a new classification based upon what the *x*-rays could do. He divided his cases as they came to him into: (1) Exterior or superficial cases; (2) Interior cases, or those beneath a healthy skin; (3) Operable cases, and (4) Inoperable cases. For the first class a medium soft or a soft tube should be used; it would break down the growth better than would a high tube. In the treatment of the interior cases one was met at the outset with a serious obstacle, the intervening healthy skin, which has to be protected from the development of a dermatitis. Assuming that general infection may occur in from six to twelve weeks, the *x*-ray operator was confronted with a very serious problem, and at the present time he did not feel like assuming the responsibility of advising the use of the *x*-ray in preference to the knife in operable cases. He had found carcinoma of the breast, both initial and recurrent, yield well to the *x*-ray treatment. In one inoperable case of very extensive carcinoma of the breast, after five weeks of treatment with the *x*-ray, the induration had practically all disappeared, the pain had been relieved, and the carcinoma had been reduced from six inches in diameter to a mass measuring 3½ by 2½ inches. Another case of carcinoma of great interest had been referred to him by Dr. W. B. Coley after Dr. Buxton had made the diagnosis of carcinoma of the breast by microscopical examination. The case had been operated upon three times, and this was the fourth recurrence, appearing in the form of a nodule situated near the junction of the third rib with the sternum. After treatment with the *x*-ray for three weeks this nodule had disappeared, and, as only three weeks had elapsed since this disappearance, nothing could be said as to the permanence of the cure. Dr. Morton concluded by exhibiting a young woman who had a large osteosarcoma behind the right ear and a considerable tumefaction in front of the ear. Treatment had been begun about one month ago with the *x*-ray, at which time the ear was a shapeless mass, involved in a very large tumor. She had received twenty treatments with the *x*-ray, and, while she had not been burned, her face had been very markedly tanned. About nine-tenths of the tumor had already disappeared, and the patient from the outset had been able to give up the morphine which she had been using quite freely on first coming under observation. He expected to cause a complete disappearance of the growth in about ten days more.

Dr. A. B. Johnson said that his experience in this field had been quite limited, but had included inoperable carcinomata, many of the recurrent variety. He had generated the *x*-ray by means of a coil, and the tubes employed had been those which would permit of using a large amount of energy. These tubes were large, and were artificially cooled by ice water. His first case had been exposed thirty-two times, the tube being at a distance varying from ten to four inches. The exposures had averaged about ten minutes. The patient was a lady who had had two operations for cancer of the breast. These operations had been followed by a recurrence, consisting of an ulcerated growth, four inches long and three inches wide, firmly adherent to the ribs, together with several hundred secondary nodules scattered over the skin of the thorax, the upper part of the abdomen and the opposite breast. There were enlarged lymphatics in both axillæ, and there were some nodules on the back. Without burning this woman, the large growth had been made to practically disappear, the only trace now remaining of the large mass being an area resembling that seen after skin grafting. Another case, one of carcinoma of the jaw, had been a most unfavorable one. There had already been an extensive plastic operation for epithelioma of the lip. It involved nearly all of the ramus of the jaw. This patient had been exposed about tweny-five times to the *x*-ray, and with very marked benefit. The size of the tumor and of the sorrounding soft parts was much less, and the neighboring lymphatics had diminished in size. This man's general health had decidedly improved, and from some of the sinuses which still remained open there was a discharge of what appeared to be broken-down carcinoma. Another case, one of ulcerating epithelioma of the ear, had also been benefited. After two exposures the bleeding had ceased absolutely, and after four exposures the ulcerated area became a healthy granulating surface. The speaker said that he was of the opinion that by the use of more powerful apparatus it would be possible in the future to attack the more deeply-seated new growths with a fair chance of success.

Dr. William B. Coley said that his experience with the *x*-ray treatment extended only over a period of four weeks. At the present time he had under treatment six cases of sarcoma at the General Memorial Hospital. The first was a round-cell sarcoma in a man of twenty-five, and had been first noticed in the parotid region last September. It had grown rapidly, and had recurred soon after operation. When first seen last January Dr. Coley tied his carotid artery and gave him toxins without apparent benefit. He was then treated with the *x*-ray, using a high vacuum tube, placed at a distance of six inches. The man steadily failed, and was now in a dying condition. Another case was one of large inoperable recurrent sarcoma of the spindle-cell variety, situated in the maxillary region. This patient had improved so rapidly at one time under the toxins that he was thought to be almost cured, but progress had then ceased, and accordingly the *x*-ray treatment was begun. So far there had been no marked change. Another case, one of sarcoma of the thigh, of very rapid growth, had continued to increase despite the use of the *x*-rays. A boy having a sarcoma of the thigh, and refusing operation, had been subjected to the *x*-ray treatment, and already there had been very marked improvement. A case of very extensive lymphosarcoma, involving both sides of the neck and the neighboring lymphatic glands, had been treated with the toxins without benefit, and three weeks ago had been subjected to the *x*-ray treatment. The improvement in this case had been little short of marvelous. Dr. Coley presented also a patient with a remarkable history. Ten years ago he had been operated upon at the New York Hospital for a typical round-cell sarcoma of the neck. Its nature was determined at the time by microscopical examination. In 1896 two recurrent tumors had been removed, and these were found to be small round-cell sarcomata. In all, he had been operated upon five times, and seven tumors had been removed. His case was considered inoperable at the Vanderbilt Clinic last May, and he then came to Dr. Coley for the toxin treatment. He received twelve injections and the external carotid artery was tied, but with apparently no controlling effect upon the disease. He left the hospital last July with a tumor about the size of the closed fist. On December 22 he came under the care of Dr. E. R. Fisk of Brooklyn, and at the urgent request of the patient he was given the *x*-ray treatment. For the first two weeks he received daily treatments of ten minutes each, and for the next two weeks daily treatments of fifteen minutes each. After that he received treatment at longer intervals. The improvement that had taken place was most remarkable, and the case was particularly interesting because of the complete record accompanying it.

Dr. Charles W. Allen said that he believed the *x*-ray was capable of doing a large amount of good, and hence he had recently begun its use in his practice, but in doing so he had not felt warranted in using the *x*-rays to the exclusion of other recognized methods of treatment. He had treated fifteen cases in all, and had the records of six cases which he believed to be cured epitheliomata, but which, of course, he would not report as such at this time. Dr. Allen exhibited a case of lupus of twenty-four years' duration that had apparently been cured by the *x*-ray treatment. One of his cases was an extensive rodent ulcer of five years' standing. After the very first exposure to the *x*-rays the whole area had presented an appearance quite like that seen in a vaccination. He had almost invariably noted a cessation of pain after the application of the *x*-rays. Dr. Allen also exhibited a device for facilitating the application of the *x*-rays by providing for the easy adjustment of the screen and tube.

Dr. **Percy Turnure** presented two patients. The first was a case of epithelioma occurring in a man of sixty years. Photographs showing his condition last December were exhibited. At that time Dr. Bull had examined the man at Roosevelt Hospital and considered the case to be inoperable. The *x*-ray treatment was begun on December 18, and exposures of five minutes were given three times a week up to January 20, and then he received daily exposures of ten minutes for one week. By that time the ulcer had broken down and there was free discharge, so the treatment was discontinued. The glands had entirely disappeared, and the case was practically cured. The second case was that of a woman in whom a red spot had appeared on the nose eighteen years ago. Two years later a similar spot had appeared on the other side of the face. All sorts of treatment had been tried since that time. The case had been sent to him by Dr. C. T. Dade, with a diagnosis of erythematous lupus. The *x*-ray treatment had been begun on December 2, and had been continued three times a week until January 18, when daily treatments had been given for a short time. The course of the case was practically the same as that of the first one. During this treatment for lupus what was apparently an epithelioma had developed in the middle of the right cheek. Its gross appearance was typical of a beginning epithelioma, but the microscopical examination only indicated the probability of its being epitheliomatous. The speaker said that his results had been most discouraging in carcinomata.

Dr. **George C. Hopkins** of Brooklyn said that he would disagree with Dr. Williams entirely in the use of the screen. He had treated a large number of cases, and had never yet had an *x*-ray burn. The *x*-ray does not seem to affect the skin as it does the deeper tissues. His researches with regard to white gangrene indicated that the trouble began in the deeper tissues and spread toward the surface. It seemed to him entirely possible to be able to treat the deeper tissues successfully with the *x*-rays. His work with these rays had been largely in the treatment of recurrences after operation, and in this class of cases the results had been most satisfactory. In one of these cases there was a cicatrix fourteen inches long, on which were seven ulcerating nodules. Under the influence of the *x*-rays five of these nodules had disappeared, and the corresponding areas were healed. He expected to have the other two nodules healed very soon. In another case, supposed to be one of carcinoma of the tongue, demanding immediate operation, three weeks of *x*-ray treatment had restored the patient's speech and had made it possible for him to again eat solid food. The speaker said that two years and a half ago he had begun to use the coil and his results had not been satisfactory. More recently he had used the static machine and a low vacuum tube, and he thought with this outfit there was very little danger of causing *x*-ray burns.

Dr. H. G. **Piffard** narrated a case of epithelioma of the cheek, which would have taken two months of treatment with the *x*-ray, he said, whereas he had cured it in a very short time, and at much less expense to the patient, by curetting and the subsequent application of the galvano-cautery. He saw no occasion theoretically for the use of the screen.

Dr. **Williams** closed the discussion. He said that it was quite possible to get a dermatitis even when a screen was used; on the other hand, it was quite possible to get a severe burn from the brush discharge, and hence it seemed to him the part of prudence to make use of the screen, and so diminish the risks of the treatment. For the treatment of cavities he thought a speculum of glass was better than one of metal, because it was a non-conductor of electricity.

NEW YORK ACADEMY OF MEDICINE.

Section on Obstetrics and Gynæcology.

Stated Meeting, Held February 27, 1902.

James N. West, M.D., Chairman.

A Case of Cæsarian Section for Rachitic Pelvis.—Dr. L. J. **Ladinski** presented a woman, twenty-seven years of age, who had been married five years. At two previous confinements she had been delivered by craniotomy. She came under his observation about two weeks prior to delivery, and after examination of the pelvis he had come to the conclusion that at this advanced stage of pregnancy the only chance of a living child being delivered was by Cæsarian section. The Porro operation was advised but refused. The measurements of the pelvis were: Between the iliac spines, 27 cm.; between the iliac crests, 28.5 cm.; external conjugate, 16.75 cm.; internal diagonal, 10.5 cm. The measurements of the child made after delivery were: Occipito-mental, 14 cm.; occipito-frontal, 13 cm.; occipito-bregmatic, 12 cm.; biparietal, 10 cm. The membranes ruptured during the night, and the patient was in labor for thirty-six hours before the operation was done. The uterus was drawn outside of the abdominal cavity, incised, and the child delivered without applying a ligature because of the œdematous state of the uterus. The placenta was attached anteriorly, so that it was necessary to remove the child through it. This was done very rapidly, without much hemorrhage. Mother and baby left the hospital in good condition.

Dr. S. **Marx** said that from his examination of the patient the case was evidently one of the flat rachitic pelvis. The measurement between the anterior spines was 28 cm., that between the crests 28 cm., the external conjugate 17 cm., and the estimated true conjugate 7.25 cm. On examination externally there was noted a well-marked curvature of the lumbar spine anteriorly, from which it was probable that there was a spondylolisthetic pelvis. An experience that he had had within the past twenty-four hours showed that no pelvis was a distinct indication for Cæsarian section. At the first confinement, the woman referred to had been delivered of a dead child after an extremely difficult version. At the second confinement the family physician had delivered with forceps a child which was so maimed that it died in a very short time. Last night he had been called to see her, and from the measurements of the pelvis had felt justified in urging Cæsarian section. The mother refused this, and to his surprise he had been able to easily deliver a living child by version with the woman in the Walcher position.

Dr. W. R. **Pryor** said that in a case of Cæsarian section in which he had met with implantation of the placenta anteriorly, he had found no difficulty in the operation because he had taken the precaution to make a free incision through the muscular portion of the uterus before coming down upon the placenta.

Dr. **Philander A. Harris** remarked that, in certain instances, the pelvis might be 8 or even 7.5 cm., and still, by reason of the smallness of the fœtus, delivery could be effected.

Carcinoma of the Uterus.—Dr. J. A. **Schmitt** presented this specimen, which had been taken from a woman whose menstruation had ceased six years previously. She sought advice because of a sero-sanguineous discharge from the uterus. The presence of a polyp projecting from the os suggested a good prognosis, but further examination showed evidence of carcinoma. In all doubtful cases scrapings from the uterus should be examined microscopically.

Dr. H. J. **Boldt** remarked that microscopical examination should be invariably made of scrapings from the uterus.

Dr. **Pryor** said that when the microscopical examination revealed distinct evidence of malignant disease, such a confirmation of the diagnosis was very gratifying, but in doubtful cases he would rather depend upon the results of clinical observation, as a negative microscopical examination in such cases was utterly valueless.

Dr. J. Riddle Goffe said that his experience would lead him to take the same view as Dr. Pryor. He recalled one case in which scrapings were examined microscopically at intervals for four years, and during all this time the reports of the pathologist were negative. The uterus was then removed, and it presented abundant evidence of malignant disease.

Dr. Joseph Brettauer said that he was a thorough believer in the value of microscopical examinations of material curetted from such cases, but he failed to see the necessity for examining microscopically all curettings from the uterus.

Dr. S. W. Bandler said that the pathologist might be pardoned for calling something else carcinoma, but he should not overlook carcinoma when present. The examination of two or three pieces of tissue removed by the curette was not a thorough examination; a truly thorough examination involved embedding and examining the large number of pieces removed by curettage, and this was a task requiring about ten days of hard work.

Dr. Schmitt, in closing, called attention to the error that was likely to arise from the operator not being careful to systematically curette all portions of the uterine cavity.

Dr. H. J. Boldt presented the following specimens:

Intraligamentous Fibromyoma Completely Separated from the Uterus.—Regarding this specimen, he said that intraligamentous tumors of this structure could almost invariably be shown to arise from one of the lateral borders of the uterus, and, inasmuch as they develop laterally, the connection between the uterus and the neoplasm frequently became quite thin, so that, in some instances, it might be difficult to ascertain whether the tumor was primarily of uterine origin, or whether it took its origin from the muscular structure in the broad ligament. In this instance, the difficulty was increased by the fact that the separation between the tumor and the uterus was complete. As the interval was about 1.5 cm., he was inclined to believe that the neoplasm originated from the muscular structure in the broad ligament.

Retroperitoneal Fibromyoma of the Uterus; Abdominal Hysterectomy.—The tumor filled the true pelvis completely, producing pressure symptoms. An interesting feature was the existence of intense trachycardia, the pulse rate varying from 120 to 140. As the trachycardia had subsided since the operation, it must be looked upon as a reflex vasomotor neurosis caused by the tumor compressing the pelvic organs. From a pathological viewpoint, the tumor was interesting. The greater part of the pedicle was inserted at the lower segment of the posterior surface of the uterus, and about one-third of the thick pedicle was given off from the cervix. As the result of this, all of the tumor except the summit had developed retroperitoneally. The enucleation of the neoplasm proved to be an arduous task, the oozing from the bed being so profuse that it was necessary to suture it before replacing the peritoneum upon it.

Uterine Adnexæ Removed for Recurrent Pelvic Inflammation.—The patient was a woman of thirty-five years who had had numerous attacks of pelvic inflammation during a period of twelve years. For five years prior to operation she had seldom had a day during which she had not had more or less pelvic pain. The tubes and ovaries presented the characteristic changes usually seen in chronic inflammation of the appendages, the walls of the tubes being much thickened as the result of interstitial inflammation. There was found an unusually large hydatid of Morgagni. The vermiform appendix was thickened, especially at its distal extremity. He inverted it according to the method described by Edebohls. Since the operation the patient had had very little pain, and what remained would undoubtedly soon disappear. When a patient had been ill a number of years with pelvic inflammation, and the ailment had withstood the various forms of treatment usually adopted for such conditions. it was not good therapy to continue with local treatment if the cause of the trouble was apparently disease of the adnexæ. In such cases surgical intervention should be resorted to, as the health of these patients was undermined more and more by waiting, and prolonged local treatment had a tendency to produce a neurasthenic condition, which was very difficult to eradicate.

Chronic Unilateral Salpingo-Oophoritis, Probably Caused by Appendicitis.—This specimen had been removed from a woman who had suffered from pain in the cæcal and the corresponding ovarian region for several years. Pressure on the right side caused much pain, so that palpation was unsatisfactory. Bimanual examination showed the right half of the pelvis to be filled with a mass consisting of the enlarged tube and ovary. The latter seemed to be cystic, but the tube felt very firm to the examining finger. The left tube and ovary appeared to be normal. The uterus was somewhat enlarged, and its consistency was firmer than normal. On abdominal section, the vermiform appendix was found to be chronically inflamed and in close proximity to the tube. He inverted it into the cæcum and removed the adnexa. The left adnexa was normal. The lumen of the tube was practically obliterated throughout its entire length, and the wall of the tube was hypertrophied to fully four times its normal thickness. The ovary was degenerated to such an extent that only a small part of the ovarian stroma remained, and that was near the cortex. The specimen was an excellent example of chronic inflammation, with an unusual degree of hypertrophy of the oviduct wall. That the appendicitis was the probable exciting cause of the adnexal inflammation seemed evident from the history, the close relation of the appendix to the diseased appendage, and from the fact that the opposite appendage was normal.

Bilateral Hæmatosalpinx; Hæmatoma of the Ovary.—This patient has been a sufferer from intense pelvic pain since her marriage three years previously, and had never been pregnant. The pelvic organs were exquisitely tender and the Fallopian tubes distended and adherent. Abdominal section revealed a small quantity of blood in the peritoneal cavity, and both Fallopian tubes distended and intimately adherent to the surrounding tissues. It was found possible to remove the tube on the left side without the ovary, and the latter was attached to the uterus to preserve the menstrual function. Inspection of the specimens showed the hæmatosactosalpinges situated in the abdominal half of the Fallopian tubes, and the uterine ends of the tubes occluded. The cause of the blood accumulation in this instance, Dr. Boldt believed, was torsion from peritoneal adhesions. The existence of hæmatosalpinx could not be diagnosed in such patients, but the indication for operation was the persistence of pelvic pain. It was customary to consider tubal gestation as the most frequent cause of hæmatosalpinx, but he was opposed to such definition when the accumulation of blood was caused by pregnancy in the tube. The most serious, if not the only serious, form of hæmatosalpinx was that caused by gynatresia, inasmuch as it was liable to rupture and cause fatal peritonitis. But when the etiology was that found in the present case, there was little danger of rupture from over-distension of the tube, and in such instances operation was undertaken because of the symptoms resulting from the pelvic inflammation.

Dr. P. A. Harris said that he had removed two tumors of about the same size as those just presented, and attended by considerable hemorrhage. He would present them at the first opportunity.

Dr. Brettauer said that he did not think Dr. Boldt had adduced sufficient proof that the first tumors were truly intraligamentous. It was more probable that they had originally developed from the uterus extraperitoneally and had subsequently become separated from the uterus. He had seen several fibroids which were apparently both extraperitoneal and intraperitoneal. One was sometimes deceived in these cases by an unusual development of the mesentery of the sigmoid flexure. He could not understand how a tumor could be both intraperitoneal and extraperitoneal at the same time.

Dr. J. RIDDLE GOFFE thought we were apt to exaggerate the influence of the vermiform appendix on disease of the uterine appendages, as in one of the cases now under discussion.

Dr. G. H. BALLERAY said that he had never operated upon more than three cases of true hæmatosalpinx, but in these no evidence of ectopic gestation could be found. In such a case the tube was not adherent and contained considerable bloody fluid. He was under the impression that a secretion took place from the lining membrane of the tube, a condition similar to the weeping from the uterus and tube during menstruation. He did not think that true hæmatosalpinx had anything to do with ectopic gestation.

Dr. MARX said that he had removed quite a number of intraligamentous fibroids, which he believed had absolutely originated *de novo* between the layers of the broad ligament.

Dr. BOLDT said that he realized that a positive diagnosis of intraligamentous fibroid could not be made in his case, but the appearances pointed that way. He was of the opinion that a true hæmatosalpinx was never caused by tubal gestation, although many statements in the text-books seemed to indicate such a view.

Dr. BANDLER said that there had been reported in the literature cases of tumors of the broad ligament containing glandular epithelium derived from the Wolffian body, and when this was the case the tumor had originated *de novo* between the folds of the broad ligament.

Ovarian Pregnancy with Viable Fœtus.—Dr. W. R. PRYOR reported this case. At the operation it was found that the colon hid a large part of the cyst. A fœtus of about six months was delivered. It cried and gasped a few times and then died. Conception had apparently taken place in the Graffian follicle over which the tube was adherent. In its growth it had separated the folds of the broad ligament, lifting up the ureter.

Dr. BOLDT did not think that one could arrive at a conclusion as to the nature of such a pregnancy from the gross appearances alone. He remembered one case which he had taken to be an abdominal pregnancy, but prolonged and careful search had shown it to have been originally a tubal pregnancy.

Dr. GOFFE said he was disposed to accept absolutely Lawson Tait's description of these ectopic pregnancies, and was of the opinion that they invariably began in the tube. Of course, true ovarian pregnancy must occur in the Graffian follicle, and it was rather difficult to believe that the spermatozoa came into contact with the ovum at this point. It was more probable that the pregnancy had occurred originally in the tube, and had ruptured into the broad ligament.

Dr. BRETTAUER said that he had been present at Dr. Pryor's operation on this case, and could testify that the tube was absolutely intact. He felt positive that it never started as a tubal pregnancy. Microscopical examination of the wall of the sac and of the placental site was essential to a proper understanding of this case. His recollection was that the placenta was attached within the tumor.

Dr. PRYOR said that, according to Welch, the sac in this case was made up of the spread-out ovary, and he had never seen the ovary spread out eight inches in a tubal pregnancy. The placenta was certainly within the sac. The Fallopian tube ran entirely over the top of the tumor, the tube standing out just as it did in a parovarian cyst. Dr. Welch said that because of the extreme rarity of ovarian pregnancy he was not willing to make that diagnosis, but he would not dispute the possibility of this case being an example of such a form of pregnancy.

Hypertrophies of the Labia Minora.—Dr. R. L. DICKINSON presented, in a paper with this title, a preliminary report of observations made by him extending over a period of fifteen years, though the greater part of the material utilized in the paper had been gathered during the last seven years. The type or full development of the deformity in question, he said, was a wrinkled and pigmented enlargement of the labia minora, the lesser labia protuding through the labia majora. One labium was usually larger than its fellow, and the prepuce often participated in these changes. Distinctive increase in the size of the clitoris, contrary to the general belief, was rare. Enlargement of the breasts and changes in the areolæ resembling those of pregnancy occurred. The most marked cases occurred in women who had never borne children and who possessed a hymen indicative of virginity. In a series of 1,000 consecutive gynecological cases, 361, or more than one in three, showed one or more of the various vulvular hypertrophies considered in the paper. In the blonde the enlargement of the labia was not so characteristic, though large blue veins were more readily identified and the follicles were frequently large and white. The speaker was of the opinion that all large, deeply-wrinkled labia minora indicate prolonged massage. This massage might be applied by crossing of the legs and pressure on the labia minora rather than upon the clitoris. The speaker said he had seen at least a dozen of noniparous women having an exceedingly elastic and dilatable hymen, one perhaps distensible to eight or nine inches, a condition characteristic of vaginal massage. Dr. Dickinson said that in the growing girl the nervous system might be very seriously affected by masturbation, and hence any means of detecting such practices should be of value to the physician. A sufficient number of his patients had admitted such practices to justify him in the belief that others presenting the same signs, though not confessing to masturbation, had been guilty of similar doings. It should be noted that in a great many women masturbation was not what might be called a strictly sexual act, but rather a physical matter; in other words, many of the most refined and lovely women suffer from tormenting excitement of the nervous system, which they learn to relieve in this way. Sometimes by removing adhesions of the clitoris, or by circumcision, great relief was afforded such persons.

Dr. BRETTAUER recalled the case of a girl of fourteen who suffered so much on the second day of each menstrual period that she finally sought advice and relief. Examination showed exceedingly marked hypertrophy of the labia minora. However, from his own observations he had been led to look upon these changes in the labia as largely a racial matter. He had seen a great many more of these hypertrophies among Russian and Hebrew women than among Germans, and he had found these hypertrophies quite exceptional among American women.

Dr. PRYOR said that he had many Syrians in his dispensary practice, and had noted among them frequent enlargement of the labia minora. These women were very cleanly about their persons, and followed the Mohammedan practice of clipping the hair short about the genitals. The same hypertrophies were frequently noted among negresses.

Dr. BALLERAY said that he thought Dr. Dickinson's experience must be quite exceptional, because a proportion of one in three hardly represented the frequency with which these conditions were encountered by the average gynecologist. This might perhaps be explained by his having seen a large number of women of a certain race. The profession was certainly indebted to Dr. Dickinson for calling attention to these changes.

Dr. DICKINSON, in closing the discussion, said that the racial question was an interesting one. It had been proved that among the Hottentots the enormous development of the labia minora into an "apron" was brought about by the custom of making traction on these parts during the years of a girl's growth. He understood that the enlargement of the labia minora had not been found to be especially frequent among the negresses of our Southern States, though it was more common, as a general rule, in proportion to the ignorance of the people. There were many cases of pelvic pain, dysmenorrhea and menorrhagia for which not enough disease could be found in the pelvis to account for such misery. If, however, there were found, in addition, one of these changes about the labia minora, it was fair to assume that the pain was the result of masturbation. The patient would rarely admit the practice, but if the treatment were directed to the possible existence of such a habit or the patient were warned, benefit would often follow.

THE PRACTITIONERS' SOCIETY.

169th Regular Meeting, Held on Friday, February 7, 1902.

Henry F. Walker, M.D., President *pro tem.*

A Case of Pulmonary Osteoarthropathy.—Presented by Dr. Walter B. James. The patient was a man twenty-seven years old, who had enjoyed good health until about three years ago, when, without known cause, he began to suffer from a cough. Soon after the onset of this cough it became paroxysmal in character, accompanied by a feeling of distress and suffocation, and these paroxysms were finally relieved by the expectoration of several ounces of purulent sputum. After these symptoms had continued for several months, he began to complain of pain in the hands, especially in the bones of the wrist, and in the ends of the long bones of the legs. He also gave a vague history of irregular fever, chills, and sweating.

The patient was first seen by Dr. James six weeks ago. He still complained of these paroxysms of coughing, with free purulent expectoration. His sputum was examined, and found to contain a large number of streptococci and colon bacilli, but no tubercle bacilli. Inoculation experiments in guinea pigs gave negative results. A physical examination revealed a general bronchitis, with coarse, sticky rales over the base of both lungs. The man's temperature usually ranged between 99 and 100° F.; then suddenly he would have a chill, followed by a temperature of 103° or 104°, which would again rapidly fall to the normal or slightly above. These chills and temperature elevations occurred at irregular intervals, and were not limited to any definite time of the day, but they were more apt to occur soon after an unusually severe paroxysm of coughing, and after the lung had been relieved of a collection of purulent sputum.

Some time subsequent to the onset of the pain in the bones, changes were first noticed in the ends of the bones. They became thickened, the ends of the fingers showed the typical club-shape, with fluctuation at the base of the nail. These changes in the ends of the bones have steadily progressed. A number of radiographs were exhibited by Dr. James, which clearly showed the deposits of new bone, and the fact that the clubbing of the finger tips was due entirely to thickening of the soft parts.

The physical signs in this case are so vague in character that the speaker said he had not been able to locate positively the seat of the chief difficulty. The patient had been given carbonate of creosote and creosote by inhalation, and latterly, intratracheal injections of menthol in olive oil. No malarial organisms have been found in the blood, and the spleen is not enlarged. In the lower dorsal and upper lumbar region the spines of the vertebræ are wanting, and these bones are very tender to pressure.

The case was clearly one of chronic fœtid bronchitis, with dilatations of the bronchi, and with the pulmonary osteoarthropathy which occasionally complicates the condition.

The negative result of inoculation of the sputum into guinea pigs may be regarded as excluding tuberculosis.

Interesting and unusual features are, first, the irregular attacks of high fever and chills without leucocytosis, and without any evidences of malaria; and, second, the very severe pain which comes on in connection with the paroxysms of coughing, and limited to the joints and the parts of the long bones which are changed, these pains being a very early phenomenon, and, perhaps, antedating the bone lesion.

Dr. V. P. Gibney said he had seen a few cases of pulmonary osteoarthropathy, but had never had an opportunity to find out just what the lesion in the lungs consisted of. In Dr. James' case the pulmonary condition was apparently not tuberculous in character. The speaker said that the cases with which he was familiar were in children with deformed spines, the deformity pressing on the lungs and producing changes in the chest wall. The interference with the pulmonary circulation in time produced these changes in the ends of the bones. In all his cases, Dr. Gibney said, there were distinct evidences of tuberculosis. In one case where the general health improved under better hygienic conditions, there was a distinct recession in the size of the clubbed-fingers.

Dr. George L. Peabody referred to a case of osteoarthropathy which he saw very recently at the New York Hospital. The patient was a man who was suffering from fibroid phthisis. His sputum contained tubercle bacilli. The deformity of the ends of the fingers was quite characteristic, but the toes were not affected, and there was no deformity of the long bones. The patient did not complain of any pain in the bones.

Dr. E. G. Janeway said that a very complete article upon this subject could be found in the transactions of the London Pathological Society for 1896. It included a history of the post-mortem findings and pictures of the enlarged bones.

Dr. George L. Peabody said that in the last edition of Osler's work Thayer has tabulated all the cases reported up to the present time, about fifty-five in all. The large majority of those cases were tubercular.

Dr. Janeway said there were other etiological factors beside tuberculosis; for example, syphilis and chronic diarrhœa.

Spontaneous Venous Thrombosis from Fluorine Poisoning—Recovery: With Method of Determination of the Rapidity of Coagulation.—By Fritz Schwyzer, M.D. (This paper will appear later.)

Dr. T. Mitchell Prudden asked Dr. Schwyzer what he had found to be the average time for the clotting of normal human blood?

Dr. Schwyzer replied that it took from five to eight minutes. In the normal rabbit it took from six to ten minutes, sometimes only five minutes, while in most of the rabbits poisoned by fluorine clotting occurred in from one to two minutes; in one or two of them, however, three or four minutes elapsed. Dr. Schwyzer said that in performing these tests, the cleansing and drying of the capillary tubes were very important. If the least moisture or acidity is present the value of the test is interfered with.

In reply to a question as to whether fluorine salt has been used for other purposes than for the preservation of beer, the speaker replied that he understood it was also used as a preservative for canned vegetables.

Specific Medication.—By Andrew H. Smith, M.D. (Vide page 401).

Dr. Janeway said that while he was fully in accord with those who would try the value of new drugs and new methods in the treatment of disease, and while it was well to be hopeful and optimistic, we must not permit ourselves to place too great a reliance upon the value of statistics. They are not infrequently collected by men whose judgment has been warped by their enthusiasm, and they are apt to cut out bad cases for reasons which are satisfactory to themselves, and as a result their figures show only the favorable side. Many years ago, the speaker said, he treated twenty-one consecutive cases of pneumonia at Bellevue Hospital in the most casual manner, and of those patients twenty got well. He had never seen nor heard of any better results than this by any other plan of treatment.

As regards the value of carbonate creosote in pneumonia, Dr. Janeway mentioned three cases where the drug was used without apparent effect. In one, an ulcerative endocarditis followed the pneumonia; in the second, the opposite lung became involved in spite of the fact that carbonate creosote had been given from the very onset of the disease, and in the third the patient died in spite of large doses of the drug. If we read the history of pneumonia we will find that various methods of treatment have become popular from time to time and highly praised, only to be discarded after a sufficiently large series of cases have been compiled.

Dr. **Beverley Robinson** referred to the erroneous idea entertained by many laymen that physicians possess a specific for every ill, and many do not take kindly to rational and intelligent methods of treatment. As a matter of fact, our knowledge of drugs is largely empirical, even of those upon the action of which we can rely. Take antitoxin, for example; we do not know whether it neutralizes the poison of diphtheria or strengthens the resistance of the organism. We look upon mercury as a specific in syphilis, and yet such an eminent authority as Sir Morell Mackenzie never used mercury in the earlier stages of that disease, preferring potassium iodide. Before we speak of the specificity of a drug we should have some tangible idea of what we expect it to do.

Dr. **Robinson** said that he would be glad to learn of some specific for pneumonia. Of the fatal cases that have come under his observation, death is usually due to the heart giving out. If we could find something to keep the heart going until the virulence of the infection has spent itself, the death-rate from this disease would, doubtless, be largely reduced.

Dr. **Peabody** said that while it was well enough to be sceptical in regard to the value of certain remedies, they should not be condemned until they had received a thorough and systematic test. If a remedy in the hands of good men has given favorable results in hundreds of cases, there is no reason why we should regard it with distrust until the cases have been increased to the thousands, as we did before adopting the hydrotherapeutic treatment of typhoid fever. To-day almost every physician believes in the value of the cold bath in the treatment of typhoid fever. It is not necessary in every case, but it has practically been adopted as a routine method of treatment; and yet, before we were convinced of its value in this country, a hundred thousand cases or more were treated by that method in Europe with a death rate of only 3 or 4 per cent., while the death rate in our hospital practice ranged between 20 and 25 per cent., and in army practice between 40 and 50 per cent.

Dr. Peabody said that while he did not feel particularly hopeful as regards the treatment of pneumonia by any new method or remedy, he had given sodium salicylate in quite a number of cases, and was much impressed by the frequency with which the disease in those cases disappeared by lysis; furthermore, the patients seem to bear the disease better and suffer less than those who were treated in the usual way or were untreated. The speaker said he was distinctly in favor of all efforts made in the direction of finding specifics for the various diseases, whether we get results in a few years or decades.

Dr. Peabody said he did not regard creosote in any sense as a specific for pulmonary tuberculosis. The beneficial effects of the drug are observed even when the dose is so small that it could not possibly exert a germicidal power.

Dr. **Robinson** said he did not think the "tubbing" treatment of typhoid fever was very popular outside of the hospital. Personally, he has never resorted to it in private practice.

Dr. **Andrew H. Smith**, in closing the discussion, said that several observers had noted that when sodium salicylate or carbonate of creosote was given in pneumonia, the disease usually terminated by lysis instead of crisis. The speaker said he attributed this to the fact that the drug seems to exert an inhibitory effect upon the pneumococcus, and this tends to stop the process before it reaches the crisis. In reply to Dr. Peabody's remark regarding the value of creosote in tuberculosis, Dr. Smith said that in pneumonia the conditions we have to deal with are entirely different. In pulmonary tuberculosis the tubercle bacilli are imbedded in a mass of tubercle tissue, and it is doubtful if the creosote can come in contact with the germs; furthermore, the tubercle bacilli are very hardy. On the other hand, the pneumococcus is a germ which is easily affected, and in the lung we get a very concentrated action of the drug—more so than anywhere else in the body, on account of the circulatory conditions in the lungs.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending March 8, 1902:

	Cases.	Deaths.
Measles	966	21
Diphtheria and croup	266	32
Scarlet fever	337	21
Smallpox	60	10
Varicella	104	..
Tuberculosis	267	183
Typhoid fever	27	8
Cerebro-spinal meningitis	..	8

Warts.—Tom Robinson, M.D., discusses warts in the February *Medical Magazine*. He places them under two sections, congenital warts and acquired warts.

Congenital warts occur, as a rule, singly, and show a marked proclivity for the face and posterior aspect of the trunk. At birth they are often passed unnoticed, until they become darker in color, firmer in structure, and covered with coarse hairs—it is then they become sources of disfigurement and annoyance.

Acquired warts embrace all warts which make their appearance after birth. These, again, must be divided into two groups, the persistent and the fugitive. The warts which come to stay appear usually as rounded elevations of the skin, varying in size from a pin's point to a split pea. They seldom attain a much larger size. They are met with in every region of the body: they vary in color and are modified by position.

With regard to the treatment of warts, Dr. Robinson says: If a crop of warts occur suddenly on either the face or hands, we may rest assured that they will disappear in a few months, in spite of any treatment we may adopt. "All remedies act best where there is a spontaneous tendency towards recovery." Those which are caused by a recognizable irritant will disappear when the irritant is removed. Those which are coeval with birth will be cured only by destruction. We have all of us our favorite escharotic. The one I use in my own practice is a saturated solution of potassæ fusee. This can be applied to the wart by means of a piece of wood. The surrounding skin must be protected by some grease during the operation. It will cause a sharp pain and a sense of throbbing and aching. The effect at first is to produce a copious exudation of viscous amber-colored fluid, as dense as the white of an egg, combined with a black-looking jelly mass, consisting of blood. This should be allowed to dry on the surface, and form a crust; in the course of ten or fourteen days the crust will be hard and fall off.

Examples of Excessive Feeding.—Interesting illustrations of the policy of excessive feeding may be taken from insect life. It is well known that many caterpillars gorge enormously. Their growth at that period of life is very rapid, and so also is the development of their structure. But they do not use up a twentieth of what they eat. They defecate continually, and to an enormous amount. Apparently their absorbent organs select what is wanted and disregard the rest, which is the bulk of what they have eaten. It is said that when a herd of nun caterpillars is feeding on the leaves of the spruce fir, the noise of their excrement falling on the foliage is like that of a shower of rain. That the fæces are not merely débris ejected without change is shown by the fact that they are excellent manure, whereas the spruce leaves themselves are useless. So efficacious is this manure that it is recorded respecting a year in which, in Bavaria, this caterpillar abounded that the grasses grew most abundantly the following summer. It was further remarked, as a secondary result, that the antlers of the wild deer in the forest were larger than they had ever been before noticed. In regions where locusts abound it is observed, as a set-off to their injurious depredations, that their very abundant excrement serves as an excellent manure. In this instance it is the nature insect which gorges itself, but it is still making growth.—*The Polyclinic.*

The Electrical Treatment of Phthisis.—Lagriffoul and Denoyès (*Archives d'Electricité Médicale*) have shown that, in the case of tuberculous lesions experimentally induced in the guinea-pig, the action of high frequency currents is to retard or greatly mitigate the development of the disease. In the untreated animals, which were used as a control, the lesions revealed post mortem were much more extensive and more advanced than in those treated electrically. The treatment was effected both by autoconduction and the "effluve," and of the two they found more benefit to follow the effluve moderately applied. Chisholm Williams (*British Medical Journal*), in a paper on the treatment of phthisis by currents of high frequency and high potential, gives the results of the method as applied to forty-three severe cases of pulmonary tuberculosis in the human subject. Of these forty-three patients, forty-two put on weight and lost all symptoms, except in some few a slight cough. The average duration of the treatment was three months, and the sittings were from ten minutes *per diem* upwards.—*Quarterly Medical Journal.*

Arsenical Poisoning, and Cutaneous Pigmentation.—J. C. Muir, Manchester, England, has recently made investigations on this subject and came to the following conclusions: (1) That the blood of arsenical patients, having deep cutaneous pigmentation, is decidedly richer in red cells and hæmoglobin than that of similar slightly pigmented or unpigmented cases; (2) That this disproves the almost universally accepted hypothesis that the pigmentation is due to destruction of hæmoglobin or red cells, and is evidence for thinking that the melanin of the skin is an important element in the production of hæmoglobin; (3) That in human beings arsenic causes a decided erythroblastic reaction in the marrow of the long bones; that a slighter but distinct leucoblastic reaction also occurs, which may be in part, or even wholly, due to accompanying tuberculosis; (4) That the erythroblastic function of the marrow is more easily stimulated in the presence of a large store of cutaneous melanin.

Overcrowding and Intemperance.—Dr. F. H. Morison, Medical Officer of Health for West Hartlepool, states that overcrowding in that borough is largely due to the taking in of lodgers into private houses. He believes that unsanitary and overcrowded dwellings are largely a cause, as well as the result, of intemperance. Can it be expected that a man who sleeps in a room with small cubic space, badly ventilated or not ventilated at all, and with three or four more occupants, will rise in the morning refreshed and able for his day's work? Dr. Morison says it is absolutely impossible. The result is that he feels tired and fagged out, and his only resource is to visit the first public house he comes to on his way to work, in the vain hope that spirits may stimulate him sufficiently to carry on his day's work. "This, I state without fear of contradiction, is a fruitful source of drunkeness."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended March 8, 1902:

		CASES.	DEATHS.
SMALLPOX—UNITED STATES.			
Arizona, Naco	Feb. 23	12	
Arkansas, Mississippi County	Feb. 18		100
California, Los Angeles	Feb. 15–22	6	
San Francisco	Feb. 16–23	18	
Colorado, Denver	Feb. 15–22	5	
Illinois, Chicago	Feb. 22–Mar. 1	2	
Danville	Feb. 22–Mar. 1	8	
Galesburg	Feb. 15–Mar. 1	4	
Indiana, Evansville	Feb. 22–Mar. 1	8	
Michigan City	Feb 17–Mar. 3	1	
Indianapolis	Feb. 15–22	7	
Terre Haute	Jan. 11–Mar. 1	12	
Iowa, Clinton	Feb. 22–Mar. 1	2	
Kentucky, Covington	Feb. 23–Mar. 2	6	
Lexington	Feb. 15–22	3	
Louisiana, New Orleans	Feb. 15–Mar. 1	2	
Maine, Durham	Feb. 15–19	12	
Freeport	Feb. 19	1	
Portland	Feb. 8–Mar. 1	9	
Sanford	Feb. 19	1	
Maryland, Baltimore	Feb. 22–Mar. 1	2	
Massachusetts, Boston	Feb. 22–Mar. 1	40	5
Cambridge	Feb. 22–Mar. 1	9	
Everett	Feb. 22–Mar. 1	1	1
Haverhill	Feb. 23–Mar. 1	1	
Holyoke	Feb. 22–Mar. 1	9	
Malden	Feb. 22–Mar. 1	1	1
Newburyport	Feb. 22–Mar. 1	1	
North Adams	Feb 22–Mar. 1	1	
Quincy	Feb. 22–Mar. 1		1
Somerville	Feb. 15–Mar. 1	6	
Waltham	Feb. 22–Mar. 1	1	
Weymouth	Feb. 15–Mar. 1	3	
Michigan, Detroit	Feb. 22–Mar. 1	2	
Grand Rapids	Feb. 22–Mar. 1	2	
Ludington	Feb. 22–Mar. 1	6	
Missouri, Hannibal	Feb. 1–28	6	
Montana Butte	Feb. 16–23	6	
Nebraska, Omaha	Feb. 22–Mar. 1	55	
New Jersey, Camden	Feb. 22–Mar. 1	5	1
Jersey City	Feb. 23–Mar. 2	19	
Plainfield	Feb. 22–Mar. 1	1	1
Newark	Feb. 22–Mar. 1	24	2
New York, Binghamton	Feb. 23–Mar. 2	10	1
New York	Feb. 22–Mar. 1	56	11
Ohio, Cincinnati	Feb. 22–28	7	
Toledo	Feb. 22–Mar. 1	1	
Pennsylvania, Allegheny	Feb. 22–Mar. 1	8	
Philadelphia	Feb. 22–Mar. 1	62	17
Pittsburg	Feb. 22–Mar. 1	6	
Scranton	Feb. 15–22	1	
Rhode Island, Providence	Feb. 22–Mar. 1	4	1
Warwick	Feb. 22–Mar. 1	4	
South Carolina, Charleston	Feb. 22–Mar. 1	2	
Greenville	Feb. 15–22	3	
Tennessee, Memphis	Feb. 22–Mar. 1	24	
Nashville	Feb. 22–Mar. 1	1	
Texas, Houston	Feb. 22–Mar. 1	32	
Utah, Salt Lake City	Feb. 8–22	2	
Vermont, Burlington	Feb. 15–22	17	
Washington, Spokane	Feb. 15–22	26	
Tacoma	Feb. 16–23	14	
Wisconsin, Fond du Lac	Feb. 22–Mar. 1	6	
Green Bay	Feb. 23–Mar. 2	10	
Milwaukee	Feb. 22–Mar. 1	2	
SMALLPOX—FOREIGN.			
Austria, Prague	Feb. 8–15	10	
Colombia, Cartagena	Feb. 15		3
Panama	Feb. 17–24	50	10
France, Paris	Feb. 8–15		3
Great Britain, Cardiff	Feb. 1–8	1	
Dublin	Feb. 8–15	3	
Dundee	Feb. 8–15	4	
London	Feb 8–15	1,185	64
India, Bombay	Jan. 27–Feb. 4		3
Calcutta	Jan. 11–Feb. 1		3
Karachi	Jan. 19–Feb. 2	34	8
Madras	Jan. 25–31		1
Italy, Rome	Dec. 27–Jan. 4		2
Mexico, Mexico	Feb. 8–16		1
Russia, Moscow	Feb 1–8	20	6
Odessa	Feb. 8–15	1	3
St. Petersburg	Feb. 1–15	14	3
Uruguay, Montevideo	Jan. 11–18	65	5
YELLOW FEVER.			
Mexico, Vera Cruz	Feb. 15–22	1	1
West Indies, Curacao	Feb. 1–8	1	1
CHOLERA.			
India, Bombay	Jan. 27–Feb. 4		1
Calcutta	Jan. 11–Feb 1		159
Madras	Jan. 25–31		1
PLAGUE—UNITED STATES.			
California, San Francisco	Feb. 22	1	1
PLAGUE—INSULAR.			
Hawaii, Honolulu	Feb. 18		3
PLAGUE—FOREIGN.			
China, Hongkong	Jan. 11–18		1
Shuitung	Jan. 18	Increasing.	
Young Keong	Jan. 18		60
India, Bombay	Jan. 27–Feb. 4		538
Calcutta	Jan. 11–Feb 1		193
Karachi	Jan. 19–Feb. 2	107	90
Madras	Jan. 25–31		1
Russia, Batoum	Feb. 5	1	

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Original Articles.

ARE VESSELS INFECTED WITH YELLOW FEVER? SOME PERSONAL OBSERVATIONS.

By HENRY R. CARTER, M.D.,
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IN a paper read before the American Public Health Association at Buffalo, September 18, 1901, Dr. Doty, the Quarantine Officer of New York, affirms the absence of secondary cases of yellow fever aboard vessels; *i. e.* that while cases of this disease contracted ashore develop aboard vessels, yet none are contracted aboard the vessel itself. That is, the vessel does not become "infected" with yellow fever.

The experience of other quarantine officers has been different, and it may be of service, then, to group some cases already of record in which the contrary was observed. It is not proposed to collate a number of examples of vessels, aboard which yellow fever was contracted, from the literature of the subject, but to give very briefly the history of some such vessels personally observed by the writer, from his own notes, during a four-years' service (1888 to 1891 inclusive) at the Quarantine of the Gulf, Chandeleur and Ship Islands. Here were received all vessels believed to be infected with yellow fever bound for all of the Gulf ports, except for New Orleans and from Tampa south. Consequently our clientele was considerable. The bulk of them, however, although certainly the worst class of vessels which entered the Gulf of Mexico, were not, in my opinion, "infected" when I received them; *i. e.* yellow fever could not then have been contracted aboard them.

I will premise here that I accept without reservation the conveyance of yellow fever by an infected mosquito of a certain kind, and that to me a vessel "infected" with yellow fever is simply one which is harboring these infected mosquitos. Whether they come aboard already infected, or, being aboard, became infected by feeding on cases of yellow fever developing aboard ship but contracted ashore, can in general be determined from the history of the spread of the infection. Indeed, it was primarily the history of these and other ships which led to the (tentative) formulating of the laws of the "Interval between the Infecting and Secondary" cases of yellow fever and the "Period of Extrinsic Incubation of Places" of that disease, which, and much else, are so clearly explained by the conveyance by a mosquito host.

The deductions as to the disease being contracted aboard the vessels, when such deduction is made, are, however, independent of the assumption of any theory of conveyance. I do assume, however, that the period of incubation of yellow fever rarely, if ever, exceeds six or six and one-half days.

I.—1888: Ship Island—"Norwegian bark *Magnolia*, 946 tons, fifty-six days from Rio, via Pensacola bar; rock ballast. Left Rio May 20; left two men sick in hospital and had one aboard, considered yellow fever; master sick third day out, May 22; died May 27; all well till June 1, then several (three) got sick at once; first mate sick June 11; died 17, black vomit; all were sick on the way up except two; twenty-one on crew list, including the two men left in Rio. One of these who escaped fever has had yellow fever, and the other is a lad from Dantzig on his first deep-sea voyage. In all, seventeen men were sick of fever *en route*, of whom five died. The last case, Elias Eliasen, developed June 14."

Here, save the captain, all sickened not less than eleven days after leaving Rio, and the first mate and Eliasen on the twenty-third and twenty-sixth day respectively. They then contracted yellow fever aboard ship.

The picture is that of an infection introduced aboard the vessel by the men who sickened in Rio; *i. e.* there were uninfected stegomyiæ aboard, which were infected from these cases and conveyed yellow fever to the remainder of the crew, except the captain, who contracted it ashore. I did not record the dates of the cases of the men left at Rio; it was shortly before clearing. The interval between an infecting and a secondary case is almost always fourteen days or over.

II.—"Italian bark *Riagino*, Rio for Pensacola, fifty-one days out; rock ballast, 560 tons. No sickness in Rio until just before leaving, then sent two men to hospital; left five days after; log shows men were taken June 4 and 6 and removed on the 6th; sailed on June 10; no one had been ashore save master and steward, using a harbor boat. First case reported sick *en route* June 21, one next day; six sick *en route*; three deaths June 28, June 29, and July 14, all with black vomit; crew refused duty at second death; last case well July 13; sixteen on crew list, two in Rio; master has had yellow fever; steward sick just after leaving, not considered yellow fever."

Six cases developed ten days after leaving Rio. Same remarks as were made of the *Magnolia* apply here. No record is made of where these two vessels lay in Rio, the writer not then appreciating the importance of this.

1889.—My notes for 1889 are lost, and, indeed, there may have been in 1888 more than the two vessels given above which should have been included in this paper; but my notes, taken at first solely with the view of determining the period of incubation of yellow fever, give data on only these two sufficiently definite to determine that they were infected; *i. e.* that yellow fever was contracted aboard.

III.—1890.—"British ship *Avon*, in rock ballast; twenty-two in crew, four immune to yellow fever. Sailed from Rio April 20; all well in port and *en route* until thirty-eight days out, when a boy in port watch sickened with yellow fever; taken to hospital, Gulf Quarantine on third day, and died on sixth; another case developed two weeks later, in a quarantine attendant who helped me clean up the room, sail locker, in which the boy was sick aboard the ship."

It is remarkable that there should have been only *one* case of yellow fever among the crew aboard this vessel. At the time it was ascribed to the fact that this boy, the only one on the port watch, helped a man, shipped in Rio and immune to yellow fever, overhaul his chest a few days before the boy was taken sick. Whether there was an infected mosquito in the chest which had survived this length of time, or whether there was any relation between the chest and the fever, may be a question. It in no wise affects the present question that the disease was contracted aboard. It was the first case seen at this station that year.

IV.—"British ship *Curlew* from Rio Janeiro, with rock ballast. No sickness was reported *en route*, in port, or on arrival; she was cleaned July 22 to July 23, 1890, and disinfection completed July 25, in the afternoon; one case of yellow fever developed July 27, the sixty-fourth day out, in the early morning, before day."

V.—"British ship *Chippewa* from Rio Janeiro, with rock ballast; no sickness was reported in port, *en route*, or on arrival; she was cleaned July 26 and July 27, and disinfection completed July 28; one man, the quartermaster, developed yellow fever July 29, at night, sixty-eight days out from Rio."

The *Avon* made no port after leaving Rio, and communicated with no vessel *en route*. The other two made no port save Pensacola bar, and communicated with no vessel save the pilot boats there and off Mobile bar. The infection in these three vessels, then, must have been contracted aboard. They lay in open roadstead at my station, one and a half miles off shore, and about one half-mile apart, and there was no visiting between them, and none of their crews were ashore.

VI.—"Spanish bark *Castilla*, fifteen days from Cienfuegos via Round Island Quarantine, in rock and earth ballast, fourteen in crew; eight days out from Cienfuegos to Round Island; all well in port, *en route*, and on arrival; mate sickened fourth day after arrival at Round Island while discharging ballast. Vessel sent here in tow August 22; mate has yellow fever, died on the sixth day of illness; captain developed yellow fever day after mate's death; taken to hospital; no other cases of sickness aboard; the remainder of the crew are, save one, Manila men, and all probably immune to yellow fever, being mainly residents of Cuba for many years."

Here two men developed yellow fever, one twelve and one seventeen days after leaving Cienfuegos. The infecting mosquitos may well have been harbored in the hold, which the mate would probably not have visited until he anchored at Round Island and began discharging ballast, and in which the master would not be apt to go while the mate was on duty.

VII.—"Spanish bark *Gran Canaries*, seven days out from Havana to July 7; all well in port, *en route*, on arrival, and while in quarantine; crew probably all immune to yellow fever, being mainly Manila men and old residents of Havana. O. F., quarantine employee, went aboard as ballast master, next day developed yellow fever, July 11. This man had been exposed to no possible source of infection for the six months previous, except this vessel."

A case nearly similar to the above occurred in 1889, but I have no notes of it.

VIII.—"Norwegian bark *Queen of the Seas*, in rock ballast, Rio for Pensacola, fifty-four days out; left Rio with seventeen men, six deaths *en route;* all well in Rio. Lay at Mocanque, a healthful part of the harbor; none save master allowed ashore, but he went in ship's boat; left one man Rio, consumption; shipped one man, a negro, in his place; sailed April 23; master sick April 26; second mate sick night of May 10; two men May 11; one man May 12; two men morning of 13th; two during day of 13th; one man sick and one died 15th; one man died 17th; two sick 17th; one died 19th; two died 21st and 22d; one sick 21st; one died 25th; thirteen sick *en route*; five died. The man shipped in Rio (negro) and one of the others immune by previous attack."

The picture is very clear of a clean ship, infected by the illness of the master contracted ashore, *i. e.* had *uninfected* mosquitos aboard, which became infected from the master sick of yellow fever, and conveyed it to the crew.

IX.—1891.—"British ship *Curlew*, fifty-seven days from Rio for Pensacola. Lay in the Gamboa last eight days. Two sick men February 27; taken to hospital that day; sailed March 1; master sick March 1; five men besides him that night; two men March 4; one March 5, and two more during the day; two men sick March 7; two men died the 19th, sickening the 13th and 15th, respectively, both with black vomit; all aboard here, nineteen, were sick *en route* except one, a Barbadoes negro; but don't believe all had yellow fever, the crew having been badly frightened. The earlier cases and the three who died were undoubtedly yellow fever, as were the steward and mate."

Here we have two cases, at least, developing thirteen and fifteen days after leaving Rio.

X.—"Swedish ship *Condoren*, seventy-nine days out from Rio via Pernambuco for Mobile. Rock and earth ballast. Eighteen in crew; all well in port; lay in Gamboa last five days; no shore leave allowed, but took ship's boat to go ashore; sailed March 3; three men sick March 5; sixteen men sick all told up to March 26, and six deaths. Last man got sick March 26, when she put into Pernambuco short-handed and sent three sick to hospital. Two men sick March 20; four men sick March 18; one man sick March 26 (really night of 25th). At Pernambuco she lay eleven days and was disinfected by sulphur. Shipped eight new men, four, probably five, of them immune to yellow fever. Developed no sickness on the rest of the way up."

Here four men developed yellow fever fifteen days from Rio.

XI.—"German ship *Gustav and Oscar*, Rio for Pensacola. Lay at Cobras, a healthful place. One case yellow fever at Rio, March 22; sent to hospital March 24; no shore leave allowed; sailed from Rio April 1; first case, sickened April 7, two men; three next day; one next morning, and two during the day of the 9th; one death on 10th, leaving six men sick; captain sick on the tenth at night after supper; last case on 14th; two deaths on the 11th; one on the 12th; crew list shows twenty-one men left Rio; fourteen sick and four deaths *en route*. It is reasonably certain that four of the remaining crew were immune to yellow fever by previous attack."

XII.—"Norwegian bark *Crown Prince*, fifty-eight days out from Rio for Ship Island. Lay at Moncanque; no sickness aboard in Rio; no shore leave granted, and did not use ship's boat to go ashore; sailed April 29th; master sick second day out (April 30); next case May 16; three (two after and one forward) became sick; May 17, two sick in morning, one in the day; May 18, three men in forecastle sick; May 20, two sick, one death; May 21, one death, one sick; May 23, two deaths; May

24, one sick; May 28, one death last night; May 29, one sick this morning; May 30, one death." The one case on the 29th was the last case taken sick. There were fourteen men aboard and every man had fever, six dying. She put into Barbadoes on June 10, disinfected, and shipped (in quarantine) four new men, one probably unacclimated. No more sickness *en route.*"

All of these cases, except the captain's, were not less than sixteen days from Rio before developing.

XIII.—"French ship *Emily Postel,* twelve days from Vera Cruz via Pensacola Quarantine. Had "sickness" aboard just before leaving Vera Cruz, one man; sailed from Vera Cruz July 28; no sickness since until the crew went to discharge ballast, August 12; one man sick yellow fever August 15; two men the same August 19, and one man August 20; disinfection by sulphur was done on the appearance of the first case of yellow fever, and no case occurred save the above."

All were developed more than sixteen days after leaving Vera Cruz, hence from infection on board. The history points to infection (infected mosquitos) in the hold.

The picture given by the *Curlew* and *Condoren* are those of disease conveyed by mosquitos coming aboard *already* infected just before they sailed. The infection was not introduced by the men who first sickened. The interval between them and the next cases was too short. Observe that they lay in the Gamboa, directly in the lee of a town badly infected. The other two give the usual history of a clean place (town or vessel) infected by some one *developing* yellow fever, contracted elsewhere, in it.

XIV.—Dr. G. (Assistant Surgeon, U. S. M. H. S.) developed yellow fever June 18 at the Gulf Quarantine station, and died June 29. He was immediately from New York, where he had been on duty for some months, and had been at the station but fourteen days when he was taken ill. There had been no case of yellow fever at the station that year. There were a number of vessels in quarantine, but the *Gustav and Oscar* (No. XI.) was the only one I judged to be infected. On this vessel, as on the others, he had been with me inspecting, opening up drawers and boxes, and going into every compartment, etc., for the disinfection. I thought his infection was from this vessel. It was certainly from *some* vessel.

I think it will be granted from the above that the ability of a vessel to carry the infection of yellow fever is no myth. Here are thirteen vessels which did so carry it collated from only three years' observation at a single station. Such vessels are, indeed, rarer, much rarer, now than they were before 1894, yet they still come. I saw two at Tortugas in 1894. Other cases are reported by Geddings and by Echemendia at the same place and at Port Tampa Quarantine. Rosenau reports a case contracted aboard the steamship *Vigilancia* from New York, plying between New York and Vera Cruz, via Havana, in 1899. The steamship *Bodo* last year (1900), from Bocas del Toro for Mobile, developed three cases of yellow fever, seven, eight and nine days out from Bocas. It would not be difficult, I think, to multiply instances of recent date, yet that they are rarer is without question. On the factors which have brought this about we can barely touch.

Obviously there are two methods by which vessels can become infected: (*a*) A case of yellow fever contracted elsewhere may develop aboard a vessel already harboring stegomyia mosquitos which become contaminated from it; (*b*) The stegomyia mosquitos may come aboard already contaminated. In the first case, there being nearly always over two weeks between the infecting and the first secondary cases of yellow fever, it results that, if the first case occurs after leaving port, vessels, even sailing vessels, from Cuba and the Caribbean Sea, will generally reach quarantine and (if at a southern station) be disinfected; *i. e.* mosquitos killed, before it is time for the secondary cases to develop or, indeed, to be contracted. This agrees with all observation. In vessels infected in the second way, cases of yellow fever may occur after a very short time, or no interval, from leaving port. The causes then which have lessened the number of infected vessels at United States ports are:

(1) The very great falling off of vessels from Rio and Santos since the establishment of the Brazilian republic. This does away with the bulk of the "long-trip vessels" we used to have, which are the only ones developing secondary cases *en route* if infected by a case of yellow fever developing aboard (*vide a*).

(2) The replacing of sailing craft by steamships. That steamers convey yellow fever less frequently than sailing vessels has long been known. This is because they lie a much less time in an infected port, and the discipline of their crews is better; no shore leave means no man goes ashore. They also make quicker trips, and thus are not apt to develop secondary cases *en route*, even if yellow fever contracted elsewhere develops aboard and they have the stegomyia aboard. It is also to be noted that the worst parts of the harbors of Havana and Rio, above San José wharf and the Gamboa, have never been berths for steamships. Note, too, that the sailing vessels displaced are the foreign sailing vessels; the American schooner was less often infected than foreign vessels.

(3) Especially since 1893, and to some extent before, supervision has been kept by United States Sanitary Inspectors in the more dangerous yellow-fever ports over vessels bound for the United States, especially of passenger vessels. Certain anchorages have been recommended as safe, others have been forbidden, notably the Gamboa at Rio and certain wharves and parts of the harbor of Havana. Passengers who it is believed will develop infection aboard have been barred; shipment of new men in the infected port carefully supervised; vessels in which yellow fever has occurred in port are disinfected before leaving, and many other measures taken to have the vessel to leave port clean, or as nearly clean as commercial considerations allow. In general, the vessel owners, especially of the regular lines, have given hearty cooperation in these measures, as well as in keeping the crew aboard, and in confining to daylight the visits of such officers as must go ashore. These restrictions, especially the last, have by no means been absolute for all classes of vessels, but are well observed, in Cuban and Mexican ports at least, by probably over five-sixths of the tonnage. The sanitary measures to avoid infection (3) and the proportionate substitution of foreign sailing vessels by steamships (2), are without doubt the main factors acting in cooperation in lessening the infection of ships. No one can read Burgess' list of infected vessels in Havana Harbor (Report, U. S. M. H. S., 1896) without noting how great has been that increase in recent years.

We have said that if a case of yellow fever develops aboard a vessel harboring the stegomyia mosquito (proper conditions of temperature being premised) they may become contaminated by feeding on him and infect others. A vessel which has no stegomyia aboard is like non-infectable territory and will not communicate infection, even if cases of yellow fever develop aboard. I think it fair to say that vessels plying to and from southern ports of the United States will, during the summer season, generally have the stegomyia aboard, independently of its berth in tropical harbors, and may at times breed them in their water supply. This mosquito, however, seems to be rare north of Virginia Beach (its distribution has not been sufficiently investigated however), and a vessel plying to and from a northern port of the United States would not harbor this mosquito unless it came aboard in the tropical port. Now how far this mosquito goes, or is borne from shore, has not, I think, been directly investigated, but we do know that the crews of vessels moored off from shore (say, two hundred or more fathoms) in that part of Havana harbor seaward from the line between the Station Catalina warehouses and the Machina wharf do not develop yellow fever (unless close to some vessel which is infected). This means that *contaminated* stegomyia, at least, do not go so far from shore. Lying then at the anchorages accounted safe in Havana harbor, where the passenger vessels for the United States lie, one would think that the probability of any stegomyia coming aboard would be small. At Vera Cruz the vessels must lie nearer ashore (although to windward of it), and experience shows that the crews of vessels lying there are not entirely safe—as I believe them to be in Havana—although infection in the part of the harbor picked out as safe is decidedly rare. The anchorages in both harbors regarded as safe are well to the windward of the town all summer. A direct investigation of this matter, *i. e.* the presence of the stegomyia aboard vessels from northern ports in different parts of the harbor of Havana and other tropical harbors should be made. To sum up:

1. Vessels aboard which yellow fever had been contracted, *i. e.* vessels infected with yellow fever, have not been rare, at least at southern quarantine stations.

2. Such vessels are much rarer since 1893, and are not very common now.

3. That the diminution of the number of infected vessels reaching United States ports is due mainly to the sanitary measures for avoiding exposure to infection in the foreign port, and to the substitution of steam for sailing vessels. To some degree the falling off of the vessels from Brazilian ports is also a factor.

4. That a case of yellow fever developing aboard a vessel plying between southern ports of the United States and the tropics will probably infect the vessel, so that other cases can, if time be given, be contracted aboard her.

5. Such vessels, however, if short-trip vessels, not more than ten or twelve days *en route* after the occurrence of the case of yellow fever, will in general be disinfected at southern quarantine stations before any other cases have been contracted abroad, although harboring infected mosquitos.

6. That a case of yellow fever so occurring aboard a vessel from a northern part of the United States would be able to infect her or not according to whether she had acquired the mosquitos stegomyia fas. in the tropical port.

7. It is, in general, then, necessary to disinfect all vessels running between southern ports of the United States and tropical ports if a case of yellow fever occurs aboard, no matter where it be contracted; while vessels running between northern ports and the tropics may, through precautions in tropical harbors, have no stegomyia aboard, and are thus not infectable by cases of yellow fever occurring aboard.

8. Some vessels giving no history of yellow fever in port, *en route*, or on arrival—even when many days *en route*—are nevertheless infected, and communicate the yellow fever to those who go aboard (*vide* Nos. IV., V., VI., VII.). Note also the first case aboard the *Avon*, No. III., was thirty-eight days out from Rio. This is probably due to the infection (infected mosquitos) in parts of the vessels unfrequented by the crew while *en route*, or to the crew being all immune to yellow fever.

PATHOLOGY OF APPENDICITIS.

WITH SPECIAL REFERENCE TO FOREIGN BODIES IN THE APPENDIX.

NEW SURGICAL POINTS.

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THE appendix consists of the same structures that belong to the cæcum, except that there is an excess of lymphoid tissue. The connective-tissue layers, the most important of which is located between the lymphoid tissue and the longitudinal muscle, become, in appendicitis, greatly distended with serum, and thus form a strong factor in strangulation of the other layers.

The principal arterial supply of the appendix is from a branch of the ileocolic artery, which passes along the free margin of the mesappendix, and its arrangement is of some clinical importance. In some women the appendix receives a little collateral circulation by way of the appendiculo-ovarian ligament.

The lymphatics of the appendix pass largely to a ganglion at the cæcal extremity.

The lymphoid or submucous coat and the serosa of the appendix are connected through gaps in the muscular layers, and through these gaps an infection can quickly spread to the investing peritoneum or, conversely, to the mucous coat. The nerves of the appendix are from the superior mesenteric plexus of the sympathetic system, which is widely distributed to the small intestine, and this explains why patients often suffer from colic and general abdominal pain, or pain at the navel, without realizing that its origin is at the appendix a little part of the whole. Thus, it is nearly the exception for the pain to be located in the appendix at the outset of an inflammatory attack.

The contents of the appendix usually consist of mucus and some fecal matter, and under normal conditions fecal matter and gas find easy entrance to and exit from an appendix on account of contractions of its muscular layers. A very little swelling of the inner or other coats suffices to obstruct the lumen. Thus a concretion or foreign body which is about the size of the lumen of the appendix readily enters, comes closely in contact with the mucous coat and, in consequence of contractions of the muscular layers, sets up irritation in the mucus and other layers, with resulting congestion and subsequent inflammation, ulceration, etc., unless it is expelled.

Concretions are of three kinds: fecal, phosphatic, and fatty, and are formed in the cæcum, appendix, or elsewhere by a bit of fecal matter being rolled into a ball or rod, and cemented with mucus; insoluble salts being precipitated from the fermenting mucus, and arranging themselves more or less in layers, alternately with the other elements of the altered mucus. Phosphatic concretions are also formed as a result of decomposition of mucus. Phosphate of calcium is the common, and sometimes the only ingredient of a concretion which may become as large as a hickory nut.

The large proportion of fat in some concretions is in all probability due to fatty degeneration of the lymphoid cells of the appendix.

Concretions are round, flat, oval, or rod-shaped, some occur singly, others multiple. Various kinds of seeds are closely simulated by concretions, and this accounts for the popular error that seeds are apt to get caught in the appendix.

Fatty concretions probably occur only as a result of long ulceration of the lymphoid coat.

Bacteria are also found in the appendix. The colon bacilli which are found normally in the colon are almost invariably present in the lumen of the appendix, and they are harmless dwellers there unless an irritation, as already mentioned, gives them an opportunity to migrate into the tissues. Streptococci are also quite constantly found. Many of the less important pyogenic bacteria and saprophytes or bacteria fermentation lurk in the appendix, awaiting the advent of conditions which will be favorable for their rapid multiplication. When an irritation is produced and inflammation sets in, the growth is usually mixed in character. The streptococci are at first more energetic than the others, but later the colon bacilli predominate. Sometimes entoza are found in the appendix.

According to my observations, appendicitis is an inflammation of the appendix vermiformis, originating in any cause that produces an irritation within or without the tissues of the appendix, the irritation causing congestion of the adjacent layer or layers, and later inflammation occurs in consequence of bacterial invasion, the organisms swarming into the adjacent layer or layers and depositing inflammatory products within them, stasis and exudation being much favored by the compression of the muscular, connective tissue and peritoneal layers of the appendix. Thus the principal cause of appendicitis is some local irritant, *i. e.* a concretion, entozoa, or foreign body that locates itself within the appendix and injures its mucous coat. The chief cause for bacterial infection within the appendix is the trauma to the mucosa. Sometimes the appendix is injured by accidental twists, violence from without and adjacent violent muscular contractions. An infection occurs at times in its peritoneal coat by extension of a local or general peritonitis to the appendix.

As the result of a lesion in the mucosa, microorganisms swarm into the tissues through the break, the bacteria multiply, toxins form as the result of bacterial growth, and in consequence of the invasion, serum is exuded into the tissues of the appendix, placing such tissues under the influence of serum compression. The lymphoid coat of the appendix and its connective-tissue layer, forming the principal part of the inner tube of the appendix, swells as a result of congestion of its layers, and the contractions of the muscular layers of the appendix stimulates the branches of Auerbach's plexus. This extends to other parts of the intestines, causing irregular spasm, producing colics, and thus over-stimulation of the sympathetic system extends still farther, and the vaso-motors cause the heart to contract rapidly, producing rapid pulse.

The layers of the appendix, on account of its indistensibility, through the rigidity of the serosa and connective tissue layers, undergo rapid destructive changes, its cells readily succumbing to the toxic destruction of bacteria. The infected appendix with its lymphatic and blood circulation obstructed, is not reached by a collateral circulation which can bring leucocytes to act as protectors, and consequently the bacteria are free to destroy. Sometimes when the lesion is not progressive, nature gets the upper hand, and we note the processes to the normal state, resolution taking place here the same as a resolving inflammation in other localities, thus leucocytes are carried freely to the place of infection, the bacteria, etc., are overcome and recovery sets in. The appendix, however, in most instances, is particularly unfitted to receive help, for when its single-artery circulation is blocked, the appendix stands out as an isolated area of infection, cut off from protection, and bacteria are at liberty to continue their work. A sufficient degree of exudation compression having cut off the access of leucocytes, the toxin destruction of the inner tube of the appendix progresses. In milder cases, as in appendicular colic, there is simply desquamation of patches of mucosa, but the injury is not easily repaired, and the bacteria lurking in such a disabled appendix may keep up a certain degree of malign influence, sometimes for many years, though the patient be unaware of the fact. Bacteria in the lumen of the appendix are ready to make new attacks at any favorable moment, so that the appendix when once crippled may be readily infected in the future, because when once an irritation has been produced within its lumen. and has acted upon its walls, pathological changes have been produced by inflammation, its complications and sequelæ, *i. e.* ulceration, scar formation, strictures of the lumen, etc., which predispose to future infections.

There is no specific microbe for appendicitis. The colon bacillus is always present, and there is a very decided tendency on the part of the streptococci and colon bacilli to outstrip the others, and finally the colon bacilli usually gains the mastery.

The temperature in appendicitis does not indicate the extent of infection, but gives a clue to the character of the infection. Thus, high temperatures more often occur when the infection is mixed, or caused by streptococci. A temperature of 103° F., or more, at the outset of an attack of appendicitis seems to mean that the toxins of mixed bacteria are sending the temperature up. The temperature in early appendicitis is not often elevated: a colon bacillus infection may show a normal or subnormal temperature from the outset, and such a temperature may continue while the most disastrous effects are being produced by the bactera in the tissues.

R. T. Morris has noted abscess of the liver in some of these cases as early as on the fifth day. There is no doubt that hepatic abscesses appear in some cases of appendicitis that are too mild to attract the attention of the physician directly to their original cause. The solitary artery of the appendix is obstructed sometimes in accidental twists of the appendix.

Dyspeptic symptoms are usually the result of fresh or old adhesions, and they are complications that can usually be cured by operation.

Peritonitis is the most important complication of appendicitis. The least severe form is limited to the peritoneum of the appendix and mesappendix. The irritating products of bacteria at work within cause a reddening and roughening of the serosa. The mesappendix contracts firmly, and remains fixed by adhesions if the inflammatory process is severe enough to produce plastic exudate. When the peritonitis spreads beyond the appendix the exudate covers adjacent peritoneum and thus more or less surrounds the appendix.

This is Nature's method of walling off the inflammation, and, unless bacteria have gained the headway, the inflammation is encapsulated. When the inflammation is more intense, either no plastic exudate forms, or what does form is liquefied, and the progress being more or less rapid, diffuse peritonitis occurs. The peritoneum does great service for or against the patient, according to the dictate of the physician or surgeon in charge. The extent of peritoneal infection from appendicitis bears no direct relation to the extent of destruction in the appendix itself. Most violent peritonitis can occur in cases in which bacteria have migrated from the appendix via the blood-vessels, lymphatics or loose connective-tissue planes, and not through a perforation in the walls of the appendix. On the other hand, a little local peritonitis may suffice to wall in a perforated or completely sloughing appendix. The relative importance of perforation depends upon whether the rupture occurs intra- or extraperitoneally. If intraperitoneally, the inflammation will surely be rapidly diffused if not walled off by omentum or plastic exudate; if extraperitoneal, the inflammation will usually be local, with the formation of one or more abscesses. The appendix is very seldom totally destroyed by one or more attacks of inflammation, unless the attack happens to be fatal. In those cases wherein one or more abscesses form, the appendix is usually but slightly destroyed. Thus the appendix should always be removed at the primary operation, no matter what stage of the disease, if the patient's condition permits, otherwise remove it later on.

When protective lymph is thrown out and, subsequently, bacteria have liquefied it, the peritoneum in many cases keeps on trying to protect by putting up new plastic walls further and further away, thus a large walled-in abscess frequently results. Very often the plastic exudate becomes liquefied in several places by bacteria leaving firm exudate in the intervals, and thus multiple abscesses are produced. We must separate all adhesions in operating upon acute cases with pus, to be sure that all abscesses are discovered and opened, for a very small abscess, if overlooked, can prove fatal. An abscess sometimes fails to evacuate itself, and, not proving fatal, may remain encapsulated for a long time, render the patient an invalid, and, in addition, subjects him to the distress of acute exacerbations of inflammation. An abscess, whether formed intra- or extraperitoneally, if neglected by the physician or surgeon in charge, may rupture externally through the skin, internally into the intestine, peritoneal cavity, or perforate the ureter, bladder, iliac vessels, or even the pleura and lung.

Thus appendicitis with abscess is, consequently, a most critical condition. A large abscess may form with comparatively little pain, or a small one with much pain on account of pressure on nerves or unyielding tissues. Adhesion bands are extremely common after appendicitis. The plastic exudate when recent and small in amount may undergo complete absorption in some cases, in others adhesions remain permanently, yet cause but little trouble. In some others the adhesions are pulled out into long bands by the moving viscera or omentum becoming adherent, and, being moved around, become rolled up like a rope, or divide into filaments, which trap loops of intestine. Adhesion bands thus cause volvulus and kinkling of the bowel, inhabit peristalsis of the colon, and produce intestinal stangulation even years after an attack of appendicitis. The most frequent complications caused by adhesions are chronic constipation from diminished peristalsis, or occasional attacks of colic from temporary incarceration of knuckles of bowel. Phlebitis of the iliac and femoral veins is a complication that may cause death in a case that might otherwise be a moderate one. Acute suppurative nephritis may appear early in the disease and carry away the patient.

Septic pleurisy and pneumonia may suddenly and unexpectedly develop in any stage of the disease. Tuberculosis and carcinoma of the appendix are sometimes complications. The simple stage of appendicitis causes symptoms when exudation and destruction of cells cause a small portion of the lining of the appendix to disappear by ulceration, or by sloughing. Thus, when resolution occurs in such a case, the injury left in the tissues is closed by granulation with resulting connective tissue formations, which slowly contract and narrow, or closes the lumen of the appendix. Such a patient may be free from symptoms of appendicitis in two or three days, but the injury has been done. More erosions of the mucosa and lymphoid tissue will in all probability follow on açcount of constriction of the lumen. Connective tissue gradually replaces the brokendown inner tube, and if it is evenly replaced without the formation of a stricture the disease may eventually disappear. In these chronic cases the structures, excepting the mucosa, frequently become hypertrophied during the infection, but finally sometimes nothing remains except a string of connective tissue, surrounded by ill-defined portions of mucosa muscle, and peritoneum. We cannot reasonably expect that the disease will terminate in this way because more infection frequently brings the case to an abrupt termination. In the active cases all the layers are rapidly destroyed. Females suffer less than males, as they expose themselves less to trauma; their pelves are wider and not so likely to hold a displaced appendix in an abnormal position, and their attacks may not be so severe, as sometimes there is a collateral circulation through the appendiculo-ovarian ligament. Thus about twenty per cent. of the cases are women. Appendicitis is most common in both sexes between the ages of ten and thirty-five, but it may occur in the infant at the breast, or the aged. The very young, and those past middle life, expose themselves less to trauma. It is important to remember that the inflammation may spread along the lympathics to the right broad ligament, so that appendicitis may be mistaken for ovarian inflammation or salpyngitis.

From a clinical standpoint, a nomenclature has been sought for the description of various kinds of appendicitis, but apparently there is only one kind. We may speak of a case as appendicular colic, catarrhal, acute or chronic, perforative or suppurative appendicitis, and so on indefinitely; appendicular colic may be present one day, catarrhal the next day, and perforative appendicitis a couple of days later, and still later, in the same case, gangrene may occur. Thus the various phenomena of appendicitis should not be described as indicating different kinds of appendicitis, but rather as marking different stages of one kind of disease.

The diagnosis of the stage of the disease can only with certainty be made at and after the operation. We do not know when an attack will stop, because the resisting power of the appendix to disease abvancement is absolutely unknown. We can sometimes place a case in a certain sort of classification from clinical symptoms, and after we have seen the appendix we have found we have more or less guessed it right, but should we classify cases clinically, as abscess, fulminating, etc., cases, we are doing so from the symptoms of complications without reference to the actual condition of the appendix.

There are no groups of symptoms which will allow us to make a positive prognosis as to the eventual outcome of a case, and we must abandon the hope of having any such classification of symptoms for a guide. Attempts have been made from groups of cases to classify symptoms for prognosis, but they fail, because of the nature of the disease.

There is but one rule to follow, and that is to remove the appendix as soon as the diagnosis is made, no matter what the stage of the disease, as experience has now shown us that such is the safest method of treating appendicitis and preventing complications and sequelæ.

Foreign Bodies in the Appendix.—It is considered that in about 7 per cent. of all cases of appendicitis there were true foreign bodies found. The objects that have been found in the appendix are shots, bullets, pins, worms, gallstones, teeth, pieces of bone, grape seeds, cherry stones, tongue-grass, whisk broom, pieces of fish fin, oat-husks, date seeds, apple pips, and beans. At a post-mortem examination Holmes found 122 bird shot in an appendix, and the patient, a man, had had no symptoms during life which pointed to the appendix. Sharp pointed bodies, as pins or spiculæ of bones, are common and quite dangerous. Coleman recorded a case in which a piece of bone was found in a dilated appendix, and had evidently been present for a long time, but externally there were no signs of inflammation. Thus while foreign bodies generally cause rapidly progressive inflammation, yet even large and rough bodies may give rise to no symptoms at all, or may lead to chronic or recurrent appendicitis. Mitchell collected thirty-three cases in which a pin was found in the appendix at operation or autopsy, two instances in which a pin had perforated the cæcum; and in no single case had there been any knowledge of swallowing a pin. Pins lodge more often in the appendix of males than females. Many are seen in children under ten years of age; others in adults in various occupations and conditions of life. Generally foreign bodies, such as pins or other sharp slender bodies, lead to rapid perforation and abscess formation, etc., but not always, and any type of appendicitis may result, with symptoms lasting for months or years. A pin usually enters the appendix straight by its head or point, with its long axis parallel to that of the appendix, and perforation usually occurs with its point, but exceptionally it lays directly across the lumen and perforates the walls with its point and head. McBurney removed an appendix containing two pins perforating the opposite walls of the appendix. In two cases pins have been found in appendicitis within hernial sacs. A pin or other body may be rusted, corroded, or free from deposit; but usually it is the nucleus of a fecal concretion which covers it, but leaves the sharp portion free. In seven out of twenty-eight cases there was abscess of the liver.

The writer reports, in addition, a case of appendicitis in which he found two foreign bodies—two beans—which produced perforations and multiple abscess formations. Operation was performed with recovery. The patient, A. B., was a man past middle life. In November, 1899, he was troubled with pains and cramps in the abdomen, pain in the right lumbar region, and indigestion, for which he was dieted with relief for a time. On February 14, 1900, while at lunch, he was taken with severe pains in the center of the abdomen. He took blackberry brandy, ginger, etc., which relieved him somewhat. On February 15 the pains returned, and, in addition, severe right lumbar pain, which confined him to bed. The following morning his physician was called and his case was pronounced one of acute gastritis following la grippe. After three weeks he was discharged as cured. Upon recovery he enjoyed good health and gained about ten pounds in weight. Early in November, 1900, he became troubled with bladder symptoms, pains and frequent urinations, for which medicines were taken without success. About this time the patient ate frequently of a Mexican dish containing beans. On February 9, 1901, he was taken ill with severe pains in the abdomen. Hot applications were applied and relieved him for a while. On February 11 his physician was called, who, after examining him, pronounced him ill with appendicitis, and ordered applications of hot flaxseed poultices.

He had pain all over the abdomen for three days, more severe on the left side. On the 13th he began to have pains in the right side, which later became more severe on the right side than on the left, bowels constipated and some vomiting. On this date a consultation was held and operation was advised. The patient would not submit and the poultices were continued. His temperature during this time ranged from 99° to 102°.

I saw the patient with Drs. Mark Neumann and Bell, February 23. We made an examination under anæsthesia, and at the patient's home, on February 25, I performed operation, assisted by Dr. Mark Neumann. Ether and chloroform were administered in separate bottles by the drop method; in the main ether being given.

An incision an inch long was made two inches from the spine and about parallel with Ponpart's ligament. The structures of the abdominal wall were divided in the direction of their fibers and the peritoneum opened. After exploration, I found it necessary to enlarge the incision slightly, and it now measured one and three-quarter inches. The upper end of the incision extended about a half inch above a line drawn from the anterior spine to the navel.

I progressed mostly by the sense of touch, using blunt dissection with the index finger, and worked along the iliac fossa, between it and the cæcum. separating adhesions until I came upon an abscess, which was freely opened and flushed out with hot water. From this abscess cavity the two beans were removed, the larger measured thirteen-sixteenths of an inch long and half an inch wide; the other nine-sixteenths of an inch long, five-sixteenths of an inch wide. The beans were carefully examined by every one present, split open and found to be perfect; their capsules being intact, and apparently not affected by either the passage along the digestive track, their stay in the appendix, or the abscess cavity.

Through a common opening, the abscess passing up towards the kidneys and the one down in the pelvis were opened and washed out. Adhesions were freed on all sides. The appendix was separated by blunt dissection from adhesions and its mesentery.

A large mass of inflamed, thickened omentum, covered with pus, was brought to the surface. The pus was sponged and washed away. The appendix was inflamed, suppurating, partly gangrenous, and perforated in two places; the cæcum was also inflamed and sloughy. All intestines in sight were inflamed. All inflamed omentum was removed, the excision being performed well in normal tissues; no mass ligatures were used, the vessels only being ligated with fine catgut, and then the omentum was cut off external to the tied vessels.

During the removal of the appendix it was so soft and friable that it tore completely across, and it was consequently removed in pieces. It was excised close up the cæcum by blunt dissection. The cæcum was deeply located, and could not be brought to the surface without irreparable damage. I tried to close the opening in the cæcum by inserting several through-and-through, continuous catgut sutures, but most of them did not hold, as the layers forming the cæcal wall were very soft. As the cæcum was deeply located and the stitches did not hold, I used borated gauze packing to bring the edges together and close opening. All pathologic and exposed intestines were freely irrigated with hot water as hot as the hand could bear; all visible pus, shreds, plastic fibrin, exudate, etc., on the surface of the bowels, etc., were removed with the fingers, gauze pads and hot-water irrigations. The infected portions of the abdominal cavity, intestines, etc., were dried and again thoroughly flushed with hot water till the fluid came away clear, redried with sponges, and the intestines returned to the abdomen as near as possible to their normal positions.

The peritonitis was of that character wherein nature had the opportunity of throwing out considerable protective adhesions.

The inflamed, sloughy surface of the cæcum, the edges of the opening in the cæcum, the adjacent peritoneum, and the abscess cavities were lightly dusted with aristol. A strip of borated gauze two inches wide and a yard long was carried to the bottom of each of the abscess cavities, the surfaces lightly packed, and the ends brought as far as possible in direct lines to the surface through the abdominal incision.

The surface of the cæcum was lightly covered with borated gauze, and the balance of the wound also lightly packed with more gauze strips, and borated gauze dressings, cotton, adhesive strips, and binder applied, the patient was put to bed in good condition. The recovery was satisfactory; the intestinal contents were discharged several times through the incision during the first week, but the wound and abdominal wall, including the skin, was solidly and durably healed by the latter part of March, 1901. His general health is good. He feels well and looks well; is working at his occupation every day; appetite and digestion good; bowels fairly regular; abdominal wall solid; there is no evidence of hernia, and he does not wear an abdominal support or truss.

New Surgical Points.—In an article on "Appendicitis," a report of fifty-four consecutive operative cases; when to operate, points in technique, which I published in the *American Medico-Surgical Bulletin*, June 13, 1896, I reviewed the several methods of treatment, and from a study of the cases cited and comparison of the methods used by various physicians and surgeons, I then came to the following conclusions:

"1. That appendicitis is strictly a surgical disease.

"2. That an infected appendix should be removed as soon as the diagnosis is made.

"3. That in many cases of appendicitis an inch-and-a-half incision is sufficient for operative treatment.

"4. That if there is local or general infection, the abscess cavities should be freely washed out with hot saline solution.

"5. That if drainage is necessitated, one or two capillary wicks should be used instead of iodoform or other gauze packing, glass, or other stiff tubes.

"6. That to prevent hernia the incision should be small, and if drainage is necessitated a small wick should be used, and the wound be closed, layer by layer, separately and accurately, with sterilized, chromicized tendon or chromicized catgut sutures."

Of the above fifty-four consecutive operative cases of appendicitis in which I performed or assisted in performing while house surgeon at the New York Post-Graduate Hospital during 1893 and 1894, and since I left that institution, up to April, 1896, there were two deaths. These two fatal cases I assisted in operating upon while I was in the Post-Graduate Hospital. Since April, 1896, I have operated upon sixteen additional cases of appendicitis, and so far all my operations for appendicitis have been without mortality.

In the article in the *Bulletin* I also described what I considered the best methods of exercising the appendix. Briefly, these methods are as follows:

The mesentery of the appendix is separated by dissection down to the cæcum, bleeding vessels or vessels being ligated with fine catgut, "the appendix is held up by the tip, and after dividing in a circle the peritoneal and muscular coat of the appendix about one-quarter of an inch from the appendicocæcal junction, leaving the lymphoid and muscular coats uncut, dissect back to the cæcum with handle of the scalpel, the divided serous and muscular coats of the appendix. Next apply a narrow-bladed forceps transversely to the mucous cylinder, close to the cæcum, to temporarily close the opening at appendicocæcal junction, then cut off the appendix close to the forceps, leaving only a small cuff of mucous membrane projecting beyond the outer edge of the forceps. Cleanse the cuff with a gauze pad wrung out of a 1-2000 bichloride solution, then suture the cut edges of the mucous membrane and lymphoid coats very closely and accurately together with fine silk on a fine needle. Disinfect united edges and line of suture, remove forceps, and suture accurately the peritoneal and muscular coats which have been dissected back to cæcum. If the coats of the appendix are matted together, apply the narrow-bladed forceps transversely to all coats at the appendicocæcal junction. Next, cut off appendix close to forceps, leaving only a small cuff of the divided coats projecting beyond the outer edge of forceps. Disinfect protruding mucous membrane, etc., and suture cut edges closely together with fine silk and fine needle; disinfect line of suture, remove forceps, and bury this line of sutures with a layer of serous sutures.

"The methods above described can be quickly done. In both only sufficient mucous membrane and other coats of the appendix are used to close accurately the opening in the cæcum at the appendicocæcal junction without leaving any tension on the line of sutures, and after suturing is finished there remains simply a line of sutures on cæcal wall at the former location of appendix. If the appendix is gangrenous, and the softening process has extended even to the cæcum, have an assistant pinch up the adjacent portion of cæcum with a dry piece of gauze to prevent extravasation, then remove the appendix and irreparably softened cæcum, and suture the layers accurately together with fine stitches. This line of sutures is then buried with one or more layers of Lembert sutures."

These are the methods I use when sutures can be inserted, with the exception that I use fine chromicized catgut for sutures instead of silk. In those cases wherein sutures do not hold, the edges can be approximated by borated gauze packing, which assists in union. The writer has found this latter method to be followed by satisfactory results.

By performing early operations, and by using short incisions instead of long ones, the mortality has been much lowered; less time is taken for the operation, less injury is done; the wound being small, can be closed in less time and with few manipulations; healing takes place rapidly, without trouble; allows patient to get back to his work soon, and, on account of the shortness of the wound, there is little or no danger of a post-operative hernia, even if the wound were left open, as is sometimes done in suppurative cases.

The writer has been able to remove an infected appendix in an adult successfully through less than an inch incision, and in cases of acute appendicitis, with diffuse peritonitis without adhesions, has, through about a two and one-half inch incision, excised the appendix, withdrawn all infected intestines, etc., to the surface; removed all septic matter, shreds, etc., from the peritoneal cavity and the surface of the bowels; then, after irrigation and sponging, returned the intestines, used drainage, had good recovery, and no hernia post-operative.

In all cases the appendix should be removed, if this can be possibly done without interfering with the life of the patient. If, after a careful search for the appendix, one is unable to locate it within the peritoneum, by making an incision through the posterior layer of the peritoneum external to the cæcum it may be detected behind the peritoneum, whence it can be readily removed. At times, during operations, one finds the appendix reduced to nearly a fibrous cord and buried in extensive adhesions; such a fibrous cord, being located in the normal position of the appendix, should not be overlooked by the operator, but should be excised close up to the cæcum after the method already described by the writer. Sometimes at an interval operation, on account of extensive and firm adhesions and the deep location of the cæcum and adjoining coils of intestines, it is impossible to find the appendix unless irreparable damage is done in searching for it. In such a case the wound should be closed and an operation performed later on if appendicitis again develops, and at the second operation the appendix, being inflamed, can be readily located and excised.

When adhesions are present they should always be freely separated as far as possible, as the results subsequent to operations in many cases depend upon the restoration of the normal intestinal movements.

When a local or general infection of the peritoneum is present an abscess cavity or cavities should be freely opened, adhesions, when present, be broken up, all pus shreds, etc., cleaned out, all inflamed or thickened omentum excised, the appendix removed, the abdominal cavity further examined, to be sure that no purulent mass has been overlooked. All pathological intestines, until normal bowels are seen and freely handled, should be withdrawn from the abdominal cavity to the surface and covered with hot towels. The infected portions of abdominal cavity and exposed intestines, etc., should be freely irrigated with hot water or hot saline solution, as hot as the hands can stand, and all pus, shreds, etc., removed with irrigations, sponges, and the fingers until all pathological materials are removed, and until the fluid used as irrigation comes away clear. The intestines are then dried and returned to the abdomen to, as near as possible, their normal positions.

This method of treatment should always be used in infected cases, and the operation thus performed has been found by the writer to be uniformly successful; whereas, if simply an incision had been made, pus evacuation and sponging and ordinary irrigation done, the result would have been, in all probability, just the opposite.

After these extensive operations on septic cases the wounds should be closed, as far as possible, by sutures, and the cavities or spaces of infection drained with borated gauze wicks or strips, which are carried to the bottom of the infections, the ends being brought out, as far as possible, in a direct line to the abdominal surface.

In order to obtain the full benefit of capillary drainage, the ends of the strips must be placed in contact with absorbent gauze on the surface outside of the wound, and this gauze must be changed and fresh gauze replaced when it becomes saturated to the point of decreased power, as otherwise it will have little mechanical effect. Adhesions wall off the wick or other drainage apparatus in the peritoneal cavity in about thirty hours, when the gauze or wick is shortened or entirely withdrawn, according to the indications presenting. The writer, as a rule, does not withdraw it entirely until the fifth day. The object in proceeding thus is to allow the intestine to come together as rapidly as consistent with safety, and thus obliterate the cavity formed by the wick or wicks. After this, if further drainage be necessary, carry a narrow strip of guttapercha tissue or gauze into the wound. A wick or gauze strip long enough to rest on the posterior abdominal wall adjusts itself nicely, is soft, causes no shock, and is easily removed. After its complete removal from the wound, drop in several minims of sterilized balsam of Peru, which facilitates healing and prevents sinus formation. A fecal fistula will not form from the use of a wick or strip, nor will adhesions follow its use, but some may if gauze packing, tubes, etc., are used for drainage. The writer prefers the wick or gauze strips to other methods of drainage. Guttapercha tissue around the rolled gauze has several advantages over plain gauze strips, etc.—that is, convalescence is more rapid, less painful, fewer disagreeable local symptoms, while the wick covering prevents adhesions between the gauze and serosa [R. T. Morris].

The length of time the patient is confined to bed when drainage is used is not much increased, except in those cases wherein fecal fistulæ form. The duration of confinement, after an operation in which drainage is required, is lengthened only the time it takes for the cavity to obliterate up to the skin surface, and the latter to become firmly and durably cicatrized. The writer insists that patients in whom drainage is used should remain in bed for about one week after the wound has firmly healed. This is done in order to obtain a very solid cicatrix, and thus lessen the chances of hernia. If a single wick or gauze strip has been used as a drain and the balance of the wound has been sutured accurately in separate layers, such a small opening is left after its removal that the layers fall fairly close together, and unite about as well as if they had been sutured. Hernia, under most circumstances, does not develop after the use of such a drainage method.

From a study of the pathology, etc., of appendicitis, the writer draws the following additional conclusions to those he has already published:

1. That, as appendicitis is strictly a surgical disease, the earlier it is operated upon the better for the patient.

2. That cases operated upon early should have no mortality.

3. That during all appendicitis operations the appendix should be removed, provided irreparable damage is not done in attempting to find or remove it.

4. That where there is a local or general infection the abscess cavity or cavities should be freely opened, all adhesions separated, all pus, shreds, etc., cleaned out, all inflamed or pathologic omentum excised, and all pathologic intestines and infected portions of abdomen be freely irrigated with hot water or hot saline solution till the fluid comes away clear; the intestines, etc., are then dried with sponges and returned to their normal positions.

5. That fecal concretions are more apt to be present as exciting causes of appendicitis than foreign bodies.

6. That foreign bodies are sometimes present in the appendix, and are exciting causes of appendicitis.

7. That when the appendix contains foreign material it is more likely to be a pointed or heavy body.

8. That fecal concretions closely resemble some foreign bodies of light weight; *i. e.* grape seeds, cherry stones, etc.; and that when one is in doubt whether the material is a concretion or foreign body, it should be carefully examined microscopically and chemically to determine the exact characters.

9. That operations, such as appendicitis or somewhat similar operations, *i. e.* those involving laparot-

omy, can be as readily, quickly, safely, and cheaply performed at the patient's home as elsewhere.

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THE DISADVANTAGES OF GAUZE PACKING IN APPENDICITIS WORK.*

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IF we take ten strong and healthy policemen from the street at nine o'clock this evening and put half a yard of gauze into their abdominal cavities, under the most careful antiseptic precautions, we shall find by nine o'clock to-morrow evening that "we did not get them in time." It is common practice in the surgery of different countries to-day to ask weak and suffering appendicitis patients to bear what cannot be well borne by the ten strong policemen. The chief steps in the questions of abdominal drainage lead, perhaps, from chaos to Mikulicz, from Mikulicz to Tait, and from Tait to Clark, and the later school of operators, who aim at disposing of artificial drainage devices altogether in their abdominal work. Not long ago it was common practice to give opium freely after abdominal operations; the lymph circulation of the peritoneal channels was not generally taken into account in our problems, and we were all at sea on the matter of drainage. Mikulicz concentrated attention upon the idea of obtaining gross cleanliness of infected peritoneal areas, and the concensus of surgical opinion was soon in favor of the employment of gauze packing for the purpose of keeping infected surfaces apart, and for the purpose of draining septic fluids away from the wound rapidly. The employment of gauze packing was a rude method for obtaining the desired result, but it represented the best knowledge that we had at that time, and it marked a transition stage toward our later and more refined and scientific methods.

When iodoform was added to the gauze, we added another element of distress for the patient, along with certain indisputable advantages offered by the iodoform. At this moment patients in various parts of the world are dying of insidious, avoidable, iodoform poisoning, and their anxious surgeons are supposing that the cases are ones of unavoidable septicæmia. Iodoform poisoning is apt to be so insidious, and its symptoms so much like those of septicæmia, that few house surgeons, at least, are accustomed to differentiate the symptoms. There is one pretty constant difference. In iodoform poisoning the wound is apt to look remarkably well, while the patient does not. In septicæmia, neither the wound nor the patient looks remarkably well. In iodoform poisoning we can find free iodine in the patient's urine, and a simple test consists in adding calomel to a specimen of the urine, and noting the reaction as iodide of mercury is formed when the mixture is stirred. Gauze packing makes trouble enough for us even without the iodoform, but only the patient can describe the distress caused by a mass of foreign body in the delicate peritoneal cavity, and only the patient can properly speak of the misery caused by the removal of the gauze packing, when a change of dressing is made. Gauze packing sometimes causes ileus and bowel obstruction by simple and direct mechanical pressure. It more often causes an excessive exudation of reparative lymph, which may result in annoying peritoneal adhesions and life-long discomfort for the patient. Its employment usually leaves a very weak place in the patient's abdominal wall, and invites the development of postoperative ventral hernia. The worst feature of gauze packing, however, is its tendency to do what any other foreign body would do in the same place. It depresses the patient's general resistance, and prolongs, if it does not sometimes cause, the condition of surgical shock. A depressed patient does not call out his resistance forces promptly, and does not retain his normal cell resistance. By resistance forces I mean chiefly the production of phagocytes for the special purpose of meeting infection. The production of phagocytes is a natural vital process, and just like other normal vital processes in its demands for an abundance of vital energy for the best accomplishment of its specific work. If a depressed patient cannot manufacture other cells well, it is fair to assume that he is not manufacturing phagocytes well, and if he is not manufacturing phagocytes well, he is not meeting infection well. It is not necessary to enter into the details of the phagocyte theory, or to quote opposing theories. For our practical surgical purposes it is sufficient for us to know that if we follow the idea of aiding the phagocytes, something within the patient acts just as phagocytes would be expected to act, and our statistics offer such testimony that physiologists may take the testimony into account in their arguments.

While surgeons, generally, were approving of gauze packing as the best means at their disposal for helping out their plans against sepsis in dangerously-infected abdominal wounds, Tait was working on quite independent lines, and achieving such remarkable results that we all felt pretty uneasy about him and his work. Many kinds of explanation were given for Tait's success without the aid of asepsis, and while many of the explanations were plausible enough to give us comfort during a conversation, the old ache came back again as soon as the explainer was out of hearing. Neither Tait nor any of the rest of us, so far as I know, had a true understanding of the reasons for his success at that time, but now it is all very clear. By means of rapid and dexterous work, Tait usually caused a minimum degree of disturbance of the patient's vital functions, and the result was a maximum degree of response on the part of the natural-resistance factors. This was such a marked feature of his work that he was obtaining better results without the aid of asepsis than some of us were getting with the most painstaking attention to details in long-drawn-out operations, which missed nothing in the way of perfection in method, so far as we could see. The most skilful artist is the one who can paint a tree so that it looks almost like the original, and still the old tree continues to look just a little better than the painting after all, and in our work it is the best surgeon who can come the nearest to leaving the patient alone with his natural-resistance forces. We conscientiously tried to do too much with our gauze drainage. The study of natural-cell resistance, and of the lymph circulation of the peritoneum were well under way when Clark struck the note that set in vibration the harmonies of our newer knowledge that were all ready to respond. Many of us were trying to convince ourselves by experience and against the teaching of the schools that we could close most of our abdominal wounds without drainage, even in cases of very extensive infection, with less danger to the patient than would follow the employment of gauze packing, or even of tubular drainage. After the publication of Clark's statistics, we felt safe in doing what experience was already showing could be done safely, and yet the closure of the abdominal wound in a case of gangrenous appendicitis was opposed to common practice and theory. The new theory was that if we removed the chief part of the toxic collection the lymphatics and leucocytes would attend to the rest better than we could do it with most complicated devices. There are cases in which some drainage apparatus must be employed for obtaining gross cleanliness of the wound. Sometimes, for instance, there is a continued oozing from separated adhesion surfaces, and of such extent that it is better to put in a small capillary drain. Sometimes the infected peritoneum is secreting serum so rapidly and abundantly that it seems to be necessary to lead off the serum externally by means of a drain, but one which is so small that it will not cause the patient discomfort, and will not interfere with a practically complete closure of the wound of the abdominal wall.

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*A paper read before the Surgical Section of the New York Academy of Medicine, February 10, 1902.

It is not safe to teach that gauze packing is to be given up at once. It is too closely a part of the methods of to-day. It is better to say that one should work toward the point of giving up gauze drainage as rapidly as experience proves that it can be done safely. The conservatism of surgeons is an outcome of the best of human intention, and yet it works out in ways that are obstructive as well as protective. The statistics of surgeons who do not employ gauze packing in appendicitis work are sometimes read as meaning that selected cases are being reported, and not the class of severe cases in which gauze packing is commonly employed by others. The statistics have even been turned to an operator's discredit, on the ground that he must have removed some normal appendices, in order to have so low an average death rate. This is reading statistics backward, and on the wrong line as well. As a matter of fact, most of the responsible men in the profession are dealing with about the same kinds of cases all of the while, for the reason that the source of supply is through the general practitioner, and the general practitioner is apt to send only the best-marked type of appendicitis cases for operation. The differences in the statistics of various operators is therefore a matter to be given the most grave consideration, and the questions bearing upon the influence of the methods employed must be squarely met, and not evaded.

Poison Sent by Mail.—A woman named Klump, of Lowell, Michigan, received a supposed sample of headache powder by mail. She took it and died twelve hours after. An autopsy showed that strychnine poisoning was the cause of death.

A PLEA FOR SPECIFIC PLANS OF TREATMENT OTHER THAN BY SINGLE DRUGS.*

By LOUIS FAUGÈRES BISHOP, A.M., M.D.;
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In connection with this extraordinarily interesting topic of specifics in medicine, I wish to call your attention to the consideration of the point that there are many conditions for which a specific remedy is lacking, and for which none can be expected, where there are complete plans of treatment that are as satisfactory in those conditions as the specifics are in the correction of the diseases to which they are applicable. Indeed, close analysis of one's active hospital work for a single day would reveal the fact that a large proportion of the cases were ones outside of the realm of disease capable of treatment by specifics. Just as in diagnosis, we are too prone, in these days, to depend lazily upon the laboratory worker for information, so in therapeutics we are waiting too inactively the multiplication of specifics by those who have been lifted upon a pedestal by the prominence given them during the last century by experimental pathology. A well-thought-out and well-developed plan of treatment is as certainly specific in many a form of disease as single remedies which are known as specifics. Quinine does not, by any means, even save the life of every case of malaria, and the failures of mercury and the iodides in syphilis are only too well known.

The cold-bath plan of treatment in typhoid fever, properly carried out, is, I believe, in proportion to the dangers of the disease, as much as a specific. The same is true of proper food and bismuth in diarrhœa in children, milk diet and prolonged rest in acute nephritis, stomach rest in ulcer of the stomach, or isolation and forced feeding in melancholia. If specifics in medicine were sufficiently multiplied, it might be possible for the rule-of-thumb man to be a physician, but for the present it is the latter's task to formulate a plan of treatment that shall be, as near as possible, a specific in every case.

Science has contributed a few specific drugs. Art, with the help of well-known remedies, has given us many specific plans of treatment. In the excitement of the new discoveries of science during the last century, the art of medicine, which consists in the summoning of many expedients for a common end, has not been cultivated as it should. To be sure, improvement in nursing by trained nurses has, in a measure, replaced the necessity for the exercise of the finer details of technique in the care of the sick by the physician. The specific drug can be administered and the patient cured, and but little credit is due to any except the discoverer of the drug. But the cure of disease by a specific plan of treatment is a matter of skill more than of mere learning, and is not to be successfully carried out by the ignorant or careless. To formulate a treatment for disease that will become actually specific when developed to its highest degree, presupposes a knowledge of diagnosis and a power of prognosis that enables the physician to lay down a definite plan. Thus, in a case of acute nephritis of a certain type cure is obtained by prolonged rest in bed on a milk diet, and is completed by a short residence in a proper climate. During this time drugs are used to accomplish certain purposes, and a cure can be promised. This is a specific plan of treatment, and yet to put it through requires knowledge and firmness, of no low order, on the part of the physician. In the same way, in cardiac disease there are plans of management that are specific in that they reserve to the individual the enjoyment of all the advantages of health at the cost of compliance with certain rules of conduct, and the carrying out, at intervals, of certain courses of treatment. In the long run much more is accomplished by the profession for humanity by specific plans of treatment than by the specific remedies. It has sometimes seemed to me that it was a disadvantage that we had these specifics, because it makes us dissatisfied with the labor required to devise and carry out specific plans of treatment which, in the broad range of their applicability, are of vastly more importance to humanity.

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*A paper presented to the Medical Association of Greater New York, February 10, 1902.

By specific treatment we mean the plan of treatment which is appropriate to a single disease, and is usually successful in its cure. Specific plans of treatment constitute the true art of medicine. When physicians have devoted themselves to the cultivation of specific plans of treatment, there have developed skilful practitioners, and peace and happiness have reigned in the profession. On the other hand, general principles have been detrimental to the true medical art. When physicians have subscribed to general principles, whether the humeral theory that prevailed so long, or the theory that most diseases were due to venous congestion, which led to universal bleeding, or the theory that like cures like, which led to blind faith in drugs, or that all disease was to be cured by exciting inflammation somewhere else, which led to blisters and purging, or whatever dogmas were adopted, the attempt to make facts and experience conform to general principles has always been detrimental to medicine. At the present time there is danger that there may be too much waiting for serums and antitoxins to the neglect of skilfully-elaborated therapeutic plans suitable to particular disease.

The indictment against Christian Science, Osteopathy, Viteopathy, etc., which represent, at the present moment, the mysticism that has been so detrimental to medicine throughout the ages, is not that they are not useful as forms of practice in certain cases, but that they attempt, as did our forefathers, to make facts conform to theories.

We must, in medicine, more than in any other science, hold fast to the inductive method. Facts must be the foundation of theories. The deductive method, when allowed full swing, has universally been detrimental to our profession. It held back German medicine for many years, so that even now, in spite of their many brilliant recent results from the inductive method, intelligent observers still hold that American physicians are, as they express it, better doctors. The success of this nation has been founded upon the inductive method of taking facts as they were found, and building up from them. Our most accomplished physicians have studied specific plans of treatment for each particular condition, and have been guided by facts instead of compelling these facts to stand by some supposed general principle.

This Academy of Medicine, in whose building we meet this evening, is founded upon the principle of the acceptance of medical truth as represented by specific plans of treatment as opposed to the adherence of any general principle, however plausible and however great the number of its adherents.

Our discussions will surely be without profit unless we carry from them lessons applicable to our work from day to day and from hour to hour, and just as many others will laud the discovery of specific drugs or antitoxins, so I would plead for better specific plans of treatment for every diseased condition that we must meet, and for which we must prescribe.

Looking back now over ten years of general practice, I cannot but compare the methods of those under whose influence I was prepared. Our teachers were essentially pathologists and diagnosticians. So much time was given to this part of the work that but little was left for the careful study of therapeutics of the cases. Treatment was a good deal a matter of routine and tradition, and was not applied with that hopeful belief in it that I have since often encountered in less scientific men, who have devoted themselves to the cultivation of specific plans of treatment in connection with large private practices. I would except one of my teachers who is to take part in this discussion. He always had a therapeutic plan and a therapeutic suggestion for every case that might arise, and, in giving it, carried the conviction to his pupils and to the patients that what they were about to use would do a real good.

What might well be termed the Iodide-of-Potash School of Therapeutics—that is, those who administer drugs on general principles, really shows a tendency to reversion to that very state of medicine when everything was governed by supposed general principles, and which did so much to retard true progress.

What we need in order to improve our therapeutics is more co-operation among those who have the opportunity of testing therapeutic plans. We need some means whereby civil-service principles may be applied to the selection of remedies. This Association should invite those who have charge of hospital services to test impartially certain plans of treatment for, say, six months, and then to compare and analyze each other's results. The great trouble with medicine is that each man works too much alone, and is in contact only with the immature minds of younger men. While we are waiting the results of experimental pathology, which has become a thing apart from the work of most of us, let us devote our energies to the development of specific plans of treatment as something of importance in itself, and apart from all theory and the attempt to make facts conform to any system of medicine.

54 West Fifty-fifth Street.

WHAT IS CHRONIC RHEUMATISM?

By EDWIN M. MERRINS, M.D.,
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Little more than a century ago the term "Rheumatism" was so comprehensive as to include not only every painful inflammation of joints, ligaments or muscles, but also such widely dissimilar conditions, as phlebetis, pyæmia, neuralgia, tuberculous affections of the joints, and even puerperal arthritis. With the advance of medical science one disease after another has been withdrawn from this group and classed elsewhere, yet the term chronic rheumatism still covers a large number of complaints that have nothing in common except pain in some joint, and a history of exposure to atmospheric change. In a recently published paper (*American Medicine*, January 4, 1902), the opinion is strongly held that cold and wet, by injuring the skin, are responsible for nearly all forms of arthritis, "from the short-lived muscular rheumatism up to the full-fledged gouty arthritis." But these etiological factors are generally regarded at the present time as of much less importance than formerly, and the diseases which they are supposed to originate directly are very few. Even the prevalent belief that rheumatic diseases are much more common in damp localities than elsewhere has no strong foundation. The report of the British Medical Association upon the geographical distribution of these diseases, states unequivocally that the degree of moisture in any locality has little or no influence upon their occurrence (*British Medical Journal*, January 19, 1889;

and *Ib.* May 19, 1900). Suppose it were otherwise, that rheumatism of a certainty is more common in marshy districts, so also is malaria, and as the latter disease is now positively known to be due to the presence of microorganisms in the blood, introduced through the agency of the mosquito, analogy would lead us to think that the former also is caused by germ infection and not by atmospheric or telluric influence. In fact, working from this point of view, many of the arthritic diseases have been found to be directly or indirectly due to this cause. Thus the diseases in which arthritic inflammation forms a primary and essential part of the disease, such as acute articular rheumatism, dengue, Malta fever, and glanders, are definitely known to be of microbic origin. The secondary affections of the joints, that not infrequently occur in the course of the acute infectious diseases, scarlet fever, typhoid fever, smallpox, gonorrhœa, puerperal fever, pneumonia, and the rest, must also be regarded as due to the invasion of the joints by the germs which have caused the general disease.

There are other bacterial diseases with arthritic manifestations in which the connection which undoubtedly exists between the germs and the arthritis is not quite so evident, because the interval between the earliest stage of the disease and the time when the joints become affected is often very considerable; and during this intervening period, sometimes lasting for many years, the patient may apparently be in the best of health and experience nothing to remind him of the taint in his system. Thus rheumatoid pains may be common in the secondary stage of syphilis, but it is not until the tertiary stage has been reached that the joints are involved in hyperplasia, gummatous infiltration or fibrous pseudo-ankylosis. So also in leprosy, after the eruptive stage has ceased to be active, or when there is no further deposit in the nerves, the disease may remain stationary for a number of years, and then among the latest manifestations of the disease, destructive changes take place in the joints.

It is not necessary to aver that in all the diseases mentioned the arthritic affections are due to the living activities of the germs, for Wasserman, in investigating the pathology of gonorrhœal arthritis found that the gonococci perish in the closed cavities of joints for want of an acid medium, but that in their dead bodies there is a virulent poison, which is the cause of the local inflammation, fever, and pain.

Among the remaining arthritic or muscular complaints that at one time or another have been grouped with rheumatism are gout, rheumatoid arthritis, and muscular rheumatism. Whatever may be the true theory of the pathogenesis of gout, all agree in attributing the arthritic manifestations of the disease to the irritant qualities of the sodium biurate deposited in or upon the tissues of the joints. The pathology of rheumatoid arthritis is still obscure, but according to the researches of Bannatyne and others, the disease is due to a specific germ. Even muscular rheumatism, that often seems to be caused by cold and nothing else, is considered by Adler (MEDICAL RECORD, March 31, 1900) to be of similar origin.

So far all is reasonably clear. Excepting gout, every arthritic disease considered has been found to be due either to the living activities of germs, or to the toxins which they produce in the system, or to both causes combined.

But when we come to the numerous cases still classed as chronic rheumatism there is much confusion; the etiology and pathology of this condition are as obscure as the ordinary treatment of it is unsatisfactory. One of the latest attempts to define the range of the diseases covered by this name is that made by Garrod in Allbutt's "System of Medicine" (Vol. III., p. 56), who groups the cases to which the name of chronic rheumatism is more or less correctly applied under three heads, as follows: (1) Frequently occurring slight articular attacks in rheumatic subjects; (2) Cases of chronic abarticular rheumatism, a condition best seen in children; (3) Joint lesions which persist after an attack, or succession of attacks, of acute or subacute rheumatism, and in some instances lead to permanent damage of the structures involved.

This is a long step in the right direction, for the term is limited to those cases in which there is a more or less clear history of acute rheumatism. But every physician must surely bear witness that from many of the patients complaining of chronic rheumatism, with symptoms in no whit differing from those in the first and third divisions of Garrod's classification, it is impossible to obtain a history of acute rheumatism, no matter how far back we go, nor how broadly we interpret the symptoms of that disease. Take the case of an actor compelled to appear on a wintry evening upon the stage in classical costume with the shoulders bared, who complains later of chronic rheumatism in his right shoulder, without any fever or the visible signs of local inflammation. He may talk glibly about his system being full of uric acid, but no amount of questioning will obtain from him a clear history of an attack of acute rheumatic fever or of anything resembling it. He has been dosed to the utmost with salicylates, and his diet has been cut down almost to the starvation point, without his deriving the least benefit. He is not gouty, nor is he afflicted with rheumatoid arthritis; neither is he syphilitic, and he is not suffering, nor has he recently suffered, from any of the acute infectious diseases. We cannot by any ingenuity bring this case within the above classification, yet we call it rheumatism brought on by cold and exposure, and add imperfect metabolism as the more remote cause. If, however, we had more closely questioned him as to his past history, we might have elicited the fact that some years previously he had had an attack of some acute specific infection, *e. g.* gonorrhœa. The discharge has ceased a long time ago, nevertheless, the pain and stiffness of the shoulder may owe its genesis to the long past infection. The following is a case in point—not quite parallel, because the urethritis has never been cured, but sufficiently so to show the dependence of the one complaint upon the other:

C. B., aged forty-two years. Family history negative so far as gout and rheumatism are concerned. Eleven years ago the patient had a severe attack of gonorrhœa, which, in spite of prolonged treatment, was never cured. The discharge would at times diminish in quantity, but any sexual imprudence or indulgence in alcohol would make matters as bad as they were at first. Three years after the original infection, the patient began to experience pain and stiffness in his ankles, this being much worse in the one that had been previously weakened by an injury. Later, intense pain developed in the sacro-iliac articulations, and occasionally there were twinges in the shoulders. Now, the connection between these rheumatic pains and the gonorrhœa is proven by the fact that when the urethral discharge is very free, the pains in the joints become so much lessened as to be almost negligible; when the urethritis is seemingly cured, the pains return with great severity.

We have already seen that all diseases of bacterial origin are capable, sooner or later, of producing arthritic symptoms either by the presence and activities of living germs, or by the chemical action of the toxins which they have formed. Perhaps the converse is equally true, that every form of arthritis (except gout, the neural arthropathies* and those due to traumatism) is due directly or indirectly to the action of germs and their products. When a synovitis or arthritis occurs during the very limited course of an acute infectious disease, its dependence upon germ infection is plainly seen; but when the arthritic symptoms do not appear until after a long period of apparent health, and then only when the tissues have been weakened by cold or injury, their dependence, in some measure at least, upon the long past bacterial infection is either overlooked or denied. Yet, as we have seen, in both syphilis and leprosy, many years may elapse between the time of infection and the time when the joints become affected. May it not be—and this is the main point of the paper—that in every case of chronic rheumatism, if we closely inquire into the past history, we shall find that at some time or another the patient has had some disease of microbic origin; in women, generally acute articular rheumatism, influenza, typhoid fever, or some uterine disease,† affecting the whole system; in a large proportion of men, either gonorrhœa or syphilis, more frequently the former?

Examining the personal records of thirty-seven recent cases, with a history of pain in one or more joints, it is found that four were due to traumatism; in two cases with painful ankles and feet the patients had flat feet; four were afflicted with rheumatoid arthritis, and six were distinctly gouty. In the remaining twenty-one cases, all complaining of chronic rheumatism or of an excess of uric acid in the system, there was a previous history in five cases of acute articular rheumatism, in one of smallpox, in eight of gonorrhœa, in two of syphilis; one was tuberculous, and in four of the cases no statement upon this particular point was obtained. This is to be regretted, for, considering their occupation, it is almost certain that from three out of the four a history of specific infection could have been obtained by close and persistent questioning. However, taking the figures as they stand, it is surely very significant that in twenty-one cases of pain and stiffness in one or more joints, and indistinguishable, so far as gross appearances go, from each other and from the ordinary run of rheumatic cases, no less than seventeen patients gave a history of having previously suffered from some disease of microbic origin.

This is quite in line with the clinical observation of others. Leri in his article on Rhizomelic Spondylosis (*Revue de Médicine*, September 10, 1899), which many regard as a form of intervertebral rheumatism, in considering the etiology of this disease states that "the most satisfactory explanation is that it arises in an infection; several patients had gonorrhœa shortly before it began, and other infectious diseases had been seen in other cases, and grip, tonsillitis and other mild infections are so frequent that this seems the most likely cause." Sachs and Fraenkel, in a careful article discussing the different types of the disease, adduce four cases of their own, of which the first had had an attack of influenza; the second, syphilis; the third, "at the age of fifteen years, had a fever which kept him in bed for two weeks; lost his hair and became bald; the fourth, syphilis" (*Journal Nervous Mental Diseases*, January, 1900). These cases are the more noteworthy as the etiology of the disease is not considered in the article.

Where so many cases of chronic rheumatism have been preceded by acute infectious disease, the conclusion is irresistible that the two are connected, that the joints in all such cases must have been attacked during the course of the primary disease. Our inability to obtain a clear history of this may be owing to the fact that the arthritic symptoms were so light as not to have attracted attention during the manifestation of the more urgent symptoms. Thus in several cases of pneumonia slight redness and pain have been observed in the shoulder joints of the affected side, which subsided with the crisis; it has been noticed in other cases that such arthritic symptoms may precede the lung symptoms, follow the crisis, or develop intercurrently (Nathan Raw, *British Medical Journal*, December 21, 1901). The patient's attention having been confined to the condition of his lungs, it is not likely he would remember such a minor symptom as slight pain in some joint.

What then bridges the gap between the acute infectious disease and the appearance months or years later of rheumatic symptoms? An observation of Adami may throw light on this point. Speaking of Metchnikoff's researches in phagocytosis, he says, "that the seizure and incorporation of microbes by the phagocytes do not necessarily lead to the death of the former, so that in certain cases of acute disease there may be abundant phagocytosis, and the disease progresses nevertheless; the phagocytes being destroyed by the products of the incorporated organisms. . . . . In other less acute diseases, such as gonorrhœa, and in chronic maladies of a tubercular nature—in tuberculosis, leprosy and glanders—the bacilli may in certain stages be found within the cells and rarely free in the lymph spaces; they appear to be almost parasitic after the manner of the microsphœra previously referred to as infesting the amœba. In these cases it would seem as though the toxic properties of the microbes and the antagonizing powers of the cells are very nearly balanced, and this equality, or almost equality, of the resisting powers of the cells and microbes may explain the chronic nature of the diseases above mentioned" (Allbutts' "System of Medicine," Vol. I., pp. 83, 84).

The germs, therefore, which had invaded a joint during the course of an infectious disease would upon the patient's recovery be forced into quiescence, and would remain so as long as this balance of power between the tissues and the germs was maintained. As soon, however, as the resistant power of the tissues become weakened by cold and wet—which are thus seen to be secondary, not primary, etiological factors—the balance is destroyed, and the symptoms of pain, stiffness and weakness follow. If Wasserman's theory be established that the toxins and not the germs are the cause of the local arthritic trouble, the conclusion is practically the same.

Walsh, in his very interesting paper upon this subject (*American Medicine*, November 30, 1901), is of the opinion that toxins circulating in the blood are the cause of the various arthritic symptoms. This may be so when they occur during the course of an acute disease, but many chronic rheumatics, apart from the pain and stiffness in some joint, feel very well, indeed, both mentally and physically, which is difficult to explain if toxins are present in the blood stream to any appreciable extent. But if, as now claimed, the source of the complaint is local, the absence of constitutional symptoms in most cases is satisfactorily explained. So also is the resemblance of such cases to each other, for there is no reason to suppose that in their action upon synovial membrane and cartilage the various germs and the toxins elaborated by them differ very much from each other, whether such action be vital, chemical, or physical.

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* It would seem that the arthritis of gout, undeniably caused by the deposition of a foreign chemical substance in the tissues of the joints, does not in its nature differ very much from a similar joint trouble due to the presence in the tissues of toxins. As for the arthropathies of such a disease as locomotor ataxia, so large a proportion of cases have a syphilitic history as almost to warrant its inclusion in the group of toxæmic arthropathies.

†See, for example, "A Quiet Effusion into the Knee-Joints Occurring in Women and Young Girls," *Lancet*, February 23, 1901.

If these views should be further confirmed by the results of pathological investigation, the term chronic rheumatism ought to be applied only to those rare cases in which there is a clear and unbroken connection with an attack of acute rheumatic fever. We shall then be enabled to make a simple and clear classification of joint affections, as all arthritic manifestations of disease can be placed according to their pathogenesis in one or other of the following divisions, or combinations of them: (1) Traumatism; (2) Bacterial infection; (3) Toxins and other chemical irritants; (4) Nerve degeneration.

336 West Thirty-Third Street.

A SIMPLE TEST FOR EQUILIBRITY OF EYE MUSCLES IN BINOCULAR VISION.

By FRED'K C. RILEY, M.D.,
NEW YORK.

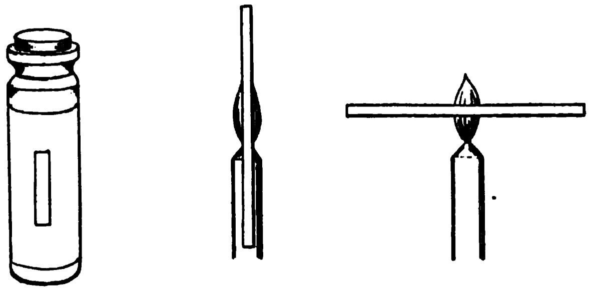
Every practitioner of medicine has, at varying intervals, patients complaining of headaches, neuralgias, etc., dependent upon lack of equilibrium of the muscles of the eyes in binocular vision. Many such are referred to the oculist immediately for examination, while not a few are subjected to various therapeutic measures.

It not infrequently happens that patients can ill afford the time and attendant expense of an oculist's examination, or feel that they cannot, unless they are assured that they will benefit thereby.

Any physician can, at no expense and with but little trouble to himself, be prepared to express an opinion with certainty regarding this condition of his patient without any special preparation for ophthalmic work.

During the past few years great advance has been made in the recognition and correction of lack of equilibrium of eye muscles in binocular vision, which, when present, develops most distressing symptoms. The determination of muscular equilibrium is a simple process, and any deviation can be readily ascertained by the family physician in the following way, which is in reality a modification of the Maddox rod. This rod of Maddox gives such a small image that it cannot be used advantageously under all circumstances. The cylindrical lens, as advised by Prentice ("Ophthalmic Lenses," pp. 121), is in itself expensive, and most of us do not always have rod or cylinder at hand. The same results can be obtained by the use of a homeopathic medicine vial filled with water, or, preferably, any red-colored liquid.

The vial should be surrounded by paper, upon both sides of which an opening has been left. These openings must be opposite each other. The patient is now seated before a lighted candle, placed on a level with his eyes, distant twenty feet or thereabouts. Hold the vial containing the red liquid in front of his eye, perpendicularly, and he will see a red band of light; the distorted image of the candle flame, due to the cylindrical shape of the vial, passing horizontally to and fro as the vial is moved laterally. If the vial be held in front of the right eye, he sees a red band with the right, and the yellow white light of the candle with his left eye. He cannot fuse the images into one, for they are too dissimilar, consequently we have an opportunity to study their relationship. Provided the red band passes through the candle flame as the vial is slowly moved from right to left, it shows that the eyes act harmoniously in the vertical plane. Provided it appear above or below the true candle flame, it shows a lack of equilibrium, *i. e.* one eye fixes above that of its fellow, and a so-called hyperphoria exists. Having recorded the conditions of examination thus far, turn the vial at right angles and move it gently up and down, and note the lateral deviation of the two lights. If there be no deviation—the red band passing through the candle flame—lateral equilibrium exists. Holding the vial horizontally before the right eye, if the red band appears to the right of the candle flame it evidences esophoria; if to the left, exophoria. The distances between the lights measure the degrees of the deviation, as two and three-eight inches (6 cm.) of variation, at twenty feet (6 meters) of distance between eye and candle flame requires a prismatic lens of one prism diopter to correct it, be it lateral or perpendicular.



Thus we prescribe prisms of sufficient "strength," combined with spherical or cylindrical lenses to neutralize any existing refractive error, to secure perfect binocular vision.

No new principle is here involved, but I have endeavored to make this test so simple that any one can make it, even if the patient is confined to the bed. Such findings are also very useful, from a diagnostic and prognostic standpoint, in connection with the history of each case.

1730 Broadway.

STATIC WRINKLES.

By HENRY G. PIFFARD, M.D.,
NEW YORK.

After a very unsatisfactory experience with a couple of static machines made in a Western city, I exchanged the last one for a product of home talent. The machine was of the usual construction, with eight revolving thirty-inch circles. The output of electricity was reasonably good, and little fault could be found except that the plates would not hold the charge over night, frequently losing it in a few hours. This machine was shortly replaced by another of the same make, warranted not to balk; but balk it did as badly as the first one. I then suspected some local "hoodoo," as both of the machines were reputed to hold their charges properly when in other hands. The hoodoo was finally located, and its influence obviated by the simple expedient of putting glass insulators under the legs of the case.

In nearly every machine that I have seen, the shelf that supports the jars has a central re-entrant curve. In other words, the shelf will support simply the jars, and but little else. This shelf I replaced with one having the curve reversed, and thus secured a convenient rest for such subsidiary apparatus as, from time to time, I might desire to use.

The large five or six-inch globes that constitute such a salient feature of most machines may be useful as well as ornamental, but their particular field of usefulness I have never been able to discover. I, therefore, removed them from their customary position, and transferred them to the upper front corners of the case, where they are equally ornamental. A couple of small vulcanite balls, one inch in diameter, occupy their former place. I cannot detect any difference in the current.

In using Morton's wave-current, with a spinal electrode and an eight-plate machine, I early became satisfied that a stronger current would be of distinct advantage. This was gained by adding two revolving plates, thus increasing the output over 25 per cent. This difference in the current was very noticeable, due, firstly, to the increased generating surface, and, secondly, to the diminished internal resistance, as the plates had to be brought nearer together, so as not to occupy more space than the original eight. Up to this time the spark gap, usually employed by myself and recommended by others, has been about five or six inches as a maximum.

In the course of some experiments, having nothing to do with the administration of the wave-current, I substituted a seven-inch metallic disc for the small trial ball on the end of the negative pole-rod. The changed character of the spark led me to make a trial of this arrangement with the wave current. The result greatly surprised me, as I found that I could use a spark gap of ten inches or more with no more inconvenience to the patient than formerly with the five-inch gap. The spark was not only twice as long, but apparently thicker, and the immediate effect more pervasive; that is, the vibrations were felt over a more extended area. As the strength of the current and its effects on the system appear to be proportionate to the length of the spark gap, the little device here mentioned has virtually doubled the efficiency of the static machine, so far, at least, as regards the administration of the wave current.

256 West 57th Street, New York, February 25, 1902.

Surgical Treatment of Tuberculosis of the Peritoneum, Intestines, and Genito-Urinary Organs.—William H. Wathen coincides with the general opinion that laparotomy does cure some cases of peritoneal tuberculosis. He says that there is nearly a consensus of opinion that laparotomy is not indicated during the earlier stages of the disease, but again, if we delay too long, until there is extensive ascites of the peritoneal structures of the bowel, the omentum, the mesentery, and general peritoneum are greatly thickened, or universal adhesions have formed, practically closing the peritoneal cavity, or numerous sacculated accumulations of pus have formed, we may have delayed too long to offer our patients the best results—the happy medium being the correct solution. In stenosis following intestinal tuberculosis the bowel has been treated by physiological exclusion, by performing an anastomosis between the healthy bowel at each end of the stricture; by complete exclusion, excising the bowel at each side of the stricture and uniting the ends by circular suturing, then closing the ends of the strictured portion and leaving it *in situ*. He endorses the conclusions of Young as to the surgical treatment of genitourinary tuberculosis as follows: (1) Epididymectomy, with high resection of the vas deferens, is the operation of choice; (2) Castration should be confined to cases in which the testicle proper is involved, or the scrotal disease is extensive; (3) Double castration should be avoided if possible, a portion at least of the testicle being left, even with the risk of local recurrence of the disease; (4) Operations upon the seminal vesicles and prostate should be done only after removal of the testiculous foci has failed to arrest the progress of the disease; (5) Serious involvement of distant parts—pulmonary, urinary, osseous, etc. —does not contraindicate operation; (6) Disappearance of extensive tuberculosis of the prostate, seminal vesicles, bladder, and kidneys, lungs, etc., may follow the simple removal of the testicular foci.

Carcinoma and Malaria.—L. Prochnik, as the result of his observations in the South Sea Islands, does not believe that malarial infection is of any avail in the treatment of carcinoma, notwithstanding the contrary opinion of F. Löffler. Malaria is an exceedingly common disease in these islands, and there are, indeed, very few of the inhabitants, either foreign or native born, who do not suffer periodically therefrom. Carcinoma is fairly prevalent also, but figures show that, generally speaking, it is more common among the native than among the foreign inhabitants, and this in spite of the fact that malaria is more frequent among the former than the latter. Numerous cases of carcinoma have been observed in which malaria was at the same time present, and yet never in such cases has the author observed the least benefit of the carcinomatous condition thereby. This is the universal experience of all physicians practising in these islands. In regard to the most frequent location of the carcinoma in that climate, it is interesting to note that in the vast majority of cases the liver is the seat of the disease. Thus, out of twenty-two cases observed in natives, in eighteen the liver was the primary seat of the disease. Prochnik accounts for this by the fact that liver diseases, especially cirrhosis and abscess, are very common in these islands. He believes that malarial infection is responsible for the special susceptibility of the liver to disease in that climate. Investigation has shown that oftentimes liver puncture will establish the presence of the malarial parasites when these cannot be found in the blood taken from the peripheral circulation. It seems probable, therefore, that the damaging of the liver by the malarial parasite indirectly lays the foundation for the development of carcinoma in this organ.—*Wiener klinische Wochenschrift.*

Cigarette Inebriety.—J. M. French considers the cigarette habit injurious chiefly because it is indulged in to great extent by young and growing boys, because, being small, the cigarette is often smoked almost constantly, and because it is the common practice to inhale the smoke, thus largely increasing the poisonous effects of the nicotine. Statistics prove that in Yale College the non-users of tobacco gain in weight, in height, and in chest girth, more than the regular or occasional users. The same conditions obtain in Amherst. In the Polytechnic School in France it was found that the nonsmokers took the highest rank in every grade, and that the smokers continually fell behind. In an experimental observation of thirty-eight boys of all classes of society, who had been using tobacco for from two months to two years, twenty-seven showed severe injury to the constitution and insufficient growth, and thirty-two showed irregularity of the heart's action, disordered stomachs, cough, and a craving for alcohol. Within six months after they had abandoned the use of tobacco, one-half were free from their former symptoms, and the remainder recovered by the end of the year. Whatever may be the verdict with reference to the use of tobacco by healthy adults, all physicians and scientific men agree that young and growing boys should not use tobacco in any form.—*The Quarterly Journal of Inebriety.*

The Microscope as an Aid to Diagnosis and Prognosis in Chronic Suppuration of the Middle Ear.—E. F. Snydacker calls attention to the significance of cholesterin, epidermis shreds, and bone dust in the discharge from suppurating ears. Concerning the two latter elements, he says that it must not be forgotten that after a long-continued suppuration of the middle ear the mucous membrane becomes denuded in places, and such surfaces may by a reparative process become clothed with epidermis, an outcome which may be entirely favorable, and, far from indicating cholesteatomatous formation in the middle ear, is one means which nature has devised of effecting a cure. It is only when the discharge persists after this epidermis formation has begun, and when by its constant irritating contact it causes over-production of epidermis, and this is constantly cast off, as is shown by its continual presence in the discharge, that its production must be regarded as a dangerous symptom. One cannot, therefore, on a single finding of epidermis shreds, make a diagnosis of cholesteatoma or advise an immediate operation; it is only when these shreds are present and the discharge persists for weeks, and even months, that it is safe to regard them as a danger sign. It is otherwise, however, when the process has gone so far that the epidermis presents the concentric arrangement known as cholesteatoma. When we can convince ourselves that cholesteatomatous masses are present, all delay is detrimental to the best interests of the patient, and it is far better to give up the case at once, than to enter on a fruitless and dangerous treatment. As to the indications when bone dust is present, there may be a difference of opinion: if the carious bone has its source in the ossicles, and the tympanic walls and mastoid cells are intact, then there can be no danger in delay. When, however, we remember the findings of Grunert, who in 108 cases of caries of the middle ear found only two where the ossicles alone were involved, while either the tympanic walls or mastoid cells were involved in all the other cases, we must agree that where carious bone is present in the discharge, and persists after thorough treatment has been instituted, a radical operation is surely the most conservative course.—*Archives of Otology.*

Eradication of Scarlet Fever.—J. W. Ames believes that the carrying out of the following regulations will lead to an eradication of scarlet fever: (1) Every suspected case should be promptly isolated until the diagnosis can be positively confirmed; (2) After confirmation, make isolation absolute, and report the case to the Health Department; (3) Instruct the family to keep the patient isolated until all signs of peeling are invisible; (4) All members of the family who desire to leave the house must do so the first day after their clothing has been disinfected. This will take six hours, as all their apparel must be placed in a sealed room and exposed to formaldehyde gas for at least that length of time to insure public safety, and they must remain away until quarantine is removed; (5) No person should leave the infected area after fourteen days' continuous exposure, unless the sick patient is free from desquamation; (6) The attending physician should have as little contact as possible with the patient; cleanse his hands thoroughly, and disinfect his clothing before entering another house; (7) The character and duration of the isolation must be left to the Public Health Department. Thorough disinfection with formaldehyde, ten ounces to one thousand cubic feet, the germs having now been corralled, will destroy them and thus end the existence of the disease.—*Physician and Surgeon.*

The Diagnosis and Treatment of Pain in the Ear.—Macleod Tearsley says that for the intracranial complications nothing but operation can suffice. In reflex otalgia, the existing trouble—a carious tooth, disease of the tongue, fauces, or pharynx—must be sought for and treated. The two forms of external otitis, diffuse and circumscribed, must be treated practically alike. Leeches can be applied in front of the tragus; hot instillations of sterilized water, hot boric lotions, cold by the ice-bag or by Leiter's tubes to the mastoid region, or a combination of hot and cold can be used. Cocain, 2 to 5 per cent., or morphia, 1 per cent., or both combined, may be used as instillations. The furuncular form is so agonizing that a sedative must be used, few preparations being better than Battey's liquor opii sedatives, in 5 minim doses every four hours. In cases of middle-ear inflammation secure absolute rest, give a saline purge, and use instillations at a temperature of 115° F. Combine cold with it, applying the ice-bag to the region below the auricle. Leeches give the most relief. In the early stages of acute inflammation of the middle ear the process can often be aborted by careful use of the Eustachian catheter.—*Treatment.*

Résumé of the Subject of Actinomycosis, with Report of a Case of Actinomycosis Abdominalis.—A. Vander Veer and Arthur W. Elting discuss this infectious disease, common to man and many of the domestic animals, and caused by a polymorphous fungus belonging to the genus of oöspores. The consensus of opinion is that the great carriers of the actinomycotic contagion are the different forms of cereals, especially barley. The neoplastic type is the one usually found in horses and cattle, and the inflammatory type in man and hogs. Poncet and Berard classify the forms of the disease as the cervicofacial, thoracic, abdominal, and cutaneous. The duration of the disease is from a few weeks to several years. In abdominal actinomycosis (of which the authors report a case), there are three typical periods: The initial period, in which the symptoms often resemble recurrent appendicitis; the period of tumor formation; and the period of fistula. The discharge from the fistulæ may be serous, seropurulent, or purulent. A fourth period of repair, or cicatrization may be added. Medical treatment alone does not seem to be very successful. The surgical treatment of all cases amenable to operation should be practised, in combination with large doses of potassium iodide.—*Albany Medical Annals.*

The Structure and the Physiological Significance of the Hæmolymphatic Glands.—Egidio Morandi and Pietro Sisto conclude that these glands, which are found in the region of the lymph glands, assist in the formation of lymphocytes and in the destruction of changed red blood cells. This conclusion they have reached, because (1) Of the presence of globuliferous cells containing red corpuscles in progressive stages of disintegration; (2) After destruction of the spleen, the number of globuliferous cells in the hæmolymphatic glands is enormously increased; (3) Because in animals deprived of their spleen, the administration of hæmolytic substances still further adds to the production of these cells; (4) Because the authors were unable to find any nucleated red cells or giant cells possessing any hæmatopoietic functions; (5) The injection of pyrogallic acid, while inducing acute anæmia of a severe type, did not cause hæmatoblastic activity in the hæmolymphatic glands at all on a par with that shown in the spleen after bleedings had rendered the bone marrow incapable of supplying the necessary number of red cells.—*Archivio per le Scienze Mediche.*

Cheyne-Stokes' Respiration, and Associated Phenomena.—E. Grande reports a fatal case of fractured skull, in which, ten days before death, there was typical Cheyne-Stokes' respiration, with absolute immobility of the chest. The period of apnœa was about forty seconds, that of dyspnœa from fifteen to twenty. There was no modification of the pupils, nor movement of the eyes during apnœa. The pulse became very irregular, and almost too rapid to count. There was abolition of reflexes and total unconsciousness. Injections of caffein diminished the duration of apnœa, and induced a more regular type of breathing. The Cheyne-Stokes' respiration appeared precisely at the time when the medulla oblongata became involved by pressure of the fractured temporal bone, causing disturbed circulation with diminished nutrition. The author considers this form of respiration as of little diagnostic or prognostic importance, unless accompanied by other significant symptoms.—*La Riforma Medica.*

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THE SANITARY SERVICE OF THE ENGLISH ARMY.

THE severest critics of the Army Medical Department of the British Army are to be found in Great Britain itself. The strictures, passed unsparingly by civilians upon every detail connected with the Army Medical Corps in South Africa, have given the general public of Great Britain and journals of Continental Europe much cause for the belief that the whole army medical organization is lacking in the essentials that go to make up an efficient service.

On no one point have the detractors, both native and foreign, been more agreed, than that the lack of a good sanitary system has been responsible for the enormous death rate from typhoid fever, and it has been constantly urged that the appointment of sanitary officers, with special powers, would have prevented the spread of the epidemic.

The truth would seem to be that the British authorities were at fault in allowing the medical service to become unpopular, and consequently undermanned, by refusing to allow its members the privileges which were, undoubtedly, their due, but so far as the work of the medical department in South Africa has been concerned, it has been performed, on the whole, efficiently.

Many eminent army medical authorities doubt the wisdom of appointing special sanitary officers. Military exigencies are against such a course, and, as is pointed out, a goodly portion of an army medical student's curriculum is devoted to the study of hygiene.

Captain John Stewart Kulp, Medical Department U. S. Army, who has recently paid a visit to the Army Medical School at Netley, England, has published an unbiased and appreciative review of the course of training at that school, and of the medical organization generally of the British Army.

He says that at Netley the instruction in hygiene is both practical and theoretical, is admirable in its thorough comprehensiveness, and includes a broad, general view of the subject—its history, its civil and military objects, and the geographical distribution of disease. Care is taken to impress on the student that the highest function of the military surgeon is the prevention of disease. . . . In clinical and military medicine there is bedside instruction on the more prevalent diseases of military men, together with lectures on the diseases which are modified by the habits, character, and duties of the soldier, invaliding and tropical diseases.

As to the field service of the British Army, it is allowed on all sides that, with regard to equipment, it does not compare favorably with the same service of the United States Army.

We had occasion to draw attention to this fact in the RECORD a short time ago.

Captain Kulp, referring to this branch of the British Army, says that while the English fully realize that an army medical department in war must be self-sustaining, and organize the force accordingly, the defects in the system are many and obvious. He enters into a minute description of the methods of the British Army Medical Department in the field, but which space fails to give in detail.

Captain Kulp says, in conclusion, that South Africa has taught England what it is to be hoped we have learned during our late war, namely, the value of an organized medical department possessing real authority in relation to all subjects affecting the health of troops. An aggregation of regimental medical services is not a medical department, and uniformity of material and administrative methods is of no greater importance than is uniformity in the education of the personnel which is to handle them.

The organization and equipment of the Army Medical Department of the United States are confessedly unsurpassed in the world, and the English might with advantage, in these respects, take example from our methods. But, on the other hand, the training in sanitary matters is much superior in the British Army to that in our army, therefore the authorities in this country should seize the opportunity of copying from the British, and of rendering the army medical department of the United States a model service throughout.

The experiences gone through by our army medical officers in Cuba, Porto Rico, China, and the Philippines, should impress indelibly upon the minds of those in control the necessity of a sanitary training and of instruction in tropical diseases for the army medical corps.

FREQUENCY OF TRICHINOSIS IN THE UNITED STATES.

THE belief is current that trichinosis in man, occurs but seldom in the United States. The fact is, of course, well known that trichinosis in hogs is prevalent, it having been shown, as a result of examination of pork for commercial reasons, to be about 2 per cent.

Dr. Herbert Williams, Professor of Pathology, University of Buffalo, for several years past has been making investigations into the matter, and has published the outcome of his researches in the July *Journal of Medical Research.*

Before entering upon the subject of trichinosis, as regards its prevalence in this country, the Buffalo professor gives some statistics treating of the frequency of the disease observed by various authorities some of which it may be as well to quote.

In 1855, Zenker discovered four cases of trichinosis in 136 autopsies at Dresden. According to Fiedler, writing in 1866, encapsulated trichinæ were found at 2 to 2½ per cent. of the autopsies in Dresden hospitals. Leuckart stated, in 1866, that in Berlin and Dresden 3 per cent, of all subjects contained trichinæ.

Gribbohm in Kiel, 1872-1877, in 972 autopsies found one case, 1 per cent. Wagner of Leipzic is said, by Haller, to have found trichinosis once in every thirty to forty bodies.

In Scotland 1 to 2 per cent. of the dead bodies, examined during the five years preceding 1860, are said by Turner to have contained trichinæ. Scheiber in Bukarest stated, in 1871, that in Roumania about one body in 200 contained trichinæ. In St. Petersburg, Rudnew found trichinæ three times among 150 dissections.

According to Lancereaux and Blanchard trichinosis is almost unknown in France.

Concerning the frequency of trichinosis in the United States, the following examples are cited:

In 1881, Kerber, in San Francisco, had made thirteen consecutive examinations of subjects, and found no trichinæ. Dr. Leidy wrote that he had repeatedly seen trichinæ in subjects in the dissecting room at the University of Pennsylvania, but that no record of them had been made.

Whelpley, in St. Louis in 1891, examined, with the microscope, specimens from twenty cadavers in the dissecting room, and found one case of trichinosis. Osler states that his notes show that in 1,000 consecutive autopsies trichinæ were present in six instances.

Packard was able to find, in July, 1897, that between 1864 and 1897 357 cases of trichinosis in man were known to have occurred in the United States and Canada. While, according to a communication from Stiles to Osler, in February, 1898, about 900 cases had been reported from the United States up to that date.

Dr. Williams began his investigations in 1894, during which period 505 cadavers were examined, and trichinæ were found present in twenty-seven, or 5.34 per cent. The subjects studied were selected at random, and were of various nationalities.

The percentage of cases of each nationality in which trichinæ were found was as follows:

United States, white, 2.89; United States, colored 7.14; British and Irish, 8.06; Canadian, 16.66; German, 12.24; Italian, 16.66.

As might be expected, the proportion of Germans in this list is large, but taking into consideration their reputed habit of consuming uncooked pork, their position is a matter for no comment.

The native Americans give an unexpectedly high percentage, attributed by Dr. Williams either to the fact that some of the American whites may have been of German parentage, and continued their ancestral custom of eating uncooked pork, or to the custom, occasionally followed by the farmers in New York State and in the southern parts of the United States, of taking a piece of pork from the barrel and eating it without further preparation.

The prevalence of trichinosis among the colored race is thought by Dr. Williams to be probably due to carelessness in preparing food and eating, while the large percentage among British subjects appears incomprehensible, except on the ground that a number of the bodies were procured from an insane institution, where the pigs, raised on the premises and used for food, had been decimated by a disease diagnosed as hog cholera, just before the collection of samples for Dr. Williams' work was begun.

The result of the investigations are summarized as follows: (1) Samples of muscles secured at 505 unselected autopsies on adult human subjects were examined microscopically for trichinæ. In twenty-seven cases, or 5.3 per cent., trichinæ were present; (2) All of the subjects died of other diseases than trichinosis. The infection with trichinæ must, in every case, have occurred a considerable time previously; (3) The infections were of various degrees of severity, being sometimes very extensive, and sometimes so slight that only one or two worms were detected; (4) The birthplaces of the subjects included the most important countries of North America and Europe. The number of cases was not large enough to allow accurate conclusions to be found as to the influence of nationality upon the frequency of the disease. The fact that a large proportion of cases occurred in subjects who were born and had lived in the United States is important; (5) An unusually high percentage occurred among subjects who had been insane; (6) Examination of sections from the above cases for eosinophilic cells failed to show such cells about or near the encapsulated trichinæ; (7) Mast cells do not collect in or about the capsules, in cases of old trichinosis; (8) Plasma cells occasionally appear in or about the capsules; (9) New-formed elastic fibers sometimes appear about the capsules; (10) As described by Leuckart and Langerhaus, the capsules may be invaded by new cells, the worms disintegrate, and thus the capsule become filled with fibrous and adipose tissue.

Dr. Williams' painstaking and protracted investigations have revealed two facts, that trichinosis is more frequent in this country than was believed, and that many cases of trichinosis escape detection at autopsies. Careful microscopic examination is necessary to determine the less severe forms of the disease, and consequently the presence of trichinæ is often passed by. The result of the researches at Buffalo do not prove that the disease is frequent throughout the United States, but it lends weight to the belief that such may be the case, as well as emphasizing the danger of eating uncooked pork.

EFFECT OF DESTROYING THE YELLOW FEVER MOSQUITO IN HAVANA.

Constant warfare against the Stegomyia mosquito in Havana, by the Sanitary Department, has resulted in very marked diminution in their numbers. In 17,000 houses examined by the "mosquito corps," during the month of January, in only 411 were larvæ found—while, if a similar inspection had been made the year previous, larvæ would have been found in almost every instance.

As a result of this systematic mosquito destruction, not a case of yellow fever has occurred in Havana for nearly six months. Since 1889 the average annual number of deaths from yellow fever for the ten months, April 1 to February 1, has been 457.18; during the same period just passed, only five deaths have occurred from this disease. In January, a year ago, the yellow-fever infection was present in every part of Havana. In January of the present year Havana was not only entirely free from fever, but had been so for four months. The Sanitary Department has worked exclusively on the hypothesis that the Stegomyia mosquito is the sole agent by which yellow fever is transmitted, and has entirely disregarded the question of "fomites." It feels assured that this method, which has eradicated yellow fever from Havana, will keep that city free from the disease in the future. The measures of mosquito destruction employed include drainage of damp places, removal of receptacles for standing water, as far as possible; the free use of petroleum, and the destruction of adult insects by formaldehyde, sulphur, or the fumes of burning pyrethrum powder.

The Clergy and Spiritualism.

The daily papers have lately exploited a divine of a fashionable church in this city, who maintains that he sees ghosts, talks with them, and even receives mysterious dictations from the other world. In other words, the distinguished gentleman confesses himself as a believer in visions, and attempts to explain them from a purely subjective point of view.

Naturally enough, the medical profession takes issue with the reverend expounder of these absurd views. Dr. Louis Albert Banks, in an address delivered last Sunday before the Grace Methodist Church, very pertinently said: "What folly this stuff is! I notice that a court and jury in Philadelphia have just set aside a will conveying $30,000, because they regard a belief in power to communicate with spirits to be a form of insanity. It is strange to what extremes the pendulum will swing in a man's life. In his early life Dr. —— was a Methodist minister, and retired from the Methodist Church because he could not believe things in the Bible which he could not understand. And now we have him taking hold of all these wares of the spiritmongers with avidity. The sad side of this clairvoyant humbug is the pitiable state to which it reduces many fathers and mothers, whose hearts cry out with grief at the death of their children, and many who long to hold communication with dead friends. The insane asylum holds many a victim of these conspirators against the broken-hearted. They allure only to deceive; they do harm and not good. The whole story of spiritualism is stained with deception and falsehood and humbuggery." Dr. Banks is perfectly right in his stand, and has voiced the sentiment of the profession in no uncertain tones.

Smallpox in London.

No more remarkable, and to the unprejudiced convincing, object lesson of the immunity to smallpox conferred by vaccination could have been afforded than that presented at the present time in London. The epidemic is there increasingly prevalent, and since the commencement of the outbreak there have been about 800 deaths, of which 80 occurred in the week ending March 15. Fresh cases are being recorded at the rate of about fifty a day. The following figures, given in a despatch to the New York *Sun*, March 16, show the value of vaccination and the necessity for revaccination about the age of twenty. Of a total of 766 deaths, 400 were those of vaccinated persons and 292 of unvaccinated persons. Regarding seventy-four there is no definite statement; of the 400 vaccinated persons who died only forty-seven were under twenty years of age, while of the 292 unvaccinated people 224 were below twenty; of the eighty deaths in the week ending March 15 fifty-two were above twenty. As a rule, in these days when big epidemics of smallpox in civilized countries are rare, individuals who have been vaccinated in infancy do not have the operation repeated when they arrive at years of discretion, forgetting or ignoring the fact that the immunity produced by vaccination only lasts a certain period.

Of the 353 vaccinated people over twenty who have recently died of smallpox in London the great majority had not been vaccinated, probably, since early childhood, and were, therefore, almost as susceptible to the disease as if they had never been vaccinated. It may be hoped that the continued prevalence of smallpox in London and in other parts of Great Britain, and the valuable statistics with regard to vaccination gathered therefrom, will convert sceptics on the subject in all parts of the world to a belief in the merits of vaccination as a preventive of smallpox.

Amendments to National Health Bill.

At a convention of some twenty State Health and quarantine officers, called by Dr. Edmond Souchon, President of the State Board of Health of Louisiana, differences of opinion regarding proposed legislation to establish a national health department were harmonized, and unity of action secured in requesting the passage by Congress of House Bill, 7,189, introduced by Mr. Hepburn, and Senate bill, 2,162, introduced by Mr. Perkins, with a slight amendment to Section 7, authorizing a convention of State health authorities, as occasion may demand, whenever, in the opinion of the Surgeon-General of the Marine Hospital Service, such a convention is necessary, or upon the request of five representatives of State boards of health or quarantine officers. This bill gives the Marine Hospital Service jurisdiction over civil health matters. Notification of the agreement upon this bill was conveyed to the House Committee on Commerce by a delegation composed of Dr. H. M. Bracken, Secretary of the State of Board of Health of Minnesota; Dr. Edmond Souchon, President of the State Board of Health of Louisiana; Dr. William H. Welch of Johns Hopkins University; Surgeon General Wyman of the Marine Hospital Service; and Dr. H. L. E. Johnson of Washington, representing the legislative committee of the American Medical Association.

Among others present at the conference were: Dr. James Evans, Secretary of State Board of Health of South Carolina; Dr. A. H. Doty, Quarantine Officer, Port of New York; Dr. U. O. B. Wingate, Secretary State Board of Health of Wisconsin; Dr. Henry D. Holton, Secretary State Board of Health of Vermont; Dr. Nowber, Secretary State Board of Health of Delaware; Dr. Durgin, Quarantine Officer, Port of Boston; Dr. W. W. Sanders, State Health Officer of Alabama; Dr. Lewis of the New York State Board of Health, and many others.

What the Army Medical Department has Done for Cuba.

In his annual report for the year 1901, the Chief Sanitary Officer of Havana says:

"This is probably the last annual report that will be made by a United States Army officer, as health officer of Havana, to his military superior, the Governor of the Island, so I hope that I may be excused if I point out some of the sanitary differences between 'the then' and 'the now.'"

"The Army took charge of the Health Department of Havana when deaths were occurring at the rate of 21,252 per year. It gives it up with deaths occurring at the rate of 5,700 per year. It took charge with smallpox endemic for years. It gives it up with not a single case having occurred in the city for over eighteen months. It took charge with yellow fever endemic for two centuries, the relentless foe of every foreigner who came within Havana's borders—from which none could escape, and from whose attack every fourth man must die. It found Havana feared as a thing unclean by all her neighbors of the United States, and quarantined against as too dangerous to touch, or even to come near anything she had touched, to the untold financial loss of both

Havana and the United States. It leaves, after the careful study of the question of yellow fever by its officers, undeterred by personal risk—for several of the investigators have died of the disease, contracted at their work. It has established the fact that yellow fever is only transmitted by a certain species of mosquito, a discovery that, in its power of saving human life, is only excelled by Jenner's great discovery, and as time goes on, it will stand in the same class as that great boon to mankind. . . . It has demonstrated a system by which yellow fever can certainly be controlled without interference to commerce."

The above facts speak so forcibly for themselves that comment thereon is superfluous. The record made by the Army Medical Department in Cuba has gained for itself the admiration of the profession.

Sanitary Regulation of Prostitution in Cuba

General Wood has recently issued an order announcing the appointment of a sanitary commission, composed of five well-known Cuban physicians, in connection with the regulation and control of houses of ill-fame in the island of Cuba. Very stringent laws on this subject existed under the Spanish rule of the island, but they were enforced either not at all or only in part. Popular sentiment in Cuba recognizes the fact that venereal disease is a sanitary problem, which should be dealt with by the public health authorities exactly like any other communicable diseases affecting the general welfare. The questions of sanitation and ethics are fully recognized, but the Cuban regards them as quite distinct from each other, and can see no reason why respect for ethical considerations should stand in the way of common sense dealing with a sanitary problem.

A Judge on Medical Expert Testimony.

At the annual dinner of the Society of Medical Jurisprudence, held on March 8, Judge Woodworth of the Appelate Division of the Supreme Court, responding to the toast of "Expert Testimony, as Viewed by Appellate Tribunals," passed some exceedingly caustic criticisms upon the manner in which expert testimony is given at the present time.

The judge said, in part: "That experts who told partial truths, or who, for a fee, testified for the side on which they were retained, were perjurers, who disgraced both the profession of medicine and that of law.

"When expert witnesses of the medical profession give testimony to things not scientifically true, their brothers of the profession know that before high Heaven, they have testified falsely, and if such men were treated as outcasts that kind of swearing would be a matter of the past."

The methods now in vogue of taking medical expert testimony are undeniably faulty, and oftimes lead to unfortunate results, but that medical men deliberately perjure themselves, or even withhold part of the truth for the sake of gain, is an exaggerated presentation of the facts of the case.

Of course, medical men are but human, and, like other mortals, are prone to error and to sin, but, although not saints, they are, as a body, as honorable and straightforward as is any class.

There doubtless have been instances where members of the medical profession have deviated from the straight path of truth, and have thrown dust in the eyes of the jury, for the sake of the fee, but it may be confidently asserted that such occurrences are rare.

The tendency, as an expert witness, to be somewhat biased in favor of the retaining side, is probably unavoidable, and a certain amount of partisanship, under existing conditions, will surely creep in.

The system in force, dealing with expert testimony, in the courts of law of this country, is more at fault than the witnesses, and it would be in the interests of all if radical and practicable reforms could be introduced.

The Medical Record has always held that an independent medical board should be established whose duty would be to proffer perfectly unbiased scientific, and medical testimony.

The successful solution of the problem of how to procure absolutely honest expert testimony is beset with difficulties, but the medical profession, for its own fair name, would do wisely to take steps to render it impossible for a judge to declare that many medical witnesses are not to be relied upon for the strict truth.

Alcohol in the Human System.

Professor W. O. Atwater of Wesleyan University recently delivered an address before the Hartford Medical Society on "The Nutritive Value of Ordinary Foods and Alcohol."

In speaking of the somewhat heated discussion on this point, which has been proceeding for the past two or three years, Professor Atwater referred to the fact that a number of scientists have opposed the theory that alcohol possesses a nutritive value, and have laid especial stress upon the view that alcohol does not protect protein from consumption.

It is known that sugar, starch, and fat protect the fat of the body from consumption, and the proteids also. The great majority of distinguished experimenters believe that alcohol protects body fat from consumption, but some deny this power as regards protein. This is the main point in the argument of those who declare that alcohol has no nutritive value. They contend that not only does it afford no protection to protein from consumption, but that it tends to increase its oxidization, and consequently cannot be regarded as useful for nourishment.

For some time past, the most eminent exponent of this view has been Dr. Rosemann of the University of Griefswald, Germany, and he is constantly quoted as one of the chief opponents of the nutritive value of alcohol, although lately, on several occasions, he has expressed his written opinion that it possesses such a value.

A recent issue of *Pfluger's Archiv für Physiologie* contains an article by Dr. Rosemann on the influence of alcohol upon the metabolism of protein, in which he brings out a number of new experiments made by him on the subject. He finally concludes that alcohol, in moderate doses, does protect body protein from consumption, though in some instances it temporarily fails to do so, and it may, in fact, tend to increase the amount of protein consumed. The latter effect appears to be the case mainly with individuals unused to alcohol, and with them seems to last but a short time; and, afterward, the alcohol protects protein from consumption.

Professor Atwater and other investigators coincide with these views of Rosemann.

Professor Atwater concluded an interesting address with the following words: "Science forbids our saying that alcohol is in no sense useful, or that it is always harmful, but it also demands that we should urge the great danger of excessive use." He repeated what he had often said before: "For people in health, and especially for young people, alcohol is an excellent thing to let alone."

News of the Week.

Attempted Assassination of a Physician.—Dr. Samuel Landsman of this city narrowly escaped being killed by a bullet fired last Sunday morning by Alois Spinner, who, brooding over the death of his child, attempted to kill the physician whose treatment he believed was responsible for the death of his son. A hot-water bath was used by the physician, and, the child being slightly burned, the father insisted that the burns were the cause of death. The physician, however, was exonerated, both by the Coroner and by the civil courts. The fact that the City Court had dismissed Spinner's suit seems to have made the salesman frantic, and while in this state he attempted the life of the doctor. The bullet, fortunately, lodged only in the clothing of the physician.

Smallpox Victims.—According to the official reports of the Marine Hospital Service, there were 22,263 cases of smallpox in the United States during the week ending March 15.

This is an unusually large number, and the officials are somewhat concerned about it. For the same period last year only 9,406 cases were reported. The deaths from smallpox during the last week have been 661, as against 136 for the same week of last year, the number being almost quintupled.

Jesty's Claim to Jenner's Discovery.—In the *London Standard* of a recent date occurs the following: The late Mr. C. Jesty, Magistrate of Antwerp, Weymouth, England, brother of Mr. A. Jesty, sends the following extracts, held documents relating to B. Jesty's discovery of vaccination. These words are copied from a graveyard in Worth Maltravers churchyard: "Sacred to the memory of Benjamin Jesty of Downsbay, who departed this life April 16, 1816, aged 70 years. He was born at Tetminster, in this county, and was an upright, honest man, particularly noted for having been the first person (known) that introduced the cowpox by inoculation, and who, from his great strength of mind, made the experiment from the cow on his wife and two sons in the year 1774."

The Late Prof. Paul F. Mundé.—At a meeting of the Medical Association of Greater New York, held at the New York Academy of Medicine, March 10, 1902, the following report of the Committee on the death of Dr. P. F. Mundé was adopted: "The Medical Association of Greater New York desires to give expression to the loss it has sustained in the death of its associate, Dr. Paul F. Mundé, one of its founders and most distinguished members. In his professional life and work he exhibited the attributes of the conscientious and conservative physician, and throughout his whole career, in every position he occupied, discharged its duties with fidelity and devotion, winning the respect and esteem of all who knew him. Our deepest sympathy is extended to his afflicted family, and we hereby resolve that this note be entered in our minutes, and a copy be sent to the family.

(Signed) W. H. Katzenbach, M.D.,
Henry C. Coe, M.D.,
Chas. F. Adams, M.D.,
Committee.

Brooklyn Medical Club.—Prof. E. W. Scripture of Yale University will deliver the annual lecture of the Brooklyn Medical Club at the Medical Library Building, 1313 Bedford avenue, March 24, 1902, at 8.30 P. M. His subject will be "A Chapter from the New Psychology: Recent Researches on the Voice," with the exhibition of lantern slides, experiments, and other illustrations.

$500 Damages for Autopsy.—Mrs. Annie Botsford obtained a verdict of $500 against the Presbyterian Hospital before Justice Gildersleeve of the Supreme Court, because the hospital authorities performed an autopsy on the remains of her husband, Albert Kent Botsford, without authority from her. The verdict is said to be the first of its kind in this State. The institution does not perform autopsies without consent of the relatives, and it set up that a brother of Mrs. Botsford had given this consent. The court would not permit evidence to this effect, on the ground that the widow was the only one who could give the authority.

The American Congress of Tuberculosis will be held at the Hotel Majestic, on May 14, 15 and 16th proximo. There will be, aside from all papers of a miscellaneous nature, four symposiums, arranged each to occupy one session of the body, viz.: (1) Preventive Legislation, Embracing the Social, Municipal, and State Aspects of Tuberculosis; (What aid should be expected from the State in the cure and prevention of tuberculosis, and how shall this be secured?) (2) Tuberculosis in Its Pathological and Bacteriological Aspects; (3) The Medical and Surgical Aspects of Tuberculosis (Embracing Sanitoria and Climatic Conditions, Light and Electricity); (4) The Veterinary Aspects of Tuberculosis. Professor Adami will speak at the Congress, and Professor Koch of Berlin has been invited to contribute his views.

Association of American Physicians.—The seventeenth annual meeting of the Association of American Physicians is to be held in Washington, D. C., on April 29 and 30 and May 1, 1902.

A New Psychopathic Ward.—The trustees of the New York Infirmary for Women and Children have, through the influence of Dr. Alexander Lambert, established in connection with the infirmary, a psychopathic ward with two laboratories for neuropathology and psychopathology. Dr. Alexander Lambert is the Chairman of the Committee of the Trustees.

The purpose of the psychopathic ward and laboratories is the study and treatment of nervous and mental diseases, especially of the initial stages of pyschomotor degeneration and of borderland cases of mental alienation.

The Board of Attending Physicians consists of the following gentlemen: Dr. Alexander Lambert, Dr. Carlos F. MacDonald, Dr. Frederick Peterson, and Dr. Pierce Bailey.

Dr. Ira Van Gieson is appointed Director of the Neuropathological Laboratory, Dr. Boris Sidis is appointed Director of the Psychopathological Laboratory, and Dr. George M. Parker is Assistant in Psychopathology. Dr. Henderson B. Deady is to take charge of the administrative part of the ward.

Health Board Objects to Compulsory Vaccination.—The Board of Health, on March 13, adopted a resolution against compulsory vaccination, as proposed in Assembly Bill No. 1,439, introduced by Assemblyman Fuller. This bill gives power to the State Commissioner of Health to compel vaccination in any county when it is, in his opinion, necessary.

Smallpox in City Jails.—Smallpox has appeared in the Tombs, and it is also said to have occurred in two other city prisons. Every precaution is being taken by the Health Department to prevent the spread of the disease.

The American Association of Urologists was organized on February 22, 1902, essentially for the purpose of further development of the study of the urinary organs and their diseases. The annual meeting will be held on the last day and the day following the annual meeting of the American Medical Association. The officers of the association are: Ramón Guiteras, M.D., *President;* Wm. K. Otis, M.D., *Vice-President;* John Van der Poel, M.D., *Treasurer;* Ferd. C. Valentine, M.D., *Secretary;* A. D. Mabie, M.D., *Assistant Secretary.*

A Jail Quarantined.—Smallpox in the White Plains Jail has brought business in all the county offices to a standstill. It was learned that two more prisoners had contracted smallpox. Guards patrol around the jail, and no one is allowed within 200 feet of the main entrance. A guard-house has been erected in front of the jail.

Coroner Archibald T. Banning has been selected by the Supervisors to have complete charge of the arrangements. All the patients will be taken to the county poorhouse at Last-view.

Smallpox in London.—The returns of smallpox for the week ending March 1 show the following figures: On Saturday, February 22, there were 42 fresh cases notified and removed; on Sunday, 23, there were 25 fresh cases; on Monday, 24, there were 53 fresh cases; on Tuesday, 25, there were 63 fresh cases; and on Wednesday, 26, there were 44 fresh cases.

Berlin Board of Health Regulations for Vaccination.—1. Vaccination in infancy, renewed at the end of childhood, renders an individual practically as safe from death from smallpox as if that disease had been survived in childhood, and almost as safe from attack.

2. The duration of the immunity conferred by vaccination is variable. In many individuals vaccination in infancy and revaccination in childhood is sufficient for life protection. In a limited number immunity is lost in five or six years. It is never possible to know with certainty to which class an individual belongs. In the face of an epidemic, therefore, vaccination of all who have not been vaccinated within five or six years is giving what the lawyers call the benefit of a reasonable doubt. Every one who has been vaccinated in infancy and childhood should be vaccinated not less than once in adult life.

3. The immunity conferred by vaccination is in direct proportion to the thoroughness with which it is performed, and this is shown with considerable accuracy by the character and number of the resulting scars.

4. Vaccination in infancy alone is not sufficient wholly to prevent smallpox among the adult population.

5. Optional vaccination has not proved sufficient to protect the community from smallpox. Compulsory vaccination is a measure warranted by more than a century of experience.

6. The mild compulsion enforced in this country by requiring vaccination, or evidence of its recent performance, upon admission to the public schools, should have the hearty support of parents and physicians alike.

Children's Seashore House at Atlantic City.—New buildings for this life-saving charity, to occupy an entire block in the city by the sea, and costing $120,000, are in process of construction, and it is expected will be ready for occupancy in June. The main structure is three stories high, with a basement, 132 feet long by forty feet deep, and it is supported by two wings, all facing the ocean, and placed on a line 200 feet back from a specially constructed breakwater. When completed, the institution will accommodate 325 mothers and children. In addition to children requiring sea air, special dietary, skilled nursing and medical care, young women under twenty are also admitted, and youths under eighteen can join a seaside camp on the beach. It is hoped that in the future it will be possible to keep the institution open throughout the year as a sanatorium for convalescent children from the city hospitals.

Passage of Safety Pin per Anum.—Dr. Wm. Herbert Bell of Cincinnati, O., writes: "Noting the case of gastrotomy, reported by Dr. John T. Howell of Newburgh, N. Y., in the MEDICAL RECORD of March 8, 1902, I would like to report the following:

"A child, one year and three days old, E. J. M., was brought to my office two hours after having swallowed an open safety pin one inch long, and at its widest part, when open, five-eighths of an inch. I concluded to take chances and let nature assert itself, advising nothing to be done that night, except giving it its milk, and an hour after its morning feeding to give a large tablespoonful of castor oil. The pin was passed Saturday morning, March 8, two days after the oil had been given. The only pain or inconvenience suffered was on swallowing the pin and on its exit through the sphincters.

"On account of the child's health, it being a very puny and diminutive one of its age and bottle fed, I desisted from the method described by Dr. Howell in the treatment of his case, as I believed that the acids of the stomach might so corrode the pin as to cause it to be more readily encased in the milk, and took the chance that it would pass the right way."

College of Physicians of Philadelphia: Section on General Medicine.—At a stated meeting, held March 10, Dr. Augustus A. Eshner presented "A Case of Arthritis." He dwelt upon the necessity of differentiating rheumatic from rheumatoid affections, both acute and chronic. The case presented was that of an unmarried woman, thirty-one years old, who presented swelling of the metacarpo-phalangeal joints of the hands, yielding a sense of elastic fluctuation, which had been present for a number of years. There was some grating on movement, and also some wasting of the muscles of the hands, and a general appearance suggestive of deforming arthritis. Dr. W. T. Longcope exhibited "Wright's Coagulation tubes," consisting of a series of graduated pipets, in which measured amounts of blood are exposed to the heat of water at the temperature of the body until clotting takes place. Dr. A. O. J. Kelly reported "A Case of Mediastinal Tumor," in which, for a long time, there had been present symptoms of bronchitis. The detection of retrosternal dulness and the appearance of a nodule over the sternal extremity of one clavicle suggested the diagnosis of lympho-sarcoma, but histologic examination of the removed gland disclosed the structure of an adeno-carcinoma. Death took place, but no autopsy was permitted. The possibility of the stomach being the primary seat of the disease was considered, in spite of the fact that the symptoms referable to this viscus were comparatively insignificant. Dr. Herman B. Allyn reported "A Case of Perforative Appendicitis with Abscess; Operation; Recovery." Drs. David Riesman and Louis N. Jacob read a paper entitled "Spontaneous Pneumothorax, with the Report of a Case Ending in Recovery in a Man Aged Twenty-seven Years."

To Improve the Sanitary Conditions of New Orleans.—New Orleans has an unenviable reputation for the unsanitary state in which a large proportion of its population live. This is especially the case with its negro inhabitants. Efforts are now being made to effect reforms in this respect, and negro preachers and citizens are taking steps in that direction to see whether something cannot be done to reduce the negro death rate, which is double that of the whites. A course of lectures on hygiene is to be delivered for the benefit of the negroes, and negro ministers will preach on sanitary matters. The New Orleans Board of Health will make a careful examination of the sections of the city inhabited by negroes and enforce the sanitary laws rigidly.

Philadelphia Pediatric Society.—At a stated meeting, held March 11, Dr. John Lovett Morse of Boston delivered an address on "Some Diseases of the Kidneys and Bladder in Infancy." He described the characters of the urine passed by the new-born and nursing infant, and related the results of observations bearing upon the frequency with which albumin is found present. It is only by such systematic examination that disorders of the genito-urinary can be detected, as the development of other symptoms, and especially œdema, cannot be depended upon. At the close of the meeting a reception was tendered Dr. Morse.

Spiritualism and Mental Unsoundness.—There seems to be sound judgment in the verdict of the jury in a Philadelphia court in setting aside the will of a man who had bequeathed the residue of an estate of $30,000 to an Association of Spiritualists. The will was contested by a daughter of the decedent on the ground that her father was of unsound mind and under the influence of Spiritualists. For the defence it was contended that the decedent was not of unsound mind, and that his belief in Spiritualism was as reasonable as the opinions of many on religious and social subjects.

Public Baths.—The movement in favor of public baths in the densely crowded parts of New York continues to gain strength. Several meetings have been held in support of this much-needed reform, and the administration will be expected to fulfill the pledges it made before election, that public baths should be established, to be open both in winter and in summer.

Samaritan Hospital, Philadelphia.—Ground has been broken for an annex, consisting of an administration building, fifty feet square, one story high and basement, in which there will be an office and large reception room. It and the clinic building will be connected with the present hospital by a wide corridor. Adjoining, on the north, will be a three-story-and-basement structure, forty-two feet by eighty-five feet. This will contain wards, baths, nurses' rooms, diet kitchen, and storerooms.

Wills' Eye Hospital, Philadelphia.—According to the report of the Board of City Trusts, the equipment of this hospital is described as antiquated, its buildings dingy and out of repair, and new buildings unfinished. It is said that the income from the Wills' estate is not sufficient for the running expenses. The sum of about $5,000 is required to place the hospital in proper condition at the present time.

Philadelphia County Medical Society.—At a stated meeting, held March 12, Dr. Hugh H. Young read a paper entitled "The Diagnosis and Treatment of Calculus of the Lower End of the Ureter in the Male." Dr. Chas. P. Noble read a paper entitled "The Treatment of Suppuration in the Uterine Appendages." He dwelt upon the good results that he had secured in a certain group of cases, by means of vaginal puncture and drainage, in preference to abdominal section.

Gift to Harvard Medical School.—Dr. J. Collins Warren and Dr. H. P. Bowditch have announced that Mrs. Collis P. Huntington has given $250,000 to the fund for the erection, equipment and endowment of the New Harvard Medical School.

This sum makes up the $4,950,000 considered necessary for the intended school, and renders immediately available the proposed gift of three buildings, at a cost of $1,000,000, by J. P. Morgan, and a gift of $1,000,000, promised, conditionally, by J. D. Rockefeller.

Pathological Society of Philadelphia.—At a stated meeting, held March 13, Dr. Robert N. Willson presented a communication entitled "A Case of Bothriocephalus Latus; Double Infection Without Secondary Anæmia." Drs. G. E. de Schweinitz and E. A. Shumway presented a communication entitled "The Lesions in a Series of Eyes Which Produced Various Types of So-called Sympathetic Disturbances in the Fellow Eye." Drs. L. W. Steinbach and D. Riesman exhibited specimens from "A Case of Acquired Hydronephrosis." Dr. D. Riesman exhibited "A Renal Calculus of Calcium Carbonate, Calcium Oxalate and Magnesium Phosphate." Drs. H. A. Hare and R. C. Rosenberger exhibited a specimen of "Aneurism of the Thoracic Aorta." Dr. A. O. J. Kelly exhibited microscopic sections of a specimen of "Diffuse Primary Carcinoma of the Kidney," with metastasis in the lungs and the liver.

The Prevalence of Plague in Australia.—It is announced that plague is prevalent in Melbourne and Sydney, so much so, indeed, that several prominent theatrical companies have canceled their Australian tours as a result of cable advices from Australia, telling of the malady.

Measles on the Increase.—The epidemic of measles which has been prevalent in New York since the commencement of the year, shows no sign of abating. The records of the Department of Health show that the number of cases reported in each week from February 1 to March 1 was as follows: February 1, 706; February 15, 962; February 22, 989; and March 1, 1,105.

In Support of the Metric System.—The House Committee on Coinage, on March 13, directed a favorable report to be made on the bill providing for the adoption by the United States of the metric system. It provides that after January 1, 1904, all departments of the Government, in the transaction of all business requiring the use of weight and measurement, except in completing the survey of public lands, shall employ and use only the weights and measures of the metric system; and after January 1, 1907, the weights and measures of the metric system shall be the legal standard weights and measures of and in the United States.

The Most Practicable Organization for the United States Army in Active Service.—It is announced from the Surgeon-General's office that the time limit for submitting the essays on the above subject, in competition for the Enno Sander prize, has been extended to March 31, 1902.

Much interest is being taken in the matter, and the competition promises to be an interesting and active one.

Mortality of Michigan for January, 1902.—There were 2,824 deaths, exclusive of still births, returned to the Department of State for the month of January, 1902, an increase of 195 deaths over the number returned for the preceding month. The death rate was 13.5 per 1,000 population. There were 442 deaths of infants under one year of age, 197 deaths of children aged one to four years inclusive, and 910 deaths of elderly persons aged sixty-five years and over.

Important causes of death were as follows: Tuberculosis, 18; typhoid fever, 45; diphtheria and croup, 39; scarlet fever, 34; measles, 24; whooping cough, 19; pneumonia, 378; influenza, 64; Cancer, 125; accidents and violence, 147. There was a slight increase in the number of deaths from pulmonary tuberculosis and pneumonia, and a considerable decrease in the mortality from diphtheria and croup, as compared with the preceding month.—*Michigan Monthly Bulletin of Vital Statistics.*

Division and Bureau Reports of Chicago Health Department for the week ended March 1, 1902: Laboratory—Bacteriological examinations made of ice, water, meat, and milk, 39; for suspected disease, typhoid, diphtheria, and tuberculosis, 64; outfits prepared for diagnosis of the same, 450; distributed diphtheria antitoxin, 59 vials; glycerinated vaccine, 2,330 tubes.

Contagious diseases—Total number of cases, 245: Diphtheria, 55; scarlet fever, 170; smallpox, 2; measles, 7; typhoid fever, 1; others, 1; disinfections performed, 127.

Public Baths—Total number of baths given for the week, 5,383. Milk Bureau—Of the 299 samples of milk and cream analyzed 134 were brought to the laboratory by private individuals, the remaining 265 were collected by the milk inspectors; of the 265 inspectors' samples ten were tagged "Skimmed Milk," and 203 not tagged, therefore sold for whole milk; of these, six were found below grade; out of fifty-three samples of cream, two were found below grade; 3 per cent. of inspectors' samples of milk were found below grade.

American Doctors in Brazil.—The New York *Tribune*, March 11, has the following:

"Under date of February 1, Consul Kennedy writes to the State Department from Para, Brazil: There is a federal statute in Brazil which provides that all physicians, surgeons, and dentists of foreign extraction who desire to practice their profession in any part of the country must first pass a prescribed examination at the medical colleges at Bahia and Rio Janeiro. These examinations, which include language and other branches not usually found in a medical curriculum, are said to be so severe that few foreigners have any chance of passing them successfully. It is now reported that this law is to be more rigidly enforced hereafter, especially in the case of dentists. There are several American dentists in Para who have been practising there for years. They may be required to go to Rio Janeiro and take examinations, and in case of failure they will be compelled to give up their professions, or leave the country. Although this is a very profitable field for medical practitioners, it should be remembered that the examinations are so severe as to compel two or three years' extra preparation."

Discharged Naval Medical Officer Likely to Be Reinstated.—Dr. Edward Kershner, who was dishonorably dismissed from the United States Navy on March 21, 1896, has almost succeeded in being reinstated. A bill, restoring him to his former rank of Medical Director, and giving him full arrears of pay, has passed both houses of Congress, and will be, in a short time, it is believed, signed by President Roosevelt.

Insurance After Smallpox.—After smallpox the British income-tax underwriters are now offering to insure against an increase in the income tax, and quite a number of policies have been issued.

Improvement in Teeth Forceps.—J. B. Davis of New Orleans has recently invented an improvement in the way of forceps for dentists' use which will greatly reduce the cost of the outfit which a dentist is compelled to purchase. His invention consists of the forcep handles, into which can be slipped beaks, which are readily detachable. Mr. Davis says this set is intended more for the use of students and country doctors who pull teeth, and to such persons his device will practically give the advantage of a full dental equipment at a very much reduced cost.—*Scientific American.*

Intoxication Among Women.—According to the report of the Department of Vital Statistics, drunkenness among the women of London is increasing year by year. This is, perhaps, one of the reasons why the Government is rigorously enforcing all clauses of the Government licensing bill that gives discretionary powers to Justices to suppress drunkenness as far as possible.—*New York Herald.*

Water of Chicago.—The weekly bulletin of the Health Department of Chicago, for week ended March 8, draws attention to the contamination of a part of the supply of Chicago's water by the Calumet. The Calumet, when the ice broke, began to pour into the lake the accumulated filth of the winter's work of the packing industries, refineries and other foul waste-producers along its banks, which was carried by the wind up to the Hyde Park Crib. Between February 1 and March 8 the water from the Lake View tunnel averaged 100 per cent., good or usable; that from the four-mile tunnel, 99.8 per cent.; from the Carter Harrison and the Chicago avenue tunnels, 93.3, while the Hyde Park supply was only 56.6 per cent., good or usable, during these thirty-six days, and on more than one occasion it was positively poisonous.

The Hyde Park tunnel supplies more than 40 per cent. of the total area of the city and contains about 20 per cent. of the total population. The remedy for this state of things is said to be comparatively simple. It involves a reversal of the flow of the Calumet from the lake into the main drainage channel by pumping through the old "Sag Feeder," and a provision for the discharge of storm waters from the Calumet water-shed into Lake Michigan, somewhere well east of the State line beyond the zone of pollution. In the meantime persons supplied with water by the Hyde Park tunnel are advised to boil it before drinking.

Vital Statistics of San Francisco for January.—Total number of deaths in San Francisco in January was 749, of which general diseases claimed 304, local diseases 381, and violent deaths 64. The births registered during the same period were 470. Comparative statement of deaths by months for the six months preceding January, 1902, was, for July, 530; August, 478; September, 516; October, 566; November, 564; December, 586; Comparative statement of births for the same period was, for July, 400; August, 459; September, 499; October, 500; November, 510, and December, 470.

Bazaar in London in Aid of Hospital.—A fashionable bazaar, says the *New York Herald*, will be that in aid of the Hospital for Sick Children, Great Ormonde Street. The Queen is to open it, and many Americans will take an active part. Mrs. John Mackay has endowed a bed at the hospital in memory of her son. The American section of the bazaar will include four stalls and an American bar. Mrs. Choate is interested in the undertaking.

State of New York Assembly Bills.—Two bills relating to public health were introduced into the New York State Assembly on March 6, read once, and referred to the Committee on Public Health. The first, introduced by Mr. Fisher, is intended to amend the public health law, relative to local boards of health, and contains a considerable amount of new matter, some of which might be adopted with advantage. The second bill, introduced by Mr. Fuller, is also a suggested amendment of the public health law, relative to local boards of health, but concerns itself solely with the management of and precau tions to be taken in the case of contagious and infectious diseases. This bill recommends the enforcement of general vaccination by local boards of health, of all persons, when required to do so by the State Commissioner of Health, who is authorized to make such requirement when, in his judgment, such action is necessary for the protection of the public health.

Caring for Street Accidents in Paris.—According to a cable dispatch to the *New York Herald*, a novel and ingenious apparatus for rendering first aid to the injured in street accidents was tested this week in Paris. It resembles a pillar letterbox, and contains a small medicine chest, folding stretcher and telephone communication with the nearest ambulance station. Access is obtained by breaking a glass panel.

Paris Druggists Barred from Prescribing.—The right of pharmacists to diagnose ills of their customers, and prescribe accordingly, has been successfully combated in the Paris courts by the Physicians' Protective Association. A test case was brought against a druggist who, after analysis, prescribed for kidney trouble. Although the diagnosis and treatment were shown to be correct, the druggist was fined fifty francs (ten dollars) and costs.

Campaign Against Tuberculosis in Havana.—Major W. C. Gorgas, Surgeon, U. S. Army, Chief Sanitary Officer of Havana, is engaged in active measures looking to the diminution of tuberculosis in that city. Information as to the nature and care of this disease is being generally spread among the population by lectures, printed matter, etc. So far, 1,642 cases of tuberculosis have been located within the city limits, and their names and addresses carded and arranged for easy reference. Estimating the life of a tuberculosis patient to average about three years, and multiplying the number of deaths from this cause (900) during the past year by three, Major Gorgas estimates that there are about 2,700 cases of tuberculosis in Havana at the present time. The average number of deaths from this cause, per year, since 1899, has been 1,555.09; while for the year 1901 it was reduced to but 900. It remains, however, the chief factor in the death rate. Major Gorgas is pushing a scheme for the establishment of a public sanitarium for the tuberculous, located near Havana, which has received the support of General Wood. This sanitarium is to be divided into two sections. Of these, one devoted to incurables will be located at Hospital No. 1, on the outskirts of the city, while the other will receive patients in whom the disease appears to be curable, and will be situated about five miles out in the country. Negotiations are now under way for the purchase of a hundred acres of land at the site selected for the latter, and work will be pushed as soon as a title can be secured. The sanitarium will be supported by the Cuban Government, and will be entirely free to those unable to pay their way. The sanitarium is established, in the interests of public health, with the idea of getting as many as possible of the infected poor out of the crowded tenement houses—particularly the bed-ridden poor, who are a great source of infection under present conditions. The establishment of the projected sanitarium is expected to be of great assistance in diminishing tuberculosis; though the Sanitary Department places its chief dependence in securing this result in urging an improvement in the home care of patients with tuberculosis, and in the constant teaching of patients and their friends the simple sanitary measures that will so certainly prevent the spread of the disease to those about the patient.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

MEDICAL COUNCIL *VS.* ROYAL COLLEGES—MIDWIVES' BILL—APPENDIX VERMIFORMIS—LIGATURE OF CAROTID FOR ANEURYSM—GYNECOLOGY AND CANCER—LATE RICKETS—SMALLPOX—INFLUENZA—DINNER OF MEDICO-CHIRURGICAL SOCIETY.

LONDON, February 28, 1902.

THE General Medical Council has this week held a special meeting to consider the question between it and the two royal colleges as to the first year of the curriculum. The committee appointed for the purpose presented a report with recommendations. These latter were withdrawn by consent, and the report only adopted. A resolution was passed that the examinations of the Conjoint Board be inspected and the colleges requested to give further information as to the schools they had recognized and which the Council did not approve. Reading between the lines, we may see that a compromise is arranged for, the Council to take the first step. Some say it will hold out the olive branch which the colleges will grasp. Others smile or sneer, and say the Council is a past master in the art of climbing down. But what could be expected of a body composed almost entirely of representatives of the corporations? The President congratulated the Council on showing it could do things in a business-like way when it made up its mind to do so!

On Wednesday the Midwives' Bill was got through the second reading in the House of Commons, and was sent to the standing committee on law. Sir J. Batty Tuke moved its rejection, and pointed out that it would not reduce the number of uncertified midwives, as its supporters pretended, for the penalty clause of the bill of 1900 had been omitted. But the Home Secretary supported the bill on the ground that if it did not remedy the evil, which most people admitted, it tended to lessen it. A committee of the medical council will endeavor to secure amendments.

The appendix vermiformis monopolized the attention of the Clinical Society on the 14th inst. Mr. Gilbert Barling opened with a paper on seventy-four cases of inflammation with localized suppuration in the right iliac fossa, or immediately adjacent to it. These cases were a portion of 140 operated on in the acute stage. In forty-six of the seventy-four the abscess, though well shut off by adhesions, had not reached the parietal peritoneum, and operation involved opening the general peritoneal cavity. Mr. Barling held that the abscess should be attacked as soon as the diagnosis of suppuration is made, but it must be remembered that pus may be present with normal temperature and pulse, though other symptoms indicate it. Leucocytosis is not pathognomonic, but very valuable; it was only absent in two cases out of twenty-one. The safety of treating without removing the appendix was shown by the low mortality. There were only two deaths in the seventy-four cases.

A paper was then read by Mr. F. C. Wallis on the treatment of intraperitoneal abscess of the appendix illustrated by eight cases. He dealt with cases in which the abscess is shut off from the general peritoneal cavity, but not adherent to the abdominal parietes, and it was, therefore, necessary to open the cavity before dealing with the abscess. All the patients but one were young, and adhesions at this age are frail, and require delicate manipulation to prevent the pus escaping. To prevent this, gamgee sponges were packed in a crescent about the affected area, and when possible the pus gradually evacuated and sponged up as it appeared. When the tension and amount of pus was too great for this, the patient was tilted over to the side and the pus caught in a small bowl as it escaped. The appendix was removed after the cavity had been cleansed. Iodoform packing was used, the wound being kept as dry as possible. Early operation after the first attack was urged.

Mr. A. G. Barker thought it best to remove the appendix at the first operation if it could be done easily; if not, to remove it in the quiescent period which followed. He favored washing out the abscess cavity with saline solution and effective drainage by an "aseptic apron." Instead of incising the muscles, the fibers should be separated, by which room could be obtained to evacuate the abscess—a great benefit for the patient.

Mr. J. Berry thought it was not advisable to remove the appendix in all cases. He waited till adhesions had formed, and then made a small opening. In forty-one cases thus treated only two died. In thirty-nine cases in which extensive operations were done thirty-two died. During the last five years, at the Royal Free Hospital, out of fifty-three cases in which he had waited for adhesions he had forty-nine recoveries and only four deaths. He quoted statistics from other hospitals.

Mr. Cuthbert Wallace gathered from St. Thomas's Hospital reports that there was a recurrence in 5.5 per cent. of localized abscess cases.

Mr. Spencer urged that the abscess should be opened as soon as pus was diagnosed. He was for removing the appendix at the first operation.

Mr. Keetley would remove the appendix in as large a proportion as possible, and it might be done without much risk by using gauze packing systematically, and raising the pelvis to keep away the intestines.

Mr. Charles Symonds supported Mr. Barling in not removing the appendix in most cases. He favored immediate operation.

Sir. T. Smith urged a very low incision. If pus did not appear, he then put in a drainage tube and after a time the pus would work through it.

Dr. Caley had collected statistics, which showed the mortality was not more than 1.5 to 2. per cent.

At the Medical Chirurgical Society, Mr. C. Heath related two cases of ligature of the left carotid for aneurysm of the arch of the aorta.

Mr. Heath has operated on seven cases, and those related are the two last, and in both there seems to have been benefit. In the sixth case, in a woman sixty-one years old, the left carotid was tied without an anæsthetic, on November 16, 1890, and on the 19th the respiration was no longer noisy, and she was able to recline against her pillows; on the 21st she slept for seven consecutive hours. She progressed favorably and lived more than a year after the operation, and eventually died suddenly. The other patient was a man, thirty-six years old, and his left carotid was tied under eucain B. on January 18, 1899. Improvement was noted daily until February 1, when he was free from pain and had slept well since the 20th. On February 16 his temperaure rose to 103, and he rapidly developed acute phthisis and died on March 21. Mr. Heath exhibited the specimen and three others. He held that ligature of the left carotid undoubtedly produced an immediate affect on aneurysm of the arch, and thought the sudden deaths which occasionally occurred some months later might be due to the ultimate solidification of the aneurysm partly through pressure and partly to the induction of syncope.

Dr. Frederick Roberts, under whose care the second case had been, said the chief indication for the operation was the extreme pain the man suffered, and that in spite of free aortic regurgitation and marked arterial degeneration. The operation was beneficial in respect to the physical conditions of the aneurysm, as well as to the patient's sensations.

Mr. Carless mentioned a case in which the left carotid was tied, and twenty-four days later the subclavian. Six months later there was but little pulsation felt above the clavicles, and the patient, a woman forty years old, went about her work with comfort for three years, and then died suddenly from rupture of the aneurysm into the left pleural cavity.

Mr. Barwell said in some cases it was better to tie the vessels on the right, rather than the left side, and Mr. Heath, in his reply, admitted that this was so.

The Gynæcological Society pursues its course with the vigor of youth, in spite of the supercilious disparagement of its older sister. The inaugural address of the president, Dr. Halliday Croom, on the 13th inst., was a very interesting one, particularly in reference to surgical gynæcology.

The remark that total rest cannot be given to the reproductive organs led to a summary of the process of menstruation—the very gentle passage from physiology to pathology, "almost what one might call a pathological condition occurring monthly, which we may consider a monthly miniature pregnancy—for weeks a preparation, for days an anticipation, and the hemorrhage as the tears of disappointment the uterus sheds."

But I refer to this address chiefly as to Dr. Croom's views on cancer, which he says is largely on the increase. In favorable cases of uterine cancer, he has published his results of vaginal hysterectomy, but cannot claim that operation prolongs life, or even renders death easier. Where the disease has advanced far he thinks it best not to interfere. In dealing with cancer he recognizes the necessity of clearing out the glands, but only 40 per cent. of cases, in the mammal, offer what is termed permanent cure, and recurrence is common enough in another part after three years. But in the uterus the difficulty of dealing with glands and lymphatics meets us, and further, it is remarkable how seldom cases present themselves at an early stage. Hysterectomy for cancer, on account of these conditions, has not been a great success, and while some may be relieved it is never possible to promise a cure.

Mammary and uterine cancer are, therefore, not to be compared. The one is constantly recognized early, and statistics give a satisfactory result. The other is very different; the victims seldom seek help until all chances of relief have passed by.

Two cases of late rickets were shown at the recent clinical evening of the Medical Society, by Mr. Muirhead Little. One was a girl thirteen years old, the other a lad seventeen years old. Mr. Little had performed MacEwen's osteotomy on both patients with excellent results. He found the bones very soft and easily penetrated by the osteotome. This, apparently, was why one member suggested that the cases should be classed with osteomalacia, but as there was enlargement of the epiphyses and other signs of rickets, the suggestion was not well received.

Mr. Owen showed at the same meeting a case of traumatic rupture of the prostatic urethra in a boy of seven, who had made a remarkable recovery from that and other injuries.

Smallpox persists—forty to fifty fresh cases a day. Last night there were 1,300 cases under treatment.

Dr. Thresh, the M. O. H. for Essex is convinced that infection has spread from the hospital ships by aerial connection. The theory that smallpox is thus conveyed receives, therefore, another support.

Influenza is again epidemic here, as you have probably learned from the newspapers, for several cabinet ministers and other celebrities are down with it.

The Royal Medical and Chirurgical Society's dinner on Wednesday was a very successful one, and Dr. Conan Doyle was among the speakers.

THE CURE OF CHRONIC BRIGHT'S DISEASE BY OPERATION.

Es liebt die Welt das Strahlende zu Schwärzen,
Und das Erhabne in den Staub zu ziehn.—Schiller.

To the Editor of the Medical Record:

Sir: In your issue for December 21, 1901, Dr. Geo. M. Edebohls published a paper under the above title, which paper commences as follows: "The proposition to treat chronic Bright's disease by operation was first made by the author in a paper entitled, 'Chronic Nephritis Affecting a Movable Kidney as an Indication for Nephropexy,' published in the *Medical News* of April 22, 1899, and this latter paper of Dr. Edebohls in the *Medical News* commences as follows: 'The voluminous literature on movable kidney is practically silent upon the subject-matter indicated in the title of this paper. The few and scattered words devoted to the sentiment that in the presence of chronic nephritis nephropexy for movable kidney is to be avoided in common with all other operations not called for as a vital indication. In quite an extensive search of the literature I have been unable to find the record of a single case of nephropexy for movable kidney performed upon a patient suffering at the time of the operation from either acute or chronic nephritis.' "

From all this it appears that our distinguished colleague, Dr. Edebohls, means to say that he has been the first who discovered the effect of nephropexy on the kidney affected with Bright's disease.

As it will happen, like in the case of Schleiden and Schwann, in the year 1840, who, simultaneously, but absolutely independent from each other, discovered the cells and established the cell theory, some discoveries are made by different men independently from each other, and such is certainly the case with Dr. Edebohls' discovery, only that here several surgeons, years ahead, had already made the discovery. In his research in literature, although quite extensive, as he says, he has overlooked the *Lancet*; he has not seen an article of Reginald Harrison in this journal's issue for January 4, 1896; he has not found that the surgeons, N. Rose, Newman, and Ferguson had, in German, French and English journals respectively, established already the fact which he discovered, independent of these writers at a later date. Especially noteworthy is a case published by Rose, who performed nephrectomy in a case of movable kidney, in which case albuminary was present. Ch. Mongour quotes this case in the *Journal de Médicine de Bordeaux*, February 9, 1902, saying, "In Rose's case especially, the kidney was affected by well characterized chronic nephritis, and the urine, examined several years after the nephropexy, revealed absolutely no sign of venal lesion."

Pourson, who had searched more successfully than our colleague Edebohls, having found the records of these cases of Rose, Newman and Ferguson, had an idea to practice nephrotomy in order to remedy the grave and threatening condition of chronic nephritis, and has published his first results at the Congrès de l'Association Française d'urologié, October, 1901, and, as we read in the *Journal de Médicine de Bordeaux*, February 2, 1902, Pourson had, during the three preceding years, operated *six* kidneys affected with Bright's disease, and he demonstrated before the society two of these patients operated on. One of them had been suffering from a severe form of Bright's disease, the medical treatment had been of no avail. The operation had been performed on July 3, 1901, and this case, when brought before the society, was considered completely cured.

Pourson gives credit to Edebohls for having done the operation in a modified form, but he mentions expressly that Edebohls' operations were of a more recent date than his own, or at least his own first operations. However, Pourson's and Mongour's communications, and, above all, the article of Reginald Harrison, in the *Lancet* of January 4, 1896, furnish conclusive evidence that Edebohls was *not* the first who introduced the cure of chronic Bright's disease by operation. A. ROSE, M.D.

Progress of Medical Science.

The Boston Medical and Surgical Journal, March 13, 1902.

A Clinician's Estimate of Alcohol as a Therapeutic Agent.—F. C. Shattuck holds that the healthy man, under ordinary conditions, in this climate, does not require alcohol, although he can use it moderately and habitually for years without apparent harm. In disease, however, it is often needed, and the burden of proof rests with those who deny its value. The difference between its use as a drug and as a beverage should be kept clearly in mind. The author agrees with Osler that alcohol is, as yet, the only known agent which can counteract the gradual effect of poisons developing in the course of acute febrile diseases, such as typhoid and pneumonia. Its use in acute diseases involves small risk of the establishment of a vicious habit. In chronic diseases it may be very useful, but its administration should be carefully guarded by a realization of its dangers.

Practical Experience with Hydrotherapy.—J. J. Putnam and G. W. Fitz report the results of their experiments to determine the effect of different kinds of baths on blood pressure, pulse rate, urea excretion, etc. The classes of cases which seem to offer especially interesting fields for study are the tuberculous, the diabetic, the anemic, the neurasthenic, the rheumatic, and the cardiac. The clinical cases to which the authors refer are, first, ten of neurasthenia; the form of treatment used was the "tonic" bath, and the result was improvement in nutrition and a sense of stimulation. Seven cases of tabes obtained relief of pain, and to a certain extent, of the distressing girdle sensations. Baths and exercises combined gave good results in a case of spastic-ataxic paraplegia; one patient with neuritis received benefit, and one did not; the patients with paralysis agitans improved in so far as general nutrition and a sense of well-being were concerned. The authors give details as to the temperature of the water, and the manner of applying the treatment.

Journal of the American Medical Association, March 15, 1902.

Dermatomycoses in Their Relation to Allen's Iodine Test.—J. Sobel states that for purposes of classroom demonstration, the Allen test (Lugol's solution) will serve to bring into greater prominence visible parasitic lesions and into view pale, hidden, and sometimes invisible ones. A positive reaction to Lugol's solution, in the form of a deep mahogany or dark brown discoloration, is strong presumptive evidence that the lesion is parasitic. In the absence of absolute proof of the parasitic nature it is of the greatest aid, and in the presence of a parasitic skin lesion, it serves to make assurance doubly sure. It is not of service in differentiating one parasitic disease from the other; this must be accomplished by other clinical and microscopical data.

Pneumatic Differentiation in the Treatment of Organic Diseases of the Heart.—By this term C. E. Quimby refers to the use of the pneumatic cabinet. He maintains the following propositions: (*a*) Any agent which decreases vascular tension and coincidently maintains or increases nutrition throughout the entire system, and only such an agent, is an ideal therapeutic measure in organic cardiac disease; (*b*) Pneumatic differentiation lowers vascular tension, increases blood flow and coincidently increases nutrition; (*c*) It is applicable to the pathic conditions of valvular lesions. Clinical results prove the accuracy of the foregoing propositions, and establish the power of this measure to neutralize the injurious effects of organic cardiac disease more quickly, fully, and permanently than can any other known agent.

The Origin of Carcinoma of the Stomach from Chronic Round Ulcer of the Stomach.—G. Fuetterer gives the histories of several personal cases, illustrated by some excellent photographs. He also reviews the literature of the topic suggested by the title, and comes to the following conclusions: (1) If a carcinoma develops from a chronic ulcer of the stomach, then this development occurs from those parts of the edges of the ulcer which are most exposed to mechanical irritation by the contents of the stomach; (2) In the pyloric region, it is the lower pyloric margin of the ulcer which is most exposed to mechanical irritation, and from which carcinoma develops. But other parts of the edges may be the ones involved when dilatations and adhesions have changed the position of the organ; (3) Development of carcinoma from ulcers of the stomach in the pyloric region occurs with great frequency, while such a development occurs less often in other parts of the stomach; (4) If what has been said under the third conclusion is correct, then one must, in all cases in which an ulcer of the stomach or its scar narrows the pylorus, recommend early a gastro-enterostomy, to prevent the development of carcinoma. If a gastro-enterostomy has been made, then the mechanical irritation of the ulcer in the pyloric region by food is reduced, and the severe friction necessary to produce a carcinoma will probably not occur; (5) A patient suffering from the consequences of a stenosis of the pylorus, particularly if this is caused by ulcers and scars, should, if a gastro-enterostomy is not performed, be advised to eat slowly and little at a time, and to be particularly careful about carbohydrates, and especially hard crusts of bread; they should avoid crisply fried, or other coarse food, and they should, as much as possible, confine themselves to liquid or semi-liquid foods. A good deal of fatty food should be recommended; (6) Elderly people in particular, who have but few or no teeth, and a saliva which is insufficient in quantity and quality, must be most carefully advised as to their diet; (7) From the fact that carcinoma does not develop from the large ulcers alone, but may be developed from the very smallest, the prognosis of ulcer of the stomach is bad. Our aim, therefore, should be to prevent the formation of ulcers, rather than to heal them after they are formed, and this may be done, at least to a certain extent, by the energetic treatment of all cases of chlorosis and secondary anæmia that come under our observation.

New York Medical Journal, March 15, 1902.

Trifacial Neuralgia and Its Treatment.—H. T. Barber contributes the clinical history of a woman of eighteen years. She was given a granule containing one-tenth of a millegramme of aconitin every four hours, and after she had taken five her pains were greatly lessened. She was then given a pill containing iron sulphate and extract of anthemis. This led to a final cure. One or two relapses were similarly treated and with a like happy result. The author has seen no mention in literature of this combined mode of treatment.

Chancroid of the Eyelid.—A case of this nature is reported by M. L. Foster, whose patient was a man of thirty-six years. One month before coming under observation he had contracted a sore on the penis, followed by suppurating buboes in the groin, which up to that time had not healed. Ten days before the patient was seen a sore appeared on the edge of his right upper eyelid and had slowly grown worse. There was no history of traumatism, and the general condition of the patient was by no means enfeebled. When first seen the entire lid was red, swollen, and drooping over the eyeball. In the middle of the intermarginal space was an ulcer 6 or 7 mm. long by 2 mm. wide, its floor excavated and covered with a purulent detritus, its edges abrupt and elevated, but not indurated. The preauricular and lymphatic glands of the neck were not enlarged, and there were no symptoms of syphilis present. Frequent cleansing of the eye with a solution of corrosive sublimate, 1 to 5,000, produced immediate improvement, and the ulcer was soon healed. The patient was kept under observation and no symptoms of syphilis had appeared three months after the supposed date of his exposure and two months after coming under Foster's observation. The author refers to several previously reported cases and discusses the question of differential diagnosis.

Uric Acid; Its Sources and Effects.—James Tyson believes the drift of modern teaching to be that uric acid is solely the product of excessive leucocytosis, and that its accumulation in the blood arises from this source rather than from defective renal function. There are two main indications for treatment: (1) A reduction in nuclein catabolism; (2) A raising of the processes of oxygenation. To attain the first object everything should be avoided that will produce a leucocytosis. To this end a number of drugs, such as quinine, pilocarpine, and atropine, should never be administered, and certain articles of diet that we know produce leucocytosis—notably proteids—should be reduced. Nuclein-containing foods, such as sweet-breads and other internal organs and yolk of egg, should be avoided. Over-eating should be forbidden. Iron should be administered in the same forms and on the same rational principles as it would be to a chlorotic patient. Arsenic should, therefore, be combined with it. Whatever medicinal and hygienic measures tend to a successful æration of the blood should be employed. Accordingly, the most striking results have been obtained in acute cases by inhalations of oxygen gas. On six occasions it is claimed that gout was aborted by inhalations of oxygen repeated at short intervals. The same remedy may also be used to relieve a uric-acid headache and various lithemic attacks.

American Medicine, March 15, 1902.

Sprue in Manila: A Disease or State.—William E. Musgrave states that sprue symptoms are nearly always found in the presence of other and well-known lesions, discoverable by careful clinical studies, aided by microscopical methods. Careful studies of these cases by modern methods fail to indicate an additional etiologic factor, and with our present knowledge it is more rational to consider sprue as a state or symptom group (comparable to the typhoid state), occurring in the tropics in chronic diseases, especially those affecting the gastro-intestinal canal.

The Use of Borax and Boric Acid as Food Preservatives.—Victor Vaughan and William H. Veenboer conclude that: (1) The use of borax or boric acid as a preservative in butter and cream in the quantities specified in the recommendations of the English Commission is justified both by practical results and by scientific experimentation; (2) The dusting of the surfaces of hams and bacon which are to be transported long distances with borax or boric acid, not exceeding 1.5 per cent. of the weight of the meat, is effective, and not objectionable from a sanitary standpoint; (3) Meat thus dusted with borax or boric acid does not become slimy, because the preservative thus used prevents the growth of ærobic, peptonizing microorganisms.

Modern Treatment of Drug Habitation.—Frank R. Searles gives the different methods of treatment of drug, habit as sudden and complete withdrawal; substitution and gradual tapering off. He declares that few morphine *habitués*, especially those who have long indulged in the habit, can stand the shock of sudden withdrawal. There is danger of hallucinatory delirium and collapse, in which the patient may die. Those who use the hypodermic needle form the largest class, death being often due to an accidental overdose, as well as by weakened heart action during a too rapid withdrawal of the drug. Such treatment is too radical. In the majority of cases substitution does not give satisfaction, and seems merely a waste of time. So soon as the physical condition of the patient will allow, gradual withdrawal of the drug is the preferable method of cure, but no two patients can stand the same rapidity of reduction. In some cases cutting the dose down one-eighth or one-fourth each day results admirably; in others, a lessening of one-sixteenth is as much as can be effected without signs of depression.

Medical News, March 15, 1902.

The Rate of Growth of Epithelium of Ulcers; Observation of 100 Cases at the Vanderbilt Clinic, New York.—Sigmund Deutsch, as a result of his observations, gives the following summary: The rate of the growth of epithelium is in direct proportion to the size of the ulcer; in the majority of cases the average growth of epithelium is from 2 to 3½ mm. per week; the range is 1.4 to 10.5 mm. (traumatic ulcers not included); the time required to heal an ulcer is in no proportion to the duration of the ulcer; an ulcer of four months' standing does not heal quicker than one of four years' standing, other conditions being equal; the rate of growth of epithelium in traumatic ulcers is extremely irregular; it is in no relation to the size or duration of the ulcer; the average growth per week is about 5 mm.; the range is from 1.4 to 8 mm.

Acute Influenzal Nephritis in Childhood.—B. K. Rachford believes that acute nephritis occurs not infrequently as a manifestation of influenza in children. He reports several cases which he has seen. Each of these cases occurred, not as a sequel but as a part of the influenza attack. The kidney symptoms in every case occurred while other active influenza symptoms were still present. The poison of the disease attacked the kidneys and caused a most violent acute nephritis just as it, in other cases, attacks and causes inflammation of the meninges, the lungs, the intestines and other parts of the body. Acute influenzal nephritis, as seen in these cases, makes its appearance more quickly and violently than nephritis caused by scarlatina, diphtheria, and the other acute infections. The writer believes the worst symptoms in these cases to appear generally within six or seven days after the kidney is attacked. If complete suppression and profound uremia do not cause death within the first week, a sure and steady improvement begins which results in recovery. The writer has never seen a case of chronic nephritis result. All of these remarks apply only to influenzal nephritis as occurring in infants and young children, as in adults the picture is very different. From his own experience, the writer believes the acute influenzal nephritis of childhood not a sequel or a complication, but a part, of the influenza attack.

Philadelphia Medical Journal, March 15, 1902.

Cerebral Apoplexy.—Edward D. Fisher, in considering the treatment of cerebral apoplexy, advises in regard to ordinary attacks, outside of speedy movement of the bowels by enemata, calomel or croton oil, absolute rest; and unless there is collapse, no administration of drugs. If the pulse is full and bounding, bleed through the veins, *i. e.* give aconite, but never use the lancet. If there is evidence of collapse with feeble pulse, give digitalis, or even whiskey and strychnine. These latter cases are usually due to thrombosis or embolus. The writer advises doing little, but giving absolute rest, and meeting the various emergencies as they arise. The most important time for treatment is in the prodromal stage.

The Report of a Case of Obliterative Pericarditis with Hepatic Enlargement and Ascites.—From the study of his own case and of the literature on this subject, Edward W. Becker believes that: (1) Pseudo-cirrhosis of the liver, due to pericardial adhesions, is a distinct entity; (2) In all cases of this condition at autopsy the pericardial sac has been found obliterated; (3) Autopsies have shown, in all recorded cases, that the ascites is due to passive congestion of the liver, causing a connective tissue formation, with subsequent contraction and obstruction of the portal circulation, the result of obliterative pericarditis; (4) In all cases of enlarged liver, with ascites without edema or enlarged spleen, a very careful examination should be made of the heart, to determine whether the symptoms are not due to chronic pericarditis; (5) The presence of ascites with enlarged liver and systolic retraction of the precordium, together with absent or later appearance of edema of ankles, is of great diagnostic value in determining the presence of chronic pericarditis.

A Study of the Cases of Accidental X-Ray Burns Hitherto Recorded.—E. A. Codman presents the following conclusions: (1) The frequency of *x*-ray injuries has been much exaggerated by the medical press, owing to the wide publicity given to many early cases; (2) The writer has been able to collect somewhat less than 200 cases, less than half of which were serious, and about one-third of which occurred in *x*-ray workers; (3) Judging from the experience with these injuries in Boston, it is the writer's opinion that a fair proportion of the severe burns are included in this series, while the dermatitis of skiagraphers is less well represented; (4) At a maximum estimate it is safe to say that not one patient in a thousand has been injured in the past five years by an *x*-ray examination, and in the past year not one in ten thousand; (5) More than two-thirds of these injuries occurred in the first two years of the use of the *x*-ray. Only one mild case is reported as occurring in the current year, those cases in which the exposure has been made for therapeutic purposes being excluded; (6) The cause of *x*-ray injuries is not definitely known. It is some form of energy closely allied to the photographically active *x*-ray, and radiates with it from the platinum terminal; (7) The primary injury is to the nerves controlling the nutrition of the skin; (8) There is no good evidence of injury to the deeper tissues without primary interference with skin; (9) The important factors which contribute to the production of *x*-ray burns are: the intensity of the current used to stimulate the tube; the quality of the tube, the distance and time of exposure and the idiosyncrasy of the patient; (10) The static machine is somewhat less likely to produce injury than other forms of apparatus; (11) From the data of the reported cases we can say that no burn has been produced by an exposure equal to or less than the equivalent of five minutes at ten inches; (12) It is impossible, from the data, to say how intense an exposure must be to produce a burn, for a comparison of the cases shows that an inconstant factor or factors exist; (13) These inconstant factors are more likely to lie in the complex human organism than in the less complicated construction of the tube; (14) General experience has shown that soft tubes produce a more intense effect on the tissues than hard; (15) While we cannot control these inconstant factors, therapeutic exposures will continue to be dangerous, and it is, therefore, important to record the exact conditions of the patient's local and constitutional idiosyncrasies, as well as those of the tube; (16) In cases of injury, the time before the appearance of the first symptom has varied from a few minutes to three weeks. Five cases have remained latent for over three weeks; two of these for five months; (17) It is impossible to predict the severity of the lesion from the time of its appearance after exposure; (18) The writer suggests ten minutes at six inches from the platinum terminal as a standard therapeutic exposure. This will make comparisons between the inconstant factors easier; (19) Unless signs of dermatitis appear within three weeks after the exposure, they are unlikely to appear at all. In one-third of the reported cases, the appearance occurred within the first four days; in one-half the cases before the ninth day; (20) In the ordinary x-ray examination with fluoroscope or skiagraph, the operator takes the entire responsibility of injury; in exposures for therapeutic purposes the patient shares the responsibility.

The Lancet, March 8, 1902.

Electric Shocks.—The nature of electric shocks is fully discussed by F. B. Aspinwall, who says that we are quite in the dark as to definite knowledge of what happens to a human body when death is caused by electricity. The author notes that an idiot does not seem to feel a shock so severely as does an ordinary person. Also the shock is less felt if occurring to a sleeping person, and he thinks it possible that electricity may act as an anæsthetic like chloroform. He, therefore, inquires whether it would not be a proper treatment in a case of shock, before applying artificial respiration to hold the body for a few seconds, head downwards, at an angle of 45°, thus flushing the brain and stimulating its action.

Latent Vaccinia.—J. W. Washbourn reports the case of a child with undoubted scarlet fever without unusual features. The child had been vaccinated two years previously in four places, only one of which took and that very slightly. With the onset of the fever, the old vaccination spots seemed to take on life, and in a few days presented all the features of a fresh vaccination at the seventh day. Examination of the patient revealed very slight impetigo of the scalp, and the skin was clear elsewhere. The appearance of the marks on the arm and their arrangement were quite unlike anything in the way of secondary infection from impetigo. There was no doubt that the child was suffering from scarlet fever, and the only explanation given was that the vaccination had remained latent during two years and had started afresh with the onset of scarlet fever.

A Contribution to the Study of Intestinal Sand.—A case of this rare affection is reported by Dyce Duckworth and A. E. Garrod. The condition is to be differentiated from enteric lithiasis, which is not uncommon. The patient was a woman of thirty-three years, with a family history of gout and liability to bowel disorders. She suffered from diarrhœa and sand was found in the stools, each stool containing about a teaspoonful of it, and there being two or three loose motions each day. The sand resembled uric acid to the naked eye. Its composition was water, 12.40, organic material 26.29, and inorganic material, 61.31. The latter contained calcium, phosphorus, and carbon, with traces of iron and magnesium. The authors believe that the sand was formed in the bowel and had no biliary origin. Such sand is usually met with in cases of muco-membranous colitis. It is believed that the upper part of the colon is the special seat of formation, as this is the region in which the conversion of bile pigment into urobilin is already far advanced and the richness of the material in urobilin and its poverty in unaltered bile pigment suggest formation in such a region.

Some Experiments to Determine the Actual Efficacy of Izal Oil as an Intestinal Disinfectant.—M. H. Gordon believes that izal oil diminishes greatly the number of bacteria in the bowel, and that, too, without untoward effect. The number of bacteria remaining in the feces is still large, but the author cannot regard this as a reason for withholding the remedy in those cases in which it is indicated. In a given case, he says, the diminution effected may make a great deal of difference to the progress of a given case. Again, for aught we at present know to the contrary, the health of the intestine may be dependent on a state of equilibrium of its bacteriological contents, and a slight disturbance of this equilibrium may be a condition resulting in serious illness. The indication in such a condition would be to restore the disturbed equilibrium, and a drug that can be depended on to achieve this result with certainty and without injury, pain, or, even, inconvenience, is not to be lightly valued. Thirdly, it is probable that by pushing the dose of izal, but still keeping outside the limit of its toxicity, the number of fecal organisms may be still further reduced. Again, by combination of izal with other drugs and by careful dietetic treatment, it may be possible to reduce still further the pathogenicity and foulness of the intestinal contents.

A Case of Reduplicated Cardiac Impulse and Heart Sounds.—J. McClymont examined a man who was in apparently perfect health and free from any cardiac symptoms. There was a double cardiac impulse of regular occurrence in the normal position, the second slighter impulse immediately following on the heels of the first. There was no increase of præcordial dulness. There was a slight impurity of the first sound in the aortic area, and the sounds, like the impulse, were reduplicated. This was specially clear at the apex, the second group being like an echo of the first or louder sounds. There was, however, no reduplication of the pulse. The complete absence of any cardiac symptoms, the lack of either hypertrophy or dilatation of the heart, and the unfailing regularity of the second impulse did not suggest the missed beat of a played-out organ. The skiagraph screen showed the first systole dilating the great bloodvessels and causing the pulse wave and first strong cardiac impulse. The apex remaining all the time in systole, there then occurred a second contraction of muscular fibers, principally or alone at the base of the ventricles. The great bloodvessels were not dilated by this contraction, but it doubtless gave rise to the second cardiac impulse and to the fainter, echo-like heart sounds. This peculiar condition of secondary fibrillar contraction was due no doubt to some irregular innervation of the cardiac muscle, and was not of the nature of the missed beat of a failing organ.

The Results of Operation in Sixty Cases of Malignant Disease of the Breast.—Marmaduke Shield gives an abstract of the histories of the cases and some remarks upon his own operative methods. He comes to the following conclusions: (1) That the risk of removing cancer of the mammæ by extensive operation is small, and should not amount to more than 1 or 2 per cent. Sepsis is preventable, and when it occurs it is a blameworthy error on the part of the surgeon; (2) That early and free removal gives prospect of years of freedom, and in a good percentage of cases, of good health and enjoyment of life; (3) That the cases which do badly are (*a*) soft, rapidly-growing cancer in young and vascular women, and (*b*) cases of long continuance before operation, where the skin and cervical glands are widely infected; (4) That in certain cases visceral cancers and cancers in the liver coexist with or rapidly follow operation, and the explanation of these is uncertain; (5) That the practice of early exploration by incision of small nodules and indurations in the breast is of the first importance, and should be strongly urged upon the profession generally, especially upon those in general practice who so often see these cases in their early beginnings and upon whom the great responsibility of prompt diagnosis falls; (6) No one should undertake an operation for mammary cancer unless he is capable, and has had sufficient operative experience, to remove thoroughly all lymphoid tissues from the axilla, the leaving of infected glands toward the apices of the axillary spaces being a common source of failure in the results of this operation; (7) The prognosis of mammary cancer is still dubious, and sometimes instances arise which falsify ordinary experience. Bad cases have long freedom from return. Early cases show recurrence. But such do not invalidate the rule, Operate early, operate extensively.

The British Medical Journal, March 8, 1902.

The Influence of Phosphorus on Organic Substances in Pills.—W. Harrison Martindale, for the purpose of examination, had phosphorus pills prepared, with the addition of strychnine (base), morphine (base), quinine sulphate, nitroglycerine, and zinc valerianate respectively. He satisfied himself as to the absence of any considerable interaction or decomposition in the case of alkaloids. He found, on further examination, that in the case of the phosphoretted suet mass, pills composed of reduced iron in various combinations with strychnine, quinine, etc., in which one might expect to find decomposition, would show a luminous surface on cutting even twelve months after they had been prepared. This is a good proof of the protective action which the fatty base exerts. The indication, in general, is that no great amount of oxidation of the phosphorus had set in at the last examination of the pills. Of the combinations of nitroglycerine by far the best in this respect were those prepared with simple theobroma oil solution. In the case of the zinc valerianate there was evidence of a combination, but this had probably taken place in the process of extraction.

A Case of Tumor of the Cerebral Cortex.—H. Cecil Barlow reports the findings at autopsy in the case of a man aged fifty-seven years, who, although apparently in good health, was suddenly seized with convulsions, which were confined to the left side of the body, mainly affecting the face, but also the arm. On examination he was found to be perfectly conscious, but unable to articulate distinctly. There was frequent and marked spasm of the left facial muscles, of the left arm, and to a less extent of the left leg. The mouth was open, the tongue protruded, and saliva flowed from the mouth. The deep reflexes were very brisk on the affected side, while sensation was markedly dulled and delayed to pain and touch on that side. The pulse-rate was 78. He appeared free from pain. About two weeks after this he died suddenly without any preliminary coma, apparently from heart failure. At autopsy there was no abnormal appearance of the dura mater and no marked increase of tension. There was marked injection of the vessels of the pia arachnoid over the right Rolandic area. Just below the surface of the cortex, which was considerably softened for a distance half an inch round it, was a perfectly circumscribed firm tumor, the size and shape of a walnut. The main bulk of the tumor was situated in the lower part of the ascending frontal lobe. It was an alveolar sarcoma.

Puerperal Insanity.—Robert Jones, in referring to the cases from which he has taken statistics, states that out of the 3,500 admissions to institutions, 259 were admitted suffering from insanity, for which reason pregnancy, confinement, the puerperal state, or lactation were assigned as a cause, a proportion of 7.4 per cent. These were classified as follows: Fifty-six were from pregnancy, a proportion of 21.62 per cent.; 120 occurred during the puerperal period, a proportion of 46.33 per cent., and eighty-three were associated with lactation, a proportion of 32.43 per cent. The very great changes comprised in gestation, the nervous excitation, the introspective life, etc., must produce many actions and reactions which may give rise to morbid mental action resulting in insanity. This is the case more especially in the single, where shame is an additional strain. The insanity is of a more unfavorable turn in single women. Of the puerperal cases, more suffered from mania than melancholia, and more from the acute form of mania than from the similar form of melancholia. Of the lactational cases, a greater proportion suffered from the depressed than from the exalted form of insanity. The onset in the puerperal cases was more often sudden than gradual, and the gradual onset characterized the advent of melancholia twice as often as mania. The symptoms of puerperal mania in 40 per cent. occurred within the first two weeks, and of these more than one-third occurred within the first week. Nearly 50 per cent. had some hereditary predisposition, either physical or mental. The greatest number of cases of insanity of pregnancy and of the puerperal period occurred between the ages of twenty-five and twenty-nine years, whereas the greatest incidence in lactation cases was between thirty and thirty-four years. This supports the view that this latter form is closely related to exhaustion. Of the 120 puerperal cases, 48 per cent. were described as cheerful, 15 per cent. as reserved. Of the lactation cases, 42 per cent. were cheerful, and 18 per cent. reserved. Most had brown hair and brown or gray eyes. Very few had dark hair, only two had red hair. Several had fair hair.

Deutsche medicinische Wochenschrift, February 20, 1902.

Nephralgia, Nephritic Hematuria and Nephritis.—H. Senator writes in opposition to Israel's opinion that nephralgia and nephritic hematuria can be produced by excessive congestion of the kidneys. Israel's idea is that such a congestion produces marked increased tension, which, in turn, causes the symptoms. Senator discusses in detail the postulates laid down by Israel and the cases reported by him, in which incision of the kidney was performed for a relief of the symptoms. He shows that in reality only two of these fourteen cases showed increased tension of this organ, and that the improvement obtained could thus not be reasonably ascribed to a lessening of such tension by incision. Furthermore, the observations which go to show that nephralgia and nephritic hematuria can be caused merely by increased tension without the presence of anatomical lesions are insufficient,. Many of the cases so reported have been submitted only to microscopic post-mortem examination. Even in those cases in which sections of the kidney were examined microscopically such examination has not been sufficiently extensive, and only a small portion of the organ has been thus examined. In these cases, therefore, it cannot be said with anything like certainty that no anatomical lesions of the kidney were present. In all the cases of nephritic hematuria which Senator has had the opportunity of examining post-mortem, anatomical lesions were present. So far as nephralgia is concerned, the author believes that this is caused by adhesions of the kidney. A careful examination of most of Israel's reported cases show that adhesions of this organ were present. Senator thinks that the good results obtained by him were due to a breaking down of these adhesions incident to his other operative procedures.

Tetanus Bacilli in Gelatine.—Ernst Levy and Hugo Bruns have instituted a series of experiments in order to ascertain whether the gelatine commonly offered for sale contains, in a fair number of instances, tetanus bacilli or spores. The subject is of importance in consideration of the number of cases of tetanus which have recently been reported following the subcutaneous inoculations of gelatine for hemostatic purposes. The results obtained are surprising in that they were able to demonstrate the presence of tetanus bacilli or spores in four out of the six specimens of gelatine examined. Their method consisted in dissolving 2 to 3 gm. of the gelatine in 100 c.c. of bouillon. This was then incubated from eight to ten days. At the expiration of this time the culture was filtered through a Pasteur-Chamberlain filter, and the filtrate thus obtained inoculated subcutaneously into mice and guinea pigs. According as such animals developed tetanus or failed so to do, the test was considered positive or negative. In addition to tetanus bacilli, other spore-forming microorganisms were also found. Most authors regard sterilization by steam at 100° C. for eight minutes as sufficient to kill tetanus spores. Levy and Bruns, however, as the result of their researches, do not regard this as sufficient in all cases. It seems highly probable that identical races of tetanus bacilli may give rise to spores of different resisting power. It is certain that more work is necessary in order to definitely establish the thermal deathpoint of tetanus spores when subjected to steam. In our present knowledge, the most important point in the sterilization of gelatine is to be sure that all portions of the gelatine are equally submitted to the 100° C., and are retained at this temperature for eight minutes, counting from the time that the given temperature is reached. It has not as yet been decided whether or not such sterilization injures the hemostatic properties of the gelatine. According to J. Forster, such is the case. This question cannot be fully decided until it shall have been definitely determined upon what the hemostatic power of this substance depends.

Practical Application of the Agglutination Reaction of the Bacillus Tuberculosis.—E. Rumpf and L. Guinard consider the practical value of the agglutination reaction of the tubercle bacillus from both diagnostic and prognostic standpoints. They maintain that it is of diagnostic value and, in so far as this, disagree with the opinion of Koch. Their investigations, however, do not include tests for the presence of the reaction in healthy individuals. They examined the agglutinating power of the blood in 107 phthisical patients, of which 29 were in the first, 41 in the second, and 37 in the third stage of the disease. They obtained a positive reaction in 84 per cent. of these cases. Seventeen showed a reaction in a 1 to 5 dilution, and seventy-three in a 1 to 10 dilution. In all cases the diagnosis of tuberculosis was made as the result of physical examination or by the finding of tubercle bacilli in the sputum. From a prognostic standpoint they confirm Koch's view that the intensity of the reaction corresponds to the degree of immunity present, and increases as the general and local condition of the patient becomes improved. Their observations were made upon sanatorium patients. In such the general condition is nearly always markedly improved shortly following reception into the institution, and when such is the case examination shows that the intensity of the reaction increases therewith. In those cases which showed a reaction upon reception, but in which the general state rapidly deteriorated rather than improved, observation showed that coincident with the decline the agglutinating power of the blood decidedly decreased or wholly vanished. Acute and rapidly fatal cases and those which show healed tubercular areas, as a rule, give a negative reaction. The authors think that in the latter instances this is due to the fact that the body has been successful in its fight against the disease. An endeavor was also made to increase the intensity of the agglutinating power of the blood by the subcutaneous inoculation of Koch's new tuberculin (bacilli emulsion). In this they were successful. By repeated inoculations they frequently obtained reactions in a 1 to 20, 30, or 50 dilution when it had previously only been present in a 1 to 5 or 10 dilution. Coincident with this increase there was a pronounced improvement in the general condition. If the inoculations were at any time discontinued, the intensity of the reaction decreased and the general condition retrograded. These results were obtained by the inoculation of relatively small doses of the tuberculin (.0025, .005, and .01). In no case was there produced any unfavorable symptoms as the result of such inoculations. For the technic of the agglutination tests they employed both the methods of Arloing-Cournnout and Koch. They find that the results obtained were practically the same in both, with the exception that Koch's technic gave the highest figures in those cases which were submitted to tuberculin inoculations. However, the Arloing-Cournnout method has the advantage that in doubtful cases the microscope can be used to observe the process. With Koch's technic this is not possible, on account of the excessively isolated condition of the tubercle bacilli in his test fluids. The general technic of the Arloing-Cournnout method is also the more simple.

Berliner klinische Wochenschrift, February 24, 1902.

Curettage of the Ethmoidal Sinus in the Treatment of Recurrent Nasal Polypi.—A. A. G. Guye reports four cases of recurrent nasal polypi, which were removed, and the ethmoidal sinus curetted. In this manner a permanent cure was effected in each case. This method was originally recommended by Rouge and Zuckerkandl, but was subsequently condemned by Hyrtl, and has of recent years fallen into disrepute as very difficult of execution. Guye finds the technique of the curettage simple. He uses a sharp curette, which is introduced into the sinus through the anterior nares. After the curetting, he packs the sinus with a boro-vaselin tampon. Cocain is used as a local anesthetic. The operation is repeated twice weekly if necessary. The first case reported by Guye was of long standing, and the growth of the polypi was dependent upon a chronic catarrhal inflammation of the ethmoidal sinus. Intense headache was a prominent symptom, and for this reason the case had been previously considered syphilitic. After thoroughly curetting the ethmoidal sinus, however, the polypi did not recur, and the head symptoms disappeared. In the second case, the original polypoid growths were due to empyema of the antrum of Highmore. In spite of the fact that this was successfully treated, the polypi reappeared in about three years. This time the seat of the trouble was found in the ethmoidal sinus. Headache was a prominent symptom, as in the first case. The same treatment was effective in permanently curing the condition. In the third case the ethmoidal sinus was also involved, but no headache was present. The fourth case was one of asthma produced by nasal polypi. On account of the persistence of the symptoms after removal of the polypi, the presence of phthisis had been suspected. Upon recurrence of the polypi they were removed and the ethmoidal sinus curetted. The asthmatic symptoms disappeared.

Dublin Journal of Medical Science, March, 1902.

The Diagnosis of Scarlet Fever.—J. Marshall Day says that the chief symptoms of scarlatina are vomiting, sore throat, fever, rapid pulse, and rash. Concerning these individual symptoms, he lays down the following rules: (1) Actual vomiting, or a distinct feeling of nausea, is nearly always present. (2) Children so seldom complain of sore throat that unless one follows the golden rule of always looking at the throat when examining a child, this symptom may be overlooked. One may find in severe cases that the patient swallows quite well, but the converse also holds good. In mild cases there is often a peculiar dull yellowish whiteness of the hard palate on the second day. (3) At the commencement, the temperature varies from 100° to 104°. It falls the next day, rising again in the evening, but not so high, and, following this course, generally becomes normal on the eighth to the tenth day. In mild cases it may become normal on the third day. (4) The pulse rate is more characteristic than the temperature, as even in the mildest cases it is over 120, generally 140 to 160, and we find that even after the temperature becomes normal, the pulse rate remains higher than normal. (5) The rash in scarlatina is never seen on the end of the nose, or around the lips—*i. e.* in the circumoral zone. It is almost invariably out before the third day. In the very mild cases there exists a fine punctiform rash on the tonsils, the hard and soft palates, and over the surface of the body where the skin is softest, such as the flexure aspect of the arms, the sides of the chest, the lowest part of the abdomen, the upper part of the thighs, and in the axilla. It can also be seen on the backs of the hands, the sides of the fingers, and on the dorsal aspect of the foot. When the elbow is flexed, a browning along the folds of the skin is noted, and a similar condition is observed at Poupart's ligament, and also, but not so frequently, at the backs of the knees. This browning persists after the rash fades, and is present with red puncta on the lower limbs. He adds that we should never attempt to diagnosticate the disease from the character of a rash without seeing the whole of it; never attempt to make a diagnosis by artificial light, and, when in doubt, always act as if the more important disease were present, until its absence be certain.

French Journals.

Effects of Decapsulation of the Kidney.—Claude and Balthazard propose to substitute for nephrotomy, which has been practised in recent times in surgical affections of the kidney and grave nephritis, decapsulation of the kidney. Urinary accidents in this way will be avoided. Besides, this intervention will facilitate the reestablishment of the renal circulation in cases where the vessels are compressed by the œdematous renal parenchyma and bound down by the capsule, and also in cases of arterial sclerosis. In normal dogs, decapsulation has not caused any sensible modifications in elimination, or in purifying the body.—*Le Bulletin Médical*, March 5, 1902.

Comparison of the Effects of Chloroform and Ether.—Poncet states that, according to his own experience, chloroform is more dangerous than ether. In 29,000 etherizations he reports one death. This occurred in a child who was found at autopsy to have old cardiac lesions. Ether does not cause the primary syncope or laryngeal reflex, so suddenly fatal and relatively frequent in the use of chloroform. Simple etherization, that is the use of plain ether, is preferable to a mixed anæsthetic. Pulmonary accidents are probably as frequent in patients who have been operated on without anæsthesia as in those who have been anæsthetized. The contraindications remain the same as they were in the past.—*Gazette des Hôpitaux, Civils et Militaires*, March 6, 1902.

The Clinical Value of Cytology, Cryoscopia, and Hematolysis in Certain Surgical Exudations of Serum.—Charles Julliard concludes that a cytological examination of serous exudations often gives useful clinical data. The different degrees of intensity of the morbid process appears to be characterized, progressively, by (1) Endothelium; (2) Lymphocytes; (3) Polynuclear cells. The first are found in exudates resulting from purely mechanical causes, as chronic hydrocele, certain forms of tuberculous arthritis, etc.; the second in exudates of an infectious nature, and the third in those of an acute nature. Cryoscopia is not of especial value in the diagnosis or the prognosis of the affection, neither does hematolysis give indications of practical importance.—*Revue de Chirurgie*, February 10, 1902.

Pathogenic Unity of Dysentery, the Specific Nature of Its Germ and the Serotherapeutic Indications.—Th. Moreul and M. Rieux, from their experimental researches, conclude that dysentery, whether *nostras* or tropical, endemic or epidemic, grave or benign, is due to a specific bacillus. It is differentiated from other coli bacilli by its failure to produce indol at the expense of albuminoid material, by specific phenomena of agglutination, and by the secretion of special toxins and antitoxins. The authors are experimenting with a serum obtained by the prolonged immunization of a horse; its properties are nontoxicity, and a bactericidal and antitoxic effect on the bacillus of dysentery and its poisons. Further clinical researches are necessary before any definite statement can be made in regard to its value.—*Revue de Médécine*, February 10, 1902.

The Proper Method of Proceeding in the Case of a Doubtful Ulcerous Neoplasm of the Tongue or Buccal Cavity.—E. Lenglet concludes that: Excision of a bit of the lesion, followed by microscopical examination, is the surest, the most rapid and the least troublesome method for determining the nature of doubtful neoplastic ulcerations of the mouth and of the tongue. It allows the institution of rational treatment in each variety of these lesions. When this method cannot be followed, there is recourse to the injection of calomel, knowing that it may ameliorate epitheliomata, and diminish connective tissue infiltration, but it must be remembered that valuable time may be lost in this way, as more time may be consumed than is strictly necessary for the confirmation of the diagnosis. Iodide of potassium should never be employed in doubtful cases, since it is so harmful in cases of epitheliomata.—*La Presse Médicale*, March 5, 1902.

Subcutaneous or Intra-Muscular Injections of the Yolk of Egg in the Treatment of Tuberculosis.—Ch. Bayle has had excellent results in ameliorating the general condition of tuberculous patients, by giving them injections of the yolk of egg. The average weight of one yolk is 20 gr. Among the constituents of the yolk of egg are vitellin, olein, lecithin, free fatty acids, cholesterin, mineral salts, a compound of phosphorus, and water. The writer attributes a particular importance to the lecithin. In these experiments two injections a week have been made. A needle, with rather a large, or at least a medium caliber, is used. It is attached directly to the syringe without a rubber tube. The egg itself is considered sufficiently aseptic. The arm and the leg have both been chosen as points for the injections. The writer is intending to use a mixture of equal quantities of the yolk and sterilized salt solution, which will increase the fluidity of the liquid, will favor absorption, and allow the injection of a larger quantity of the active material. About four cubic cm. are injected at a time. The process is carried on with great gentleness. The writer has had no case of abscess. These injections are considered one of the best methods of causing the absorption of a quantity of lecithin which has not undergone any alteration.—*Lyon Médical*, February 23, 1902.

Clinical Department.

HYPEREMESIS GRAVIDARUM.

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VOMITING of pregnancy is due to two principal causes: (1) To the influence of pregnancy on the central and peripheral nervous system; (2) To a process of autointoxication. In my estimation the toxic cause is the most frequent and the most easily treated.

During pregnancy there is an augmentation of the toxic products of the intestine (ptomain). The liver, that, in association with the other functions, is charged with the neutralization of these toxins, becomes, sometimes, during pregnancy unable to meet the increasing exigencies of the organism. A state of autointoxication arises, described by Pinard as hepato-toxæmia gravidica. The vomiting of pregnancy is simply one of the most serious symptoms of such intoxication.

I have been treating for two years cases of hyperemesis gravidarum on the assumption of the truth of these views. I have only nine cases in my record, but in all I had good results. My last case was in Washington a few weeks ago, and is worthy of mention. The patient, a woman aged twenty-six, lives in Mexico. She had one previous pregnancy. She always felt well. At the beginning of the third month of pregnancy (last week of October) she was attacked with vomiting. She suffered especially in the morning, but in the afternoon was as well as usual and retained her food. Her physician ordered subnitrate of bismuth. At the beginning of November she felt well, and, with the consent of her physician, started for Washington with her husband. Arriving in New Orleans, she was again seized with vomiting. This time she vomited more frequently, about ten times in the twenty-four hours, and could retain no nourishment. A physician in New Orleans prescribed bismuth and light food. The second day, the patient, thinking herself better, started from New Orleans, but was taken sick again on the train; her husband gave her the medicine brought with him from New Orleans, but she could not retain it. He endeavored to nourish her with milk and champagne, but she retained nothing. The first day of the trip she vomited nine times; the second, twenty-two; the third, thirty-seven. She arrived in Washington in the early morning of the 11th of November, and immediately sent for me. I examined the patient and found a temperature of 101°, the pulse 137; the skin was dry and muddy, mouth dry, tongue coated, breath fœtid. The small amount of urine voided was acid and had a bad odor; the eyes were sunken; she complained of headache and pains in the epigastrium; she was constipated; she had lost a great deal of flesh in the last week. She vomited, while I was attending her, water, bile, and mucus.

My treatment is causal and symptomatic. With the causal treatment I seek to diminish the toxin present in the organism and to stimulate the action of the liver. With the symptomatic treatment I seek to alleviate the vomiting until the causal treatment becomes effective.

The following was the course pursued: November 11, 1901.

8.30 A.M. First enema as follows:

℞ Aquæ	1,000 gm.
Sodii chloridi	5 gm.
Sodii sulphates	10 gm.
Veratrinæ	1 mgm.

I gave the enema through a long cannula.

10.30 A.M. Second enema of the same amount and composition.

12.30 P.M. Third enema of the same amount and composition. Each enema was followed by a discharge of fecal matter. The last discharge was watery and of a greenish color. After the third enema the patient did not complain of any pain in the epigastrium, and the headache was relieved. She vomited twice in the first two hours; three times in the second two hours; only once in the third two hours. After the third enema the patient lay on her back, head lower than the limbs, and a hot pack on the head, to be changed every twenty minutes. This was done to remove the state of cerebral anæmia always present in these conditions, and one of the exciting causes of persistent vomiting when the other causes have been eliminated.

1 P.M. Evaporization of ether on the epigastrium. After ten minutes I prescribed 6 cgm. of calomel in six powders, one to be given every half hour, followed by a tablespoonful of cold champagne and little pieces of ice.

5 P.M. The patient slept quietly for one and one-half hours.

7 P.M. I began to nourish the patient with milk and vichy water (equal parts), giving her teaspoonful doses, each teaspoonful being followed by a piece of ice. In the meantime I used the spray of ether on the epigastrium. In this way I succeeded in giving the first glass of milk which was retained.

9.30 P.M. I gave in the same way the second glass of milk, which was retained, and the patient went to sleep.

12th November, 6.45 A.M. The patient slept all night; woke up and had a movement of the bowels of watery-greenish nature.

7.30 A.M. The patient had a spell of vomiting; had no pains of any kind, no fever; the skin was moist; the tongue was clean; pulse, 90.

8 A.M. I gave to the patient a glass of milk in the same way as before; hot pack on the head. No vomiting.

10 A.M. Second glass of milk; hot pack on head. No vomiting. A glass of milk was then given every two hours until six had been taken. All were retained. One movement of the bowels, watery-greenish, occurred at 4.30 P.M. In the evening three powders of 1 cgm. each of calomel were given at half-hour intervals.

From that hour on the patient gradually returned to her regular meals, taking 3 cgm. of calomel every night. She felt well and wanted to go back to Mexico.

On 19th November she left Washington with these instructions: (1) Take milk and vichy during the trip and only one full meal in the middle of the day; (2) Take every night 3 cgm. of calomel; (3) Lie down most of the time.

On the 23d of November the patient arrived in Mexico in good condition.

The Discoverer of Serum Diagnosis.—Ronald Ross, writing upon the question of priority in the discovery of the so-called Widal test, states that Prof. Gruber gives the credit to two men who belong to England, viz., H. E. Durham and A. S. Grünbaum. He gives certain facts in detail that show pretty conclusively that the agglutinating power of the blood in typhoid disease was announced by Prof. Gruber at the Medical Congress in Wiesbaden in April, 1896, although his paper on the subject did not appear until September of the same year. The original work was done by Grünbaum in Gruber's laboratory. But before Gruber's paper appeared, Widal published several papers in the French journals claiming priority of discovery. Ross is inclined to give him the credit of priority in publication, but contends most vigorously against Widal's claim to be the discoverer of the test now commonly known by his name.—*The Lancet.*

WHAT ARE THE BEST SOLUTIONS FOR USE WITH WET DRESSINGS?

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A WET dressing is one that is moistened with some solution, which is protected from evaporation by means of an impermeable covering. For some years following the adoption of the Listerian method, wet dressings were employed in the treatment of nearly all wounds, whether operative or accidental, septic or aseptic. The tendency of modern surgery is to employ the dry dressing only in cases in which the wound is presumably aseptic, since a properly absorbent covering will suffice to imbibe the normal secretions, and because the heat and moisture of the wet dressing favor the development of germs.

The moist dressing serves a limited, yet most important, purpose. It is to be adopted in every wound that is septic, or that is likely to become contaminated. It is necessary to appreciate as accurately as possible the factors which contribute to the undoubted usefulness of the wet dressing in such cases. Do they depend upon the presence about the wound of what has been called a moist antiseptic atmosphere, and upon contact of the solution itself with the wound, or are they simply derived from the fact that the moist dressing promotes drainage? While it is possible that both of these factors may be possessed of some value, I am persuaded through many years of careful observation that the second is of overwhelmingly the greatest importance. That the surgical world is beginning fully to appreciate this is shown by the fact that the modern tendency is to employ, for wet dressings, solutions that are constantly becoming weaker. Carbolic acid is becoming obsolete, owing to the fact that it may bring about gangrene, and that its absorption sometimes results in the production of toxic effects. Bichloride solutions are often employed in such a degree of dilution that their antiseptic effects have reached the vanishing point. Dr. Eisendrath of Chicago* mentions a Russian surgeon who in one year treated 1,500 cases of infection with ordinary salt solution, with results equal to, if not better, than those which he obtained by means of strong antiseptic solutions. The late Dr. Gibier, of this city, who constantly treated a large number of infected wounds in people who had been bitten by dogs, and who applied for the Pasteur treatment, told the writer that dressings of normal salt solutions were far more effective than any others that he has tried. Dr. Eisendrath states that in ten years he has used a 1-1000 solution of salicylic acid in about 2,000 cases with good results. In the presence of these observations it is becoming evident that surgery is gradually becoming weaned from so-called antiseptic moist dressings. The surgeon nowadays operates with clean hands upon an aseptic field, and leaves an aseptic wound covered with aseptic dressings. When dealing with an infected wound he opens every focus of sepsis that he can reach, packs deep cavities lightly with gauze, or drains them with tubes or strands of some ligature material, after which he applies a wet dressing, the chief purpose of which is to prevent all drying and caking of discharges, so that the absorbent material out of which the dressing is made may continuously take up and remove from the wound all toxic substances which come to the surface. A wet dressing, therefore, acts mechanically, and it is more than questionable whether the influence of any so-called antiseptic is not an entirely negligible quantity. As a matter of fact, strong antiseptic solutions often exert deleterious effects, which are so well known that we need not stop to discuss them.

Considered as bactericidal agents, solutions of salt or of salicylic acid, such as the one mentioned by Dr. Eisendrath, the ordinary Thiersch solution, and the weak bichloride solutions employed by many surgeons, possess no virtue whatever. Hence it might be asked whether these solutions possess any advantage at all over plain sterilized water. From the practical standpoint it is not very certain that they do. The use of the saline solution, however, is justified by the fact that it is distinctly less irritating to the tissues than plain water. The dermatologists long ago observed ill effects resulting from the continued application of plain water to the skin. A hypodermic injection of plain water is distinctly painful, whereas the injection of normal salt solution under the skin causes no pain excepting that produced by the needle. We, therefore, have a distinct reason for adopting the latter for our wet dressings. Now, it is important that the dressing shall remain wet as long as possible, since, notwithstanding the impermeable covering, a certain amount of evaporation will take place. The hygroscopic virtues of the salt may assist to a slight extent in securing this object, but the employment of a small amount of glycerin will promote it a great deal. Any one who has developed photographic films knows how the addition of a small amount of glycerin to the final bath keeps the films soft and straight, which otherwise would become hard, brittle, and curly. A small amount of glycerin added to the salt solution keeps the dressing softer and more absorbent. Even without rubber or oiled silk covering, a dressing moistened with such a solution will remain moist, soft, and non-adherent to the wound nearly twice as long as one dipped in plain water or even in salt solution. The writer employs a solution composed of salt, 8 parts; glycerin, 20 parts, and water, 1,000 parts; and in nearly eighteen years of active surgical practice has never found anything which better answered his needs. From all this we may conclude that for wet dressings the ordinary antiseptics are practically valueless if considered as bactericidal agents, unless employed in such a degree of concentration as to be dangerous, and that they are best replaced by aseptic non-irritating solutions.

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*Infection in a General Surgical Sense," *American Medicine*, November 16, 1901.

A CASE OF DOUBLE TONGUE.

By ALBERT SEITZ, M. D.,
MCMINNVILLE, TENN.

IT was my fortune recently to see a case of double tongue in the person of a boy five years of age. He is of Jewish parentage, and has always been healthy, so his father tells me. There is no other abnormality in his body so far as I could discover. He is one of six children, none of whom presents any bodily malformation save himself. He has a normal tongue, beneath which lies the rudimentary organ, which is nearly, or quite, one inch in length and a little broader than it is long. It arises where the normal tongue joins the floor of the mouth, and below the frænum of the normal tongue. The rudimentary organ is about three-eighths of an inch in thickness at its base and grows gradually thinner toward the tip. The anterior end is convex and does not come to a point, but is broader than the apex of the normal tongue. The whole of the rudimentary organ is covered with mucous membrane, and the body of it seems to be composed of muscular tissue. When the normal tongue is raised, lowered, or moved in any direction, the lower one moves with it, but does not seem to interfere at all with its functions. The boy talks with great distinctness and says his second tongue does not trouble him in any way. Neither he nor his parents knew of its existence until the night before his father brought him to my office. During the night the boy was awakened and complained of a pain in his mouth, which I think was caused by a carious tooth which I discovered on examination. His father, on looking into the boy's mouth for the cause of the pain, discovered two tongues, and was greatly alarmed, not knowing what the second organ was, and supposing it to be the cause of the pain of which the boy complained. So early the next morning he brought him to my office and I found the condition which I have attempted to describe. As the rudimentary organ was giving the patient no trouble or inconvenience I did not think it necessary to excise it, so did nothing to it, but sent the boy to a dentist to have his carious tooth attended to, as I am satisfied that was the cause of his pain. I believe Hajek and Dolaeus have each recorded a case of double tongue. This is the only case of this anomaly I have ever seen.

INTRA-PERITONEAL RUPTURE OF THE BLADDER.

By JAMES PEDERSEN, M.D.,
NEW YORK.

ASSISTANT ATTENDING SURGEON (G. U.), BELLEVUE HOSPITAL; ADJUNCT PROFESSOR OF VENEREAL AND G. U. SURGERY, N. Y. POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

The patient was forty years old. On the evening of October 2, after some indulgence in beer, he retired with his clothes on. He arose at 3 A. M., and urinated, and soon thereafter, while sitting on the window sill removing his shoes, he fell out backward. His fall was broken by the roof of a porch a few feet below the window. The window was about twelve feet above the ground. About two hours later (5 A. M.) he regained consciousness, and was removed by ambulance to a neighboring hospital. Four hours later he was transferred to Bellevue Hospital with his left upper extremity in a splint, a fracture of the olecranon process having been made out. The Division House-Surgeon at Bellevue, while making a careful physical examination, noticed a little blood at the meatus, and suspecting rupture of the bladder, introduced a soft rubber catheter. A small quantity of bloody urine was obtained. Four ounces of boric acid solution were then instilled from an ordinary hand syringe. Only three ounces returned. Six ounces were instilled and only four returned. Again six ounces were instilled and only one and a half returned. In all seven ounces of the boric acid solution were lost. Through the courtesy of Dr. Bryant, to whose service the patient had been admitted originally, he was now transferred to the service of Dr. Bangs.

I operated an hour later, approximately, nine hours after the accident. A sound was passed into the bladder and cut down upon through the usual suprapubic incision. On reaching the peritoneum the point of the sound was found immediately beneath it. On opening the peritoneum a transverse rent in the bladder two and a half to three inches long was found just within the peritoneal reflexion. It being necessary to hasten the operation, only a continuous suture of ten-day chromatized catgut was used. It was closely applied, however, and the edges of the rent were brought together accurately. As careful a toilet as possible of the peritoneum was made; a quantity of bloody fluid and decolorized clots being wiped from the rectovesical space. The membranous urethra was then buttonholed and a 35 F. perineal tube was inserted through it into the bladder. The suprapubic incision was sutured in layers down to its lower angle, where two wicks of plain gauze, surrounded by rubber tissue, were passed to the bottom of the rectovesical space. A fold of iodoform gauze was placed anterior to these, and carried down between them and the bladder to a point just below the rent.

There was no leakage from the rent until the evening of the following day, when the drainage by way of the perineum was interrupted by some occlusion or a slipping of the tube. The fault was corrected as soon as discovered, but the leakage continued for ten days, and the fold of iodoform gauze had to be changed daily. The leakage ceased gradually. The drainage wicks were shortened from day to day; then one was removed. Thirteen days after the operation the remaining one was removed and a small drainage tube substituted, the discharge from the sinus having become purulent. Nineteen days after the operation this drainage tube was finally removed and the sinus allowed to close. The sutured portion of the wound had healed by first intention.

The penile urethra was now explored for strictures. Only a narrowing at the meatus being found, a meatotomy was performed to relieve the bladder of all unnecessary strain in voiding urine after recovery. The perineal drainage was continued until the twenty-second day after the operation. The perineal wound then healed rapidly and firmly.

The highest temperature reached was 102°, two days after the operation. From that day on it slowly declined. The highest pulse rate was 116; the respiration 36. Eight days after the operation the patient was mildly delirious and almost succeeded in getting out of bed. The temperature at this time rose to 101.2°, the pulse to 90, the respiration to 34. At no time were there physical signs of peritonitis or of pneumonia.

Both the suprapubic and the perineal wounds have remained closed. The patient urinates once in eight hours without difficulty. The urine contains only a few mucous shreds.

I am indebted to Dr. Lusk, assistant attending on Dr. Bryant's service, who kindly supervised the treatment of the fractured olecranon process.

REPORT OF AN UNUSUAL CASE OF DEAFNESS.

By DONALD M. BRISTOW, M.D.,
NEW YORK.

F. H., male, twenty-two years old, single, and a clerk, came to me at the New Amsterdam Eye and Ear Hospital on January 13, 1902. He gave the following history: He is a twin. His twin brother is living and in good health, but occasionally suffers from sore throat. The family history is negative. The patient's infancy and early childhood were uneventful. When eight years old he had an attack of acute illness, which he had been told was typhus fever. Since that time, he has had no hearing at all in his right ear. The hearing in his left ear is very good, and he has been able to get along perfectly well until lately. During the last few months he has taken up the study of choral singing, and finds himself handicapped by not being able to hear the singing on his right-hand side. This is his reason for applying for treatment. He has never noticed any temporary improvement in his right ear. He does not think it has grown any worse lately. His health is always good.

The patient is well nourished, the nose and throat show nothing abnormal. The left ear is normal in appearance, and responds normally to all tests. The right drum membrane is retracted, the short process of the malleus abnormally prominent. The drum is somewhat pale, but apparently not thickened. The cone of light is very distinct and slightly elongated. My watch (normally heard at thirty-six inches) cannot be heard even when pressed hard against the auricle. The tuning-fork (G) is heard—by air conduction, six seconds; by bone conduction, twenty seconds. The Eustachian tube admits air freely, either through the catheter or by Politzer's method.

The patient's ear was subjected to an energetic inflation through the Eustachian catheter, with no result. The Lucæ pressure-probe was then used, without effect. The following day the patient was subjected to acoustic massage, after which the pressure-probe was again used, and finally the ear was inflated with the catheter. Result: the watch is heard faintly on close contact, and the tuning fork, by air conduction, is heard for nine seconds.

During the next three weeks the patient was treated every second day by the pressure-probe, followed by catheterization. He showed slight improvement after each sitting for the first two weeks. Then he began to improve more rapidly, and on the eighteenth day from his first coming, he heard the watch four inches from the auricle. This was sufficiently encouraging, but on the twenty-first day, to my great astonishment, he heard the watch at thirty-six inches, and, with his left ear tightly plugged with cotton, he heard every word of a conversation which happened to be in progress in the next room, all of twenty feet from him. Since then (three and one-half weeks) I have had him come once a week for inflation, and his hearing has continued to improve until now he hears my watch at five feet or about a foot further than I can hear it myself.

This case is quite unique in my experience, and I have been unable to find a similar one reported. The boy had been absolutely deaf, to all intents, on one side for fourteen years, and there had been, apparently, no active catarrhal process in operation during that time. I had, of course, given an uncertain prognosis at the outset, and had told him that if he should improve, the improvement would be very slow. My view of the pathology of the case is, that the deafness was due to simple fibrous ankylosis between the ossicles, and that the bands were stretched and, perhaps, broken, by the pressure probe.

21 West Fifty-third Street.

Orthopædics of the Ovary.—E. Rose refers to orthopædics of the ovary as those measures directed toward replacing this organ to its normal position, when it has become displaced therefrom. He reports two cases where such measures were undertaken and followed by successful results. In the first case, the patient presented herself with a tumor in the region of the external abdominal ring, which was tender upon pressure and not movable. Upon cutting down the ovary was met with. Since this was not diseased, it was returned to the abdomen and the wound closed. No further discomfort was experienced by the patient. The second patient had long complained of abdominal pains and had previously had the right ovary removed. Following this, however, the pains returned, although they were largely intermittent in character. Upon examination on the left side, coinciding nearly with the course of the left ureter, there was detected a long indurated swelling about the size of the index finger at the lower extremity of which there was a small oval tumor. A diagnosis was made of stone in the ureter. Upon operation the ureter was found to be normal, but the anterior border of the psoas magnus was seen to be thickened and very prominent, and the left ovary was lying upon this muscle, bound down by the peritoneum. This organ was freed and returned to its normal position. Complete recovery followed.—*Deutsche Zeitschrift für Chirurgie.*

Society Reports.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Held February 24, 1902.

Frank Van Fleet, M.D., President.

Psychopathic Epidemics.—Dr. John B. Huber presented this paper. He said that at the present time there were several movements which seriously affected our national life, and all of them appeared to him to be of the nature of psychopathic epidemics. They all present certain common characteristics. Each cult insisted that theirs alone is the embodiment of truth, and that all others should be thrown aside. An abnormally-minded individual was capable of influencing his fellows, no matter how superior their intellectual powers. As examples, the speaker referred to the present movement of the Christian Scientists and the brilliant but short-lived career of Mesmer. The movement of Sanford, culminating in the erection of the magnificent temple at Shiloh, and the sudden disappearance of Sanford, was described. Some of the grotesque doings at the meetings led by the Rev. A. B. Simpson were narrated, and this gentleman was quoted as having said at the close of a meeting at which eight thousand dollars had been subscribed, "What the Lord can do with simple-minded people is marvelous!" Dr. Huber went on to say that it was with a feeling of regret and sympathy that he sketched the character and history of Schlatter, a poor shoemaker, whose doings were characterized by a rude sincerity. He did not think that Schlatter was consciously an impostor; he was undoubtedly insane. That there was nothing miraculous about his so-called healing powers was patent to every medical man, but the influence he exerted was certainly most pernicious. Osteopathy next received the author's attention. He said that all diseases were claimed to be due to the dislocation of some bone. Some vertebra was usually the culprit, and was subjected to a prolonged course of massage. Dr. Huber said that some time ago he had examined a series of cases claimed by the leaders of the Christian Scientists to be cures, and had been impressed chiefly with the great disproportion between the results claimed and those which he had observed. The most potent influence in swelling the ranks of these various cults was the faculty of imitation, always so prominent an element in a large popular movement.

Melancholia Simplex.—Dr. Ralph Lyman Parsons was the author of this paper. (See page 406.)

Dr. S. A. Knopf read several quotations from Mrs. Eddy's book on Christian Science. Mrs. Stetson, referring to this book, said: "That book, I believe, can cure anybody who reads it understandingly, of any disease, even of consumption." On page 388 of this book are found the words, "The less we know or think about hygiene, the less we are disposed to sickness." Dr. Knopf added that in this teaching lay the greatest danger of Christian Science. He incidentally called attention to the fact that the Christian Scientists had never invaded the haunts of the poor or endeavored to heal their less fortunate brethren. They insisted that, in order to have the necessary faith, payment should be made in advance, and as the poor could not do this they did not come under the kindly influence of Christian Science.

Dr. Theodore Kellogg said he was disappointed that the first paper had not brought out more forcibly the psychopathic influences involved in the many "isms" described. Peculiarities of religious belief and practice were not, in his opinion, truly psychopathic. Since the world began there had been an almost endless number of religious beliefs. The paper on melancholia simplex was very practical and well founded on clinical facts, but the all-important problem of diagnosis was still left somewhat obscure. Attention might well be directed to the defects of nutrition, the insomnia, the characteristic peculiarities of the pulse, the increased arterial pressure, the subnormal temperature and the various perverted functions of the body. Melancholia, in his opinion, was chiefly a physical disorder, the mental affection being really a reflex of the physical state. In the slight and transitory cases it was almost impossible to make the diagnosis. The physician assumed a very grave responsibility when he publicly made the diagnosis of melancholia and insanity, and hence it was well that the physician often recognized it quietly, but avoided speaking of it or acting in such a way as to attach unnecessarily a stigma to the unfortunate person. For this reason he was not disposed to agree with the writer of the paper as to the advisability of sending such patients even to a private hospital.

Dr. **Robert T. Morris** said that our legislators should be made to understand the nature of these psychopathic epidemics, in order that they might not place too much weight upon the claims and arguments of the victims of these epidemics. We should also collect specific instances of injury to present to our legislators.

With regard to the second paper, he would like to lay more emphasis upon the influence of organic disease upon melancholia. Surgeons were in the way of seeing melancholia and other more marked examples of mental derangement that were relieved by surgical means. Loose kidney and diseased uterine appendages were responsible for a certain rather large number of such cases. He would not operate on such cases with the specific object of improving the mental condition, but because of the pathological condition present, and as a result of such practice, he, as well as other surgeons, had seen very gratifying improvement in the mental condition. This was a subject which was totally ignored in hospitals for the insane.

Dr. **Edward D. Fisher** said that the epidemics described in the first paper were truly of a psychopathic nature, as they involved mental delusions and beliefs sometimes mixed with an idea of gain. The main body of the Christian Scientists undoubtedly had no thought of gain, and they included many refined people and men of business. The secret of the strength of this movement was to be found in the natural love for the mysterious which is deeply rooted in the human family. Our laws were sufficient to properly restrict these people, and if they overstepped the bounds, as in failing to report contagious diseases, we should make them shoulder all of the responsibility. Our opposition should only be along such lines.

With regard to the second paper, the speaker said he thought the essential feature of melancholia was the deep-seated, unreasoning mental depression. It was often because of the desire to sacrifice themselves for others that these patients committed suicide. It was utter folly to take a melancholiac out to an entertainment, because he would fail to be entertained, no matter what the surroundings. The great need was for forced nutrition and correction of the bodily functions. A fair trial should be made at the home, and if this failed, the patient should be removed and sent to some small place, preferably one having none of the features of a sanitarium.

Dr. **William M. Leszynsky** said that he doubted whether the general practitioners present at this discussion would learn anything regarding melancholia. This was not surprising, because experts often failed and admitted their inability to positively diagnose many of the milder cases. Every case of melancholia should be considered without exception as having suicidal tendencies. For this reason it was well not to treat even cases of supposed nervous prostration in the upper stories of a skyscraper hotel. In every case in which the patient's family was poor, the chances of recovery would be better if the patient were sent away to some institution. He did not think there were many cases of mental depression that were benefited by the rest cure; the majority of them were made worse thereby.

Dr. **William C. Deming**, referring to the claims of the Christian Scientists, said that they had at least served to accentuate the important influence exerted by the mind over disease.

NEW YORK ACADEMY OF MEDICINE.

Section on Pediatrics.

Stated Meeting, Held March 13, 1902.

Rowland G. Freeman, M.D., Chairman.

A Case of Imbecility Following Scarlet Fever.—Dr. H. **Illoway** presented an imbecile boy, who had developed what appeared to be a permanent imbecility as the result of an attack of scarlatina. Dr. Illoway was of the opinion that in this case the condition was the result of the general infection, although commonly it came on as a consequence of a meningitis.

Notes on Acute Joint Diseases of Infancy.—Dr. T. **Halsted Myers** presented a paper with this title. He pointed out that some aid in diagnosis was sometimes afforded by considering the age of the child. For example, acute articular rheumatism was almost never seen in very young infants; scurvy commonly made its appearance between the ages of eight and twenty months, and hæmophilia was commonly first observed about the close of the first year of life. Dr. Myers said that he had had blood examination made in many of his cases of joint disease, and had noted, quite uniformly, in the abscess cases, the presence of a moderate leucocytosis. This was important, because some surgeons interpreted this as meaning that the abscess had become infected, and that incision was demanded, whereas, several acknowledged authorities on blood examination state their belief that a moderate leucocytosis may be present without infection of an abscess. Acute osteomyelitis was usually produced by staphylococci or streptococci, though exceptionally the result of infection with tubercle bacilli. He had never seen a typhoid periostitis in a young infant. In cases of tuberculous osteomyelitis the joint motions were not restricted. Syphilitic periostitis usually occurred in the first two years of life, though a personal or family history was often wanting. The speaker said that he had had considerable experience with the diagnostic use of tuberculin, and felt warranted in stating that a positive reaction proved the presence of either tuberculosis or syphilis. He had seen a number of joint infections in children suffering from specific vulvovaginitis, but the affected joints were found to contain staphylococci or streptococci and not gonococci. In the mechanical treatment of the acute joint diseases of infancy, rest of the affected part and extension were the chief features. A plaster of Paris spica, with extension plasters underneath, often afforded better protection in young children than the common hip splint. While it was often desirable to resort to immobilization in the joint affections arising in connection with hæmophilia, it was hardly practicable to make use of splints, because the pressure which they produce gives rise to ecchymoses. However, in one case of hæmophilia, occurring in a boy whom he had observed for several years, effusions into the knee joint had perfectly recovered time and again without any treatment.

Chronic Joint Disease in Children.—Dr. **Henry Ling Taylor** read this paper. He said that the term chronic joint disease in children was almost equivalent to bone tuberculosis, because traumatic, rheumatic, and syphilitic infections constitute such a small percentage of the cases. Hemorrhagic and scorbutic joint affections had recently attracted much attention. Suppurative arthritis in infants was usually acute, and if treated by incision and drainage would rarely become chronic. It was remarkable how many cases of joint disease in children came to the specialist with a diagnosis of rheumatism. It was for this reason that he desired to warn against a hasty diagnosis of rheumatism in children, especially if the affection is monoarticular. Tuberculous joint disease was characterized by its insidiousness; its very existence would often escape notice for months, or until more acute symptoms appeared, as a result of some insignificant trauma. Too much weight should not be placed upon the family history, or upon the absence of pain in the early stages. The most characteristic sign was a limitation of joint motion, caused by reflex muscular spasm. If suspicion fell upon the hip or spine, the child should be completely undressed, in order that the gait and the action of the muscles may be critically studied. The neglect to do this was responsible for very many errors in diagnosis. In disease of the vertebræ, the pain would vary with the region involved, and while frequently severe and even paroxysmal, there were not a few cases in which the child made no special complaint, but was peevish and disinclined to move. Gastralgia was a prominent symptom of disease of the dorsal spine; hence, if persistently present, the condition of the spinal column should be thoroughly investigated. The catchy breathing, often observed in these patients, had led to the diagnosis of asthma and to many months of delay before the true condition was recognized and properly treated. Indeed, so common were errors in diagnosis in this class of children, that it was a safe rule to make a searching investigation into the condition of the spinal column in all chronic diseases of children of an obscure nature. Another point worthy of remembrance was, that pressure over the spinous processes of the vertebræ, with the object of eliciting tenderness, was incapable of giving reliable information. In hip disease limitation of the motion of the hip was the earliest and, at the same time, the most delicate test. The medical student was taught to look for hip disease when pain in the knee was complained of, but it should not be forgotten that disease of the lumbar vertebræ, as well as hip disease, may give rise to this symptom, and that pain in the knee is often absent in hip-joint disease. A study of the records brought out the interesting fact that bone tuberculosis was decidedly infrequent in persons having rachitis.

Dr. A. L. **Fisk** spoke briefly of cases of acute suppurative joint disease in children. Bacteriological examination in these cases would show the presence of streptococci and staphylococci, and later observations had brought out the fact that in some instances pneumococci were present, and there was a history of an antecedent pneumonia. He had treated these cases by incision and by washing out the joint with equal parts of alcohol and carbolic acid.

Dr. H. H. **Berg** spoke of the ease with which the milder grades of polyarthritis, occurring in children, in connection with the acute infectious diseases, might be overlooked. He had tried antiseptics and various internal remedies in these acute inflammatory joint lesions, but had come back to the salicylates as being the most efficient and reliable. The clinical fact could not be disputed, even though we were unable to explain saitsfactorily their action in a class of cases now known to be different from rheumatism. Some years ago he had reported six cases of such joint affections, because of their unusual severity. They had terminated in bone changes, and immobilization of the joints had been required. It was well that Dr. Taylor had laid so much emphasis on the frequency with which chronic joint disease was wrongly diagnosticated, but the orthopedists were not altogether blameless, for he had known of a case of rheumatism of the hip being diagnosticated by one of these specialists as a case of bone tuberculosis.

Dr. R. G. **Freeman** said that while rheumatism was almost never met with in the New York Foundling Hospital, joint affections of the nature of septicæmia were not very rare.

Books Received.

Essai de Semiologie Urinaire. By Camille Vieillard. 376 pages. Société D'Editions Scientifiques, Paris, France.

Principles and Practice of Operative Dentistry. By J. S. Marshall. 8vo, 635 pages. Illustrated. J. B. Lippincott Company, Philadelphia.

The Social Evil. By Committee of Fifteen. 8vo, 188 pages. G. Putnam's Sons, New York.

The Standard Medical Directory of North America. Royal octavo, 824 pages. G. P. Engelhard & Co., Chicago, Ill. Price, $10.00.

A System of Physiologic Therapeutics. By S. S. Cohen, M.D. 8vo, Vol. VI., 372 pages. Price, for set, $27.50 net.

Transactions of the American Orthopedic Association, Vol. XIV., 8vo, 374 pages. Illustrated. Published by the Association, Philadelphia.

Contributions from the William Pepper Laboratory of Clinical Medicine, No. 2. Royal octavo, Illustrated.

The Accessory Sinuses of the Nose. By A. L. Turner. 8vo, Illustrated. 211 pages. Longmans, Green & Co., New York.

Animal Experimentation. By H. C. Ernst. 8vo, 177 pages. Little, Brown & Co., Boston, Mass.

Bibliographia Lactaria. By Henri de Rothschild. 88 pages, royal octavo. Octave Doin, Paris, France.

Some Thoughts of the Principles of Local Treatment in Diseases of the Upper Air Passages. By Sir Felix Semon, M.D. 8vo, 130 pages. McMillan & Co., Ltd., London.

Psychology Normal and Morbid. By C. A. Mercier, M.B. 8vo, 518 pages. Swan, Sonnenschein & Co., Ltd., London. Price, $4.

Syphilis. By L. D. Bulkley and others. 12mo, 120 pages. E. B. Treat & Co., New York City. Price, $1.

Twenty-eighth Annual Report of the Secretary of the State Board of Health of the State of Michigan for 1900. 8vo, 272 pages.

Eighth Annual Report upon the Births, Marriages, Divorces, and Deaths in the State of Maine for 1899. 8vo, 232 pages. Kennebec Journal Print, Augusta, Maine.

Eleventh Report of the State Board of Health of Maine. 8vo, 319 pages. Illustrated. Kennebec Journal Print, Augusta, Maine.

Diseases of Women. By F. H. Davenport, M.D. 12mo, 405 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa. Price, $1.75 net.

Principles and Practice of Operative Dentistry. By John S. Marshall, M.D. 8vo, 635 pages. Illustrated. J. B. Lippincott Co., Philadelphia, Pa. Price, $5.00.

Recherches sur L'Epilepsie L'Hysterie et L'Idiotie. By Bourneville. 8vo, 236 pages. Progress Medical, Paris, France. Price, Fr. 6.

Diseases of the Intestines. By John C. Hemmeter, M.D. 8vo, 679 pages. Illustrated. Vol. II. P. Blakiston's Son & Co., Philadelphia, Pa. Price, $5.00 net.

Toxicology. By C. M. Riley. 12mo, 121 pages. Lewis S. Matthews & Co., St. Louis, Mo.

Annual Report of the New York State Reformatory at Elmira for 1901. 8vo, 106 pages. Illustrated.

Nursing, General, Medical, and Surgical, and Sick-Room Cookery. By W. J. Hadley. 12mo, 326 pages. P. Blakiston's Son & Co.

Compend of General Pathology. By A. E. Thayer, M.D. 12mo, 322 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia, Pa.

The American Year-book of Medicine and Surgery. In two Volumes. By George M. Gould. 8vo. W. B. Saunders & Co., Philadelphia. Price, cloth, $3.00 net; half morocco, $3.75 net.

Human Embryology and Morphology. By Arthur Keith, M.D., 8vo, 324 pages. Illustrated. Longmans, Green & Co., New York. Price, $4.50.

Twentieth Annual Report of the State Board of Health of New York. 8vo, 555 pages, with maps. James B. Lyon, State Printer, Albany, N. Y.

Twenty-third Annual Report of the State Board of Health of Connecticut for 1900. 8vo. The Tuttle, Morehouse & Taylor Company, New Haven, Conn.

Seventeenth Report of Registration and Return of Births, Marriages, Divorces, and Deaths in New Hampshire for 1898 and 1899. Vol IV. 8vo, 434 pages. Arthur E. Clarke, Manchester, N. H.

Cats: How to Care for Them in Health and Treat Them When Ill. By Edith K. Neel. Boericke and Tafel, Philadelphia, 1902.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending March 15, 1902:

	Cases.	Deaths.
Measles	850	18
Diphtheria and croup	327	38
Scarlet fever	360	26
Smallpox	65	11
Varicella	132	..
Tuberculosis	243	163
Typhoid fever	22	6
Cerebro-spinal meningitis	..	5

Boer Medicine.—The Boer faith in "medicine," viz., "nasty black stuff in bottles," is almost sublime. When they swooped down on the Natal villages in the early days of the war they looted every shop they came across. Everything they could carry away they took with them, and to this drugs in bulk were no exception. Consequently, at the commencement of the campaign many of the burghers, it is reported, became in their own proper persons mere peripatetic medicine chests. An amusing instance was given recently by a trooper of the Imperial Light Horse, who was captured early in the war. On the second morning of his captivity a Boer came up to him, and, producing three medicine bottles from his bag, asked him what they contained. The prisoner uncorked the bottles, smelt them, and gave the laconic reply, "Medicine." "Oh, yes, I know that," said the Boer, "but what kind of medicine? I have a pain here," and he rubbed his hands over the region of his watch-pocket. "Would it be any good for that?" The yeoman had been lying all night in the rain, without food or even covering of any kind, and he naturally did not feel as charitably disposed towards his enemies as a dry night and a well-lined alimentary tract would have made him. The bottles the Boer showed him were covered with mud and stuff, and the labels had been washed off, and the Britisher had no idea as to their contents, so he said, "Why, yes, of course they would. I should advise you to drink the three bottles." The story ends with the highly suggestive information that the soldier never saw the Boer again! Perhaps, after all, it was just as well for that soldier.

It would appear that many of the Boers killed at this period had all their pockets full of phials and medicine boxes, and that even Private Thomas Atkins was sufficiently carried away by his curiosity to taste this loot with untoward consequences.—*Medical Times and Hospital Gazette.*

Regulations for Barbers' Shops.—The Health Board of San Francisco recommended the following series of rules to be adopted as a city ordinance. They were submitted to the State Barbers' Examiners for approval, and it was advised that they be hung in a conspicuous place in all barbers' shops. These rules seem to be both feasible and adequate:

Mugs and shaving brushes shall be sterilized by immersion in boiling water after every separate use thereof.

Razors shall be wiped with alcohol both before and after they have been used.

Hair brushes known as "sanitary brushes" must be used, after first being sterilized.

Razor strops must be kept clean, and never wiped off with the hand or blown upon with the breath.

A separate clean towel shall be used for each person.

Barbers shall not blow away with the breath any hairs after cutting, but use a towel or bulb or hair brush.

Barbers shall keep their finger nails cut short and clean; alum or other material used to stop the flow of blood shall be so used only in powder form, and applied on a towel.

The use of powder puffs, finger bowls, and sponges is prohibited.

No person shall be allowed to use any barber shop as a dormitory.

All barbers' instruments must be disinfected after using.—*Indiana Medical Journal.*

Mind Triumphing Over Matter.—In the October number of the *Sphinx*, the Liverpool University college students' magazine, Sir William Mitchell Banks brings to a close his interesting "Recollections of Student Days in Edinburgh," extracts from which have already been given in the *British Medical Journal.* Speaking of the professor of anatomy, who was then in the early stages of the locomotor ataxia which ultimately caused his death, Sir William Banks gives a graphic description of a scene in the lecture room, which paints the character of the man: One day he was a little excited over his subject, when his poor ataxic legs gave way beneath him, and his great body fell with a crash on the floor. He was speedily helped up by those nearest at hand, the table was set up, and the delicate skull bones that were on it replaced. Goodsir, though evidently agitated, steadied himself again. There was a dead silence for a brief period while he gazed intently over his favorite sphenoids and ethmoids, and then he looked up with a delighted air and said, with the greatest earnestness, "Gentlemen, there is not a bone broken." His own bones were of no moment compared to his specimens, and the notion so tickled us that we gave him a tremendous cheer.—*British Medical Journal.*

Fracture of the Forearm from Starting a Motor Car.—At the meeting of the Academy of Sciences, held on January 13, M. Sorel reported some cases of fracture of the forearm caused by starting a motor car differing from those previously reported, which were cases of indirect fracture of the lower end of the radius by rupture of the anterior carpal ligament. In the case reported by M. Sorel there was a direct fracture at the junction of the lower and middle third of the radius, owing to the blow of the crank handle on the external anterior face of the forearm while at the same time the hand was forcibly extended. Contemporaneously the styloid process of the ulna was torn off. There was thus a direct fracture of the radial diaphysis and an indirect fracture of the lower ulnar epiphysis. There was no obvious deformity of the forearm, as the shaft of the ulna, which was intact, served as a splint to the radius.—*Paris Correspondent to Lancet.*

Foreign Medical Practitioners in London.—According to the recently-issued census returns there are 4,801 "physicians, surgeons, and general practitioners" in London, of whom ninety-two are females. There are no less than 169 male and six female foreign physicians, surgeons, and general practitioners in London. Of these there are nine male and one female who are Russians; one male Russian-Pole; seven male, three female, Swedes; two male Norwegians; three male Danes; four male Dutch; one male Belgian; twelve male French; thirty-two male, one female, Germans; three male Austrians; eight male Swiss; three male Spaniards; one male Portuguese; twelve male, one female, Italians; two male Greeks; three male Turks; two male Japanese; one male Asiatic, and sixty-three male Americans. 16,107 persons living in London are returned as "sick nurses, invalid attendants," of whom 15,844 are females; three of the latter are stated to be blind; 266 "midwives" are also returned in London.—*Lancet.*

Grave Abdominal Injuries Without External Evidences of Traumatism.—R. Harvey Reed reports a series of injuries in which were grave abdominal lesions without corresponding external evidences of traumatism, yet the result in each case was fatal. In four of the cases reported there was rupture of some part of the alimentary canal. From his own experience, and from reading the literature of this class of cases, he is led to the conclusion that it is the surgeon's duty to make an exploratory incision in all cases where there is grave doubt as to the real nature of the injury, and particularly so when the constitutional symptoms point to a condition more serious than is indicated by either the subjective or objective symptoms, provided the physical condition of the patient is such as to warrant such an operative procedure.—*Annals of Gynecology and Pediatry.*

Definition of Old Age.—Sir Andrew Clark was accustomed to define old age as the period of life at which a man no longer adjusted himself to his environment; and to illustrate the definition by saying that he regarded as old a doctor who expressed himself contumeliously with regard to microbes, or who, like one of his own contemporaries, spoke of the tubercle bacilli as "lung-bugs." Perhaps, as regards action, the sum of practical wisdom in the matter may be reached by Sir James Paget's admonition that the old man must not only say of his intentions "I will," but "I will *now*," in recognition that the limit of his activities in time is approaching, and that none can say how much of any work that he defers it may ever be within his power to accomplish.—*Hospital.*

Taste or Test?—A well-known Brooklyn physician of Spanish extraction has not yet mastered the intricacies of the pronunciation of the English language. Some time ago the doctor had occasion to send a specimen of urine for chemical examination to a druggist who attends to this work for the physician. A servant was dispatched with instructions that the druggist should "*taste*" it. The fluid was in an ordinary wine bottle, and the German druggist eagerly swallowed a good-sized draught, and immediately declared it to be the worst wine he had ever had the misfortune to sample. When the doctor informed him that it was a specimen to "test" chemically, the druggist was enlightened but not satisfied.

A Case of Abnormal Eruption of Mandibular Canine.—Mr. Deucer Whittles in a recent issue of the *Journal of the British Dental Association* records a case of the above condition. A girl six years of age had an acute suppurative periodontitis in connection with the right mandibular deciduous incisions and canine. The result was a sinus opening under the chin. Six months after a sequestrum was removed through the sinus, and the wound healed, leaving a depressed scar. When the patient was ten years old the right mandibular canine erupted through the scar and was ultimately removed. The root of the tooth was considerably distorted, due probably to some displacement of the tooth sac at the time of the primary trouble.

Intravenous Infections in Foot-and-Mouth Disease.—The infection of corrosive sublimate in foot-and-mouth disease seems to have fallen somewhat into disrepute in Italy. Professor Bacelli, when asked recently in Parliament to give some statistics of the results obtained, failed to do so, although he spoke in general terms of its efficacy. At a meeting of the Piedmontese Veterinary Association a resolution was passed unanimously condemning the treatment. The method was declared to be useless, and in many cases injurious by the exacerbation both of the fever and the local symptoms and also by the production of mercurial poisoning.

Disciplining Anti-Vaccinationists.—A novel way of dealing with "conscientious objectors" has been devised by the Liverpool Stipendiary. He reads them a pamphlet, issued by the Council of the British Medical Association, containing statistics in favor of vaccination. As this occupies an hour in reading, the "objectors" have to undergo what is to them an unpleasant ordeal, and we should not be surprised to find a marked falling off in these undesirable applications in consequence. We hope so, anyway, otherwise the magistrate may find it difficult to discharge his ordinary duties.—*Sanitary Record.*

Cancer in Savage Races.—The question as to whether cancer is or is not common amongst savage races is of great interest, and is, perhaps, not so nearly decided in the negative as some would have us believe. Dr. Long, medical resident in Maseru (Basutoland), said that malignant growths were common there. Dr. Kerr Cross gives evidence respecting the Uyassa district, and makes the cautious statement, "Cancer is not very common," adding that he had recently seen a woman with cancer of the breast who had travelled 450 miles to consult him.—*Polyclinic.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended March 15, 1902:

SMALLPOX—UNITED STATES.

		CASES	DEATHS
California, Sacramento	Feb. 22–Mar. 1	1	
San Francisco	Feb. 23–Mar. 2	4	
Colorado, Denver	Feb. 24–Mar. 3	4	
District of Columbia, Washington	Mar. 1–8	3	
Illinois, Belleville	Mar. 1–8	4	
Chicago	Mar. 1–8	19	
Indiana, Crawfordsville	Mar. 1–8	17	
Evansville	Mar. 1–8	8	
Indianapolis	Feb. 22–Mar. 8	31	
Terre Haute	Mar. 1–8	1	
Iowa, Ottumwa	Feb. 1–Mar. 1	42	
Kentucky, Covington	Mar. 2–9	0	
Lexington	Mar. 1–8	4	
Maine, Portland	Mar. 1–8	0	1
Massachusetts, Boston	Mar. 1–8	17	6
Cambridge	Mar. 1–8	4	1
Chicopee	Mar. 1–8	1	
Lawrence	Mar. 1–8	3	1
Malden	Mar. 1–8	1	
New Bedford	Mar 1–8	1	
Quincy	Mar. 1–8		1
Michigan, Detroit	Mar. 1–8	3	
Ludington	Mar. 1–8	2	
Minnesota, Minneapolis	Feb. 22–Mar. 1	16	
Winona	Mar. 1–8	4	
Montana, Butte	Feb. 23–Mar. 1	2	1
Nebraska, Omaha	Mar. 1–8	52	1
New Jersey, Camden	Mar. 1–8	1	
Harrison	Mar. 2–9	1	
Hoboken	Mar. 2–9	2	
Jersey City	Mar. 2–9	40	1
Kearney	Mar. 2–9	3	
Newark	Mar. 1–8	22	3
Union	Mar. 2–9	1	
West Hoboken	Mar. 2–9	3	
New York, Binghamton	Mar. 1–8		1
New York	Mar. 1–8	60	10
Ohio, Chillicothe	Feb. 22–Mar. 1	1	
Cincinnati	Feb. 28–Mar. 7	15	
Pennsylvania, Philadelphia	Mar. 1–8	47	11
Rhode Island, Providence	Mar. 1–8	3	
South Carolina, Charleston	Mar. 1–8	2	
South Dakota, Sioux Falls	Feb. 22–Mar. 8	15	
Tennessee, Memphis	Mar. 1–8	4	
Texas, Houston	Mar. 1–8	12	
Utah, Salt Lake City	Feb. 22–Mar. 8	6	
Washington, Tacoma	Feb. 23–Mar. 2	5	
Wisconsin, Green Bay	Mar. 2–9	11	

SMALLPOX—FOREIGN.

Belgium, Antwerp	Feb. 8–15	4	3
Ghent	Feb. 1–22		6
Brazil, Rio de Janeiro	Jan. 18–Feb. 9		33
Canada, Halifax	Feb. 22–Mar. 8	3	
Quebec	Feb. 8–Mar. 8	121	2
Winnipeg	Feb. 16–Mar. 1	7	
Colombia, Cartagena	Feb. 17–23		1
Cuba, Guantanamo	Feb. 27	1	
France, Marseilles	Jan. 1–31		1
Paris	Feb. 15–22		3
Gibraltar	Feb. 9–16	1	
Great Britain—			
England, Birmingham	Feb. 15–22	1	
Liverpool	Feb. 15–22	14	
London	Feb. 8–15		64
Manchester	Feb. 15–22	1	
Southampton	Feb. 15–22	1	
Scotland, Glasgow	Feb. 15–28		8
India, Bombay	Feb. 4–11		11
Madras	Feb. 1– 7		2
Italy, Baselice	Feb. 17	176	
Naples	Feb. 8–22	20	
Palermo	Feb. 1–22	35	6
Malta	Feb. 8–15	1	
Mexico, Mexico	Feb. 23–Mar. 2	2	1

YELLOW FEVER.

Brazil, Rio de Janeiro	Jan. 19–Feb. 9		24
Mexico, Vera Cruz	Feb. 22–Mar. 1	1	

CHOLERA.

China, Canton	Mar. 6	Increasing among Europeans.	2
India, Bombay	Feb. 4–11		4
Calcutta	Feb. 1– 8		50
Madras	Feb. 1– 7		4
Straits Settlements, Singapore	Jan. 11–18		5

PLAGUE—INSULAR.

Hawaii, Honolulu	Feb. 26–Mar. 2		3

PLAGUE—FOREIGN.

Brazil, Rio de Janeiro	Jan. 18		11
China, Shui Tung	Jan. 23		100
India, Bombay	Feb. 4–11		531
Calcutta	Feb. 1– 8		124

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Original Articles.

THE RELATION OF SURGERY TO OBSTETRICS.*

By EDWIN B. CRAGIN, M.D.,
NEW YORK.

In the faculty room of the College of Physicians and Surgeons there hangs a set of certificates, bearing the date 1807, given to a student of the college during the first year of its existence. Each of these certificates represents the work of a single chair, and one of these certificates reads "Surgery and Midwifery." Although this combination is looked upon now as ancient history of amusing interest, and although in the growth and development of the college this combination existed only a few months, I desire this evening to state and defend the proposition that the relation between surgery and obstetrics is now, and in the future is likely to be, so intimate, that the best preparation for obstetric work of the highest type is through surgical training. Obstetrics will probably always be practised by the general practitioner, but, in the discussion of the subject before us, one must consider obstetrics not from the viewpoint of the midwife or the doctor who devotes little attention or study to his obstetric patient, either before, during, or after her delivery, but from the standpoint of those who consider obstetrics a science worthy of a lifetime of careful study, and the practice of the art, often associated with complications, the dealing with which calls forth the best that broadly-trained brain and hands can afford.

There are six features of obstetric work which will especially engage our attention: 1, asepsis; 2, hemorrhage; 3, lacerations; 4, obstructed deliveries; 5, eclampsia; 6, infection.

I. *Asepsis.*—It is now well understood by intelligent people, whether professional or non-professional, that the secret of success in obstetrics is based largely on asepsis. This is known theoretically, and aimed at practically, by almost every one who attends a woman in labor, but no one trained in aseptic technique can watch the conduct of a case by a man who has not had the aseptic drill of a surgical service or a similar drill in an obstetric hospital without noting the marked contrast between theory and practice. The scrubbing and disinfection of the hands, followed by the handling of non-sterile bed clothes, or non-sterile skin of the patient, is a picture often seen by the consultant in the practice of those who think they observe antiseptic precautions and are aseptic in their work, even if they have not had hospital training.

Asepsis is something which cannot be learned by reading text-books or listening to lectures. It must be learned by routine aseptic work; repeated till asepsis becomes a habit; repeated till a man develops within himself an aseptic instinct which teaches him how to render as aseptic as possible his hands and the parts concerned in operation or delivery, and after that causes him to refrain from touching anything not aseptic until the operation or delivery is completed. The preparation for and conduct during a confinement is similar to the preparation for and conduct during a surgical operation, and, in the judgment of the speaker, routine training in the latter best fits for the former.

For several years I have watched the work of young men coming to the Sloane Maternity Hospital for a three-months' service, after completion of their general hospital training. Some of these men have come from a medical service, while others have come from a surgical service, in one of the general hospitals. After careful observation, it is my firm conviction that, as a class, the men with the surgical training have not only adjusted themselves more easily to the work, but have shown better judgment and more skill.

II. *Hemorrhage.*—I shall not enter into the details of the etiology, symptoms and treatment of hemorrhage. It is sufficient to recall to your mind the fact that obstetric hemorrhage may occur either during pregnancy, during labor, or subsequent to labor; that during pregnancy, aside from other causes, hemorrhage may be due to the abnormal situation of the placenta, as in placenta previa, or abnormal situation of both placenta and fetus, as in ectopic gestation. We will discuss the last first.

Suppose any one of you is face to face with a case of ectopic gestation, with ruptured sac and intra-abdominal hemorrhage. What training will best fit you for dealing with the case? There can be but one answer. The treatment is surgical. To the man with surgical training it is simply the application of the general rule in hemorrhage: ligate the bleeding point; followed usually in this case by removal of the tube and ovary involved, the product of gestation, and the blood clots. Certainly this condition is obstetrical; just as certainly it is surgical, and needs surgical treatment.

In placenta previa, as well as in intra-partum and post-partum hemorrhages, the obstetrician is presented with a problem which needs calm judgment, quick decision, and rapid execution. He must not be disconcerted by the sight of blood, but must realize the surgical principle that if the vessel walls and the tissues about them do not contract and check the bleeding, and ligation of the bleeding points is impracticable, artificial pressure must be applied.

The version and drawing down of one leg of the child in central and marginal placenta previa, so that the thigh and half breech shall plug the cervix and lower uterine segment, is using the same principle of pressure for control of hemorrhage as when one plugs the nares for epistaxis. The rupture of the membranes in lateral placenta previa, allowing the head to descend and plug the lower uterine segment, is making use of the same principle. If in any case of placenta previa Cæsarian section seems indicated, we have surgery of a higher type. If any doubt exists as to whether or not the treatment of placenta previa is surgical, there certainly can be none in the treatment of post-partum hemorrhage, whether that be due to uterine inertia, or laceration of the parturient canal. As in dealing with hemorrhage from a wound in any other part of the body, so, in post-partum hemorrhage, one must first ascertain the source of the bleeding. Does it come from the cavity of the uterus or from a laceration of the cervix? Having ascertained the source of the hemorrhage, the next step is to check it. In general surgery one ligates the bleeding points whenever practicable, but when one has to deal with a large oozing surface, gauze pressure is the method employed. Turning now to post-partum hemorrhage, due to uterine inertia, with bleeding coming from the cavity of the uterus, not the cervix, it is well agreed that, after ineffectual attempts to check the hemorrhage by manipulation of the fundus and the hot astringent douche, nothing serves as such a sheet-anchor in the time of need as the application of the surgical principle of gauze pressure for an oozing surface; consisting here of packing the uterus with gauze. After the hemorrhage, from whatever cause, has been checked, it is generally agreed to-day that nothing will so quickly lift the woman, perhaps pulseless and apparently almost moribund, from her condition of extreme danger to that of safety and returning health, as intravenous infusion of saline solution. It is a simple procedure, easily mastered, but a knowledge of the veins at the bend of the elbow, and practical familiarity with the technique of the operation, make all the difference between a quick operation, with small incision and no loss of valuable blood, and an operation characterized by quite the opposite.

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*An address delivered by invitation before the students of the Medical Department of the University of Pennsylvania, February 12, 1902.

III. *Lacerations.*—If, in spite of the firm contraction of the uterus, the hemorrhage still continues, we conclude that the bleeding is from the cervix, or vagina, especially the former, which has been lacerated.

Without entering the discussion as to whether or not lacerations of the cervix should be immediately sutured, it is generally agreed that lacerations of the cervix or vagina causing marked hemorrhage should be immediately repaired. The technique is not difficult, but that man will do it best who has done it frequently before, and who realizes that a cervical canal must be left, allowing for drainage, as involution proceeds.

If on examination it is found that the hemorrhage is from a laceration of the parturient canal above the cervix, *i.e.* if a rupture of the uterus has occurred and the hemorrhage is internal as well as external, we are face to face with a surgical problem of a grave type. Realizing that the indication is usually abdominal section, with ligation of the bleeding vessel, and either suture of the rent or removal of the uterus, and realizing, also, that on account of the shock accompanying the condition, whatever is to be done, must be done quickly, one becomes impressed with the fact that he alone is best fitted to deal with the situation who is familiar with abdominal and pelvic surgical work.

Although laceration of the perineum is of less danger to life than the preceding conditions, as an indication for operation it is much more frequent, and, in fact, occasionally demands the attention of every one who practises the obstetric art. It may be thought that the operation for repair of an incomplete laceration of the perineum is so simple that it can be easily done by any one who has seen the operation a few times. Like all minor operations in surgery, perineorrhaphy may be rightly done, followed by no complications and by a perfect result, or it may be wrongly done, with poor and dirty technique, followed by septic complications and failure as a result.

Speaking of incomplete lacerations alone, *i.e.* where the sphincter ani is not involved, the proper attention to the asepsis of hands, instruments and suture material; the attention to anatomical landmarks, and the care to bring torn tissues into normal relation; the care in introducing each suture so that no pocketing shall be left for the accumulation of discharges. Attention to these details is found, as a rule, only among those who have trained themselves practically in the surgery of the perineum; and if this applies to incomplete lacerations, much more does it hold good in the complete. We hope that none of you will be unfortunate enough in his own practice to meet with a laceration of the perineum through the sphincter muscle, but the consulting obstetrician is bound occasionally to meet with this condition in the hands of men less thoroughly trained.

Whether the patient is to emerge from her puerperium in perfect condition, and without knowledge of laceration other than that not uncommon to childbirth, or whether she is to spend months of misery, an object of disgust alike to herself and her friends, depends largely on whether her obstetrician was or was not a man trained in the repair of the rectovaginal septum. For a man without this training to repair a complete laceration of the perineum with a good result is something the speaker has never seen.

IV. *Obstructed Deliveries.*—So long as operations for the delivery of a living child through the abdomen carried with them a mortality of 75 per cent. to 90 per cent., it was only natural that the life of the mother should, as a rule, be alone considered, and that of the child sacrificed, when the parturient canal was too small for the delivery of living offspring. These times have passed, however, and with the development of obstetric surgery during the last few years, two lives demand consideration, instead of one. With the record of Reynolds' nineteen consecutive Cæsarean sections without a death, and my own of sixteen with only one death, and that of a woman nearly moribund from cancer of the uterus when brought to the hospital, we realize that we are living in a new era, with new fields opening to the obstetric surgeon, but demanding from him who would enter these fields a training that is broad, and a skill in the use of other instruments than the obstetric forceps.

V. *Eclampsia.*—Although the treatment of the eclamptic seizure is largely surgical, and we shall soon discuss it, I am free to admit that the condition of toxæmia leading up to and threatening eclampsia demands the careful observation and attention to the different avenues of elimination and the detection of slight deviations from the normal, which are usually considered the work of the trained physician. This simply illustrates the fact that to be a good surgeon in any branch one must be a good *doctor*, and whatever specialty in medicine or surgery one selects as his field of thought and work, he alone serves his patient best who realizes that his special field is but a part of the general system of his patient; that the special may affect, but is largely affected by the general. Valuable as devotion to a special field of medical or surgical work is to the world, specialism can occupy its true place, and justify its existence only, when based on the broad foundation of a knowledge and study of the patient as a whole, and the relation between the general system and the special field. For those who believe, with the speaker, that the best interests of the woman afflicted with an eclamptic seizure demand an emptying of her uterus as speedily as is consistent with the integrity of the tissues of her cervix, and lower uterine segment, it is easy to appreciate the value of experience in dilatation of the cervix, both instrumental and manual. The danger of a laceration extending into the lower zone of the uterus is well known, and is best guarded against by the training which comes from practice in dilating the cervix under various degrees of rigidity and for various indications.

VI. *Infection.*—The advantage of a surgical training in maintaining asepsis and avoiding infection has already been discussed, and we now come to the consideration of infection when that has occurred.

During the last few years we have learned that certain conditions existing just beneath the surface of the infected endometrium—such, for instance, as the blood-clots in the uterine sinuses and the infiltration of the tissue with leucocytes—are conservative in character, tending to prevent the entrance of bacteria from the uterine cavity into the general circulation. We have also learned that, by vigorous scraping and injury of this tissue, opening vessels and lymphatics, infection which before was localized may become general. On the other hand, it is generally agreed that decomposing placenta, or membranes retained within the uterus, should be removed. The problem, then, is the removal of these secundines without opening, if possible, new avenues of infection. In other words, the object desired is to remove that which should have been cast off at the time of labor, and to leave behind that which normally remains after a complete expulsion of placenta and membranes.

It is well known that, in a soft septic uterus, unless one is familiar with the feel of the uterine cavity, both with finger and curette, it is easy to mistake uterine wall for foreign material, and scrape not only beyond the limit of safety, but even through the uterine wall. The man will accomplish the desired result more thoroughly, more rapidly, and with less injury to the endometrium and uterine muscle, who has trained himself in the feel of the uterine cavity under varying conditions.

It is generally agreed that major operations for puerperal infection are not often indicated, but collections of pus in the Fallopian tubes, or in the wall of the uterus, sloughing tumors, and other conditions complicating the puerperium, sometimes demand surgery of the radical type.

One best understands the preparation needed for obstetric work of the higher type by considering the demands made upon the obstetric surgeon at the head of any of the good maternity hospitals of the country. He is not only called upon to superintend the conduct of normal labors, but to deal with all complications as they arise, whether it be in the hard parts or in the soft; whether it be in the parturient canal, or within the abdominal cavity.

One cannot consider the growth and development of obstetrics during recent years, especially along surgical lines, without feeling that its limit has not been reached, and the speaker will, perhaps, be pardoned for a glimpse into the future, which to him seems justified. It seems to me that in the near future the skilled obstetrician will not be thought to have finished his work until the parturient canal of his patient is restored to as good a condition as existed prior to the onset of labor. This implies not only the immediate repair of lacerations, when indicated, but also the secondary operation, if for any reason the primary was not performed, or was not successful. The difference in the two operations is chiefly one of denudation. In the immediate operation the parts are already denuded and ready for approximation; in the secondary operation, denudation must be the first step. The value of experience in secondary operations, when performing the primary, has already been referred to. It is equally true that familiarity with the appearance of the raw surface just produced by a laceration greatly aids in the secondary operation.

There is one other condition of the uterus which, in the future, I believe will be regarded as falling within the sphere of the skilled obstetrician. I refer to a displacement of the uterus beginning in, or recurring during, the puerperium. The fact that such displacements are most likely to occur when the uterus is large and the ligaments are relaxed is well known. That these displacements are more easily corrected soon after their occurrence is also well known; it, therefore, seems only rational that the obstetrician should be trained in the maintenance of the normal position of the uterus during its involution.

The test of every operation for the correction of a displacement of the uterus, aside from the relief of symptoms for which the operation was performed, is non-interference with the normal course of a subsequent pregnancy and parturition The man who has the best opportunity to judge of the effect of different operations upon these conditions of pregnancy and parturition is the obstetrician. I believe, then, that I am not extending his field too far, when I express the belief that the time will come when the care of cases of displacement of the uterus, which have been neglected during the puerperium, or which failed to respond to treatment during this period, will be considered the legitimate work of the skilled obstetric surgeon, and that, too, whether the case needs pessary or operation.

Gentlemen, my object this evening has been to throw upon the screen a picture of obstetric work of what I have called the higher type, and to inspire within you respect for a branch which some of you may have thought small and narrow.

The branch is no longer small, and it is only narrow when you make it so. With its ever-increasing literature, its problems extending into the realms of biology, physiology, and bacteriology, and its technique demanding years of training before proficiency is attained, certainly its fields are broad enough to inspire conscientious preparation and lifelong devotion.

Realizing that the growth and development of obstetrics during recent years has been largely along surgical lines, and realizing, too, the anxiety of medical students to best prepare themselves for their life work, it seemed to me fitting that you should have impressed upon you the relation of surgery to obstetrics.

62 West Fiftieth Street.

Creosote in Pneumonia.—Dr. I. L. Van Zandt of Fort Worth, Tex., is preparing a statistical table showing the results of the treatment of pneumonia with creosote or creosote carbonate, and asks physicians who have given the treatment a trial to send him, on a postal card, during April, 1902, the number of cases treated, and number of deaths, whether of record or on approximation. The questions are as follows: (1) Do you believe creosote ever aborts pneumonia? (2) Do you believe the majority of cases are mitigated by it? (3) Have you found cases which, having plenty of time, were entirely uninfluenced by it?

THE STUDY OF QUARANTINE IN THE LIGHT OF MODERN PROGRESS.*

By ARTHUR H. GLENNAN, M.D.,

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The meaning of quarantine in the original acceptation of that word has so wholly changed with the progress of sanitary science as to be inadequate to the demands of modern usage, and incapable of covering the present field of restraint of epidemic disease.

Different definitions have been made the outcome of differing interpretations of a law none too clearly defined, because of the varied applications of quarantine, for instance: "The time during which a vessel from ports infected with contagious or epidemic disease is required by law to remain outside the port of its destination as a safeguard against the spread of such disease." This is decidedly inadequate as referring only to maritime quarantine, while we have land, interstate, municipal, railroad, house and room quarantine.

Another rendering of the meaning and scope of quarantine reads thus: "The length of time required to insure immunity after exposure, or the length of time necessary after an attack to render the disease innocuous." To our sense, however, a more comprehensive exposition has been given by Surgeon-General Wyman of the Marine Hospital Service: "The adoption of restrictive measures to prevent the introduction of diseases from one country or locality into another."

It is a long step from the time of Moses, the lawgiver and sanitarian, who decreed that the unclean should be kept apart and the leper remain outside the gates, to the time when Venice, in the fourteenth century, first quarantined vessels for forty days against the plague.

Hence we have the term lazaret or lazaretto, from the house of St. Lazarus, located upon a small island near that city. The sanitary laws of Moses provided for the cleansing and disinfection of clothing and habitations, and their destruction when necessary, a very early recognition of the necessity of isolation and disinfection.

The ancients offered sacrifices to their gods during times of epidemic pestilence to appease offended deities. In later Christian times fastings, prayers, and religious processions were made in an intercessionary way, to be delivered from so-called "visitations of Providence." At the same time fires of pitch-tar and other material were burnt upon the streets to purify the air and dissipate the plague, while herbs and odorous drugs were carried upon the person to prevent infection.

Intermixed with the appeals for spiritual help and crude physical endeavor to be free of pestilential disease in the Biblical account of the race, appears the idea that fear, sin, disease, and death are intimately related, the result of wrong living.

Out of all this error of thought, modern sanitary science has developed the fact that Providence does not specially direct or send disease and pestilence; they are simply the result of departure from fixed laws of proper sanitary environment.

Out of this grew the necessity for a quarantine against a country or locality which neglected these laws, developing into a maritime quarantine in the narrower sense of self-protection, and rigid exclusion of the person and effects of the offending neighbor for an indefinite time, without regard to the practical methods of purification or the limitation in the incubative period of disease. For the same reason the "sanitary cordon" was established upon land to retain the limits of pestilence, or prevent its spread and introduction; fear and the shotgun upon the one side, and terror and disease upon the other, struggling to escape.

In the light of modern progress we have a better understanding of sanitary laws, and the origin and propagation of disease. As we reach out, understanding and destroying the foci of disease, quarantine as a means to an end is proportionally relaxed, and finally becomes unnecessary.

Quarantine is eminently dependent upon the practical value of scientific investigation of disease, which must correspond to definite methods and rules of procedure, in order to meet confirmation and acceptance. Without these conditions arise useless discussions and opinions of that which should be a matter of fact.

The personal equation and bias of the observer must be eliminated and mathematical precision introduced to make any conclusion of scientific value; therefore the casual observations of the earnest general worker have seemed of merit, and often did come very near the border line of truth, but without systematic classification or method, they are useless to-day, while the careful work of scientific investigation cannot be cast down by these unformulated opinions as offered in the medical magazines, or the relating of personal opinions and hearsay evidence in medical society meetings.

We are all familiar with the earnest work pursued by exact methods in Havana by Drs. Reed, Carroll and Agramante as to the propagation of yellow fever by the mosquito; the discovery of their relation was undoubtedly noted before by Dr. Finlay; but I refer more particularly to the scientific demonstration of the fact. The conclusion from all work of this character must correspond with the demonstration, and undue claims be avoided; while the conclusions thus logically drawn from it must stand. "Truth is mighty and will prevail!"

All the limitations and relaxations of modern quarantine are founded upon confidence, first, in the knowledge arrived at by investigation as to the origin, growth and progress of epidemic disease, and, second, its arrest and destruction at the quarantine barrier, with reasonable assurance of safety after release.

The improvements in quarantine methods have kept pace with the development of our knowledge of the origin and propagation of disease and cause of epidemics, while the methods of prevention have not generally exceeded the value of the protection afforded.

All the devices and inventions of modern progress have been applied to the uses and modification of quarantine. The telegraph and cable give notice to the health officer of the conditions and prevalence of disease in ports of departure, and the fluctuations of epidemic disease in distant countries, thus affording ample time for protection with the least interference to commercial interests.

Chemistry gives us the most efficient agents for the destruction of the germs of disease, and bacteriology the limit of time in which they can be safely applied, reducing the old period of forty days' detention to possibly an equal number of hours.

All the modern appliances are to be found upon the disinfecting steamer *Sanator*, located in Havana harbor for the past two years, the property of the United States. This vessel is conceded to be the most complete and compact disinfecting floating plant in the world. Its use has demonstrated the value of disinfection in ports of departure, while the incubative period of disease is, all or in part, undergone afterwards at sea. With the certificate of disinfection taken from this initial point, the quarantine officer at the port of arrival carefully inspects the vessel's personnel, and if found favorable, releases the vessel with confidence. This more recent process in the treatment of vessels and cargoes is a great commercial advantage, and it is a satisfaction to know that the majority of steamship companies and common carriers now distinctly recognize the financial benefit of rational quarantine methods as a protection to their interests.

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*Read before the International Sanitary Congress, Havana, February 18, 1902.

The best result to be obtained from international sanitary conferences should be based upon informatory principles, and not the imposition of too many rules and regulations, to which the various countries are not prepared to subscribe, because quarantine is progression, bespeaking a nation's growth towards higher ideals.

The diffusion of sanitary science and knowledge of hygiene has been rapid in the past few years, and is now known to a greater or less extent in all the countries of the world. Its practical application has been demonstrated in this fair city of Havana, in the eradication of yellow fever, by the application of methods of procedure deducted from scientific investigation under the administration of Dr. Gorgas. In only the same way will other quarantinable foes be conquered, and the restrictions of quarantine disappear. Education and understanding, right thinking and right living, will hasten this result to the individual and the community.

The student of history will observe that strife and war has always bred pestilence from time immemorial, consequently international conferences for arbitration are an aid to international sanitation. So, also, has port and municipal sanitation come to be interwoven in international commercial agreements; the one an adjunct and an aid to the other. This has just been recognized at the recent Pan-American Congress, which met in the city of Mexico, where the following rules were formulated and recommended by the Signatory Republics:

"1. All matters relating to maritime quarantine should be intrusted to the national governments, which shall have the sole right to institute maritime quarantine; to establish the necessary quarantine stations, both land and floating; to define the length of time during which a vessel may be detained and to adopt such measures as may be deemed necessary to prevent the introduction of contagious disease.

"2. In the port of each of the signatory States there should be established two kinds of quarantine—first, the quarantine of inspection or observation, and, second, the quarantine of detention and disinfection.

"3. The signatory parties agree to recommend that prohibitive quarantine on all kinds of new manufactured merchandise between ports and territories of the parties shall be abolished.

"4. The signatory parties hereby agree to cooperate with and lend every possible effort of the municipal, provincial, or local authorities within their respective limits, to the end that efficient and modern sanitary conditions may be obtained in all ports and territories of each, for the purpose that quarantine restrictions may be diminished to a minimum and finally abolished.

"5. The signatory republics further agree that it shall be the duty of their respective health and quarantine organizations to promptly notify the diplomatic or consular representatives of the signatory republics stationed within their territory of the existence and progress within their sovereign limits of the following diseases, namely: cholera, yellow fever, bubonic plague, smallpox, or other serious pestilential outbreaks. It shall be the duty of the sanitary authorities in the respective ports to note on the bills of health the transmissible diseases which may exist in said ports prior to the sailing of the vessel.

"6. In order to bring health and quarantine organizations more closely together for mutual benefit and international coöperation, a general convention of representatives of these organizations shall be provided for as hereinafter specified.

"In order to promote the above aims, it is recommended that an international sanitary committee shall be established, whose membership shall consist of not more than five delegates appointed by each republic; said delegates to be selected from the respective health and quarantine organizations of each republic, so far as practicable.

"That a general convention of these delegates shall be held once every two years, in which convention one delegate may represent more than one republic, the voting to be by republics, each republic represented having one vote in the convention.

"The first general convention shall be called by the President of the United States, one year from the date of the adoption of these resolutions by this conference, and the meeting place or places of subsequent conventions shall be determined by the general convention.

"The executive board shall consist of five members, to be elected by the general convention, which, with the Surgeon-General of the Marine Hospital Service of the United States as chairman *ex-officio*, shall maintain a permanent international sanitary bureau at Washington, D. C."

The functions of the general convention shall be advisory in character. They shall make manifest, practical, and active the latest scientific knowledge which the world has obtained in sanitation, to the end that the public health may be protected, and that commerce may be facilitated. The general convention assembled, or, in the interim, the executive board, shall have the authority to appoint subcommittees or experts to investigate, in coöperation with local authorities, into the sanitary condition of ports or places where pestilential diseases prevail, and to inquire into any other special conditions affecting the health of the American republics, and to maintain communication with the various health organizations for the purpose of recommending sufficient measures in all emergencies.

The salaries and expenses of the delegates and experts of each republic are to be paid by the respective governments which they serve. The office expenses and the expense of special investigation, as well as publication, translation, and distribution of reports, are to be paid from a special fund created by annual appropriation by the signatory republics, made on the same basis as is in force for the maintenance of the Bureau of American Republics. It is further recommended that the facilities of the Bureau of American Republics, under the direction of the Secretary of State of the United States, be utilized by the general convention and its Executive Board, for the correspondence, accounting, auditing, and disbursing and preservation of the archives incident to the administration of the proclaimed purpose of the convention.

These rules,* formulated at the City of Mexico, are quoted in full; are offered as a fitting summary of the present state of sanitary thought in the light of modern progress, and worthy of consideration and adoption by this International Sanitary Congress.

*Note.—The rules were unanimously adopted by this Congress at a special meeting of the delegates.

A FATAL CASE OF GANGRENOUS APPENDICITIS WITHOUT ONE CARDINAL SYMPTOM IN THE COURSE OF THE DISEASE.*

By SAMUEL M. EVANS, M.D.,
NEW YORK CITY.

To DISTURB the usual picture of appendicitis, namely, pain, tenderness, rigidity, rapid pulse, etc., which has been set forth by the most skillful clinicians of our time, is not the purpose of this record, but to show the inadequacy of the picture to represent every case.

The patient, C. R., was nine years of age. Her father was subject to bilious attacks when young, and has always had more or less tendency to gout. The patient had tonsillitis frequently, and for the past three or four years of her life was troubled occasionally with moderately severe attacks of facial spasms. Otherwise her history was negative up to a year and a half ago, when, within a period of five months, she was ill three times, her illness being characterized each time by prostration, nausea, vomiting, rapid pulse, some temperature, obstinate constipation, and slight soreness over the abdomen. In the last one of these attacks the abdomen was examined thoroughly. There were no tympanites, no rigidity of recti, and no especial tenderness anywhere. The cause of these symptoms, however, could not be found. Each illness continued about one week, followed by a slow convalescence. During her last illness, serious attention was directed towards the appendix, although there was a total absence of all cardinal symptoms of appendicitis.

The illness which is the subject of this paper was preceded by a week or two of ailing, during which she had no appetite, was very constipated, grew pale, complained of being tired without sufficient reason, and now and then had severe headaches.

About noon, January 22, she was put to bed, as she had complained of an intense headache during the morning. I saw her in the afternoon and made a thorough physical examination of her. There was no temperature, but the pulse was a little quickened. The tongue was dry and coated. The examination of the heart, lungs, liver, spleen and nervous system was negative in its results. The examination of the abdomen revealed nothing. Her throat was dry and somewhat reddened, due to a recent cold. The patient was perfectly comfortable and wondered why she was compelled to lie quiet.

The morning of the 23d found her with a normal temperature and a pulse of 98, whose quality was decidedly thin. The headache was better, but the tongue was more dry, and its coating, instead of covering the whole dorsum of tongue, as it did the previous day, was confined more to the middle, leaving a very red margin at the edges and tip. Her breath was very bad and she was vomiting frequently, yet she asked for food. Her bowels had moved well and her mind was cheerful. A physical examination revealed nothing new.

In the evening her abdomen was examined again, but there was neither soreness nor tenderness found. The stomach, however, was still irritable. The vomitus was green, watery and of normal odor.

The next morning, January 24, her temperature was 99°, pulse 112, and more thin and wiry. Nothing could be retained on her stomach. She passed rather a sleepless night, begging constantly for water or broth. Her face was drawn and pinched and her skin was dry and sallow. She was able to lie on her side as easily as on her back. There was a frequent desire to pass urine, which, on examination, was found normal in every way.

The evening found her with a temperature of 99.8° F., and a pulse of 112. She was much sicker, although her stomach was less irritable. She complained a good deal of headache during the day, and said she could not bear the light. She complained of her abdomen feeling sore for the first time. Palpation revealed a more or less general hyperæsthesia all over her body. There was no tenderness anywhere in the abdomen, and another complete physical examination left me as completely in the dark as ever. Her spirits were wonderfully maintained, and she was ready to smile or answer any questions put to her.

On the morning of the 25th her temperature was only 99.8°, though her pulse had shot up to 132, and its thin, thready quality was more than marked. The lips, as well as tongue, were very dry, and her thirst was no better, despite every means to alleviate it. She passed another very restless night. Her stomach was still irritable. Her face was somewhat cyanotic, and she was emaciating rapidly. Nothing was learned from another physical examination. The abdomen was slightly sore, but no more than the rest of the body. Pressure at McBurney's point elicited some pain, but of a very indefinite character, and in all probability it was due to the hyperæsthesia of skin, as there was no rigidity of either recti, and all methods of detecting pain in this region proved futile. She wanted to lie on her back most of the time. Dr. W. T. Bull was called in consultation, but could find no cause for her condition.

In the evening a blood count was made, and the leucocytes were found to be 19,600. A rectal examination disclosed a soft fluid mass in Douglas's culdesac. The child's resistance prevented drawing any certain conclusions.

The 26th saw a marked change for the worse. Her temperature in the morning was 102.6°, indicating for the first time some thermic disturbance. The pulse, worse than ever, rose to 136. A physical examination left us more mystified than ever. Her abdomen was still very sore, and she dreaded having any one touch it, but when she was being examined it was surprising what little resistance she offered. She was examined per rectum, under an anæsthetic, by Dr. W. T. Bull, Dr. L. Emmett Holt and myself, but nothing pathological was found. During the day she was seen also by Dr. Jos. E. Winters and Dr. E. G. Janeway. They found nothing whatever to explain the profound toxæmia which was now so evident. There were two very offensive movements from the bowels during the day. The pulse grew more and more rapid, reaching 156 by night, and on the 27th, about 11.00 A.M., three hours before she died, it had reached 172. The temperature after once reaching 102° remained high until she died, being 105° at one time. The abdomen was watched carefully until the end, but divulged nothing different from what had previously been found. She died at 2.30 P. M., January 27.

To Summarize.—This patient was sick five days. Every twenty-four hours marked a decided advance in the pulse and toxæmia—the pulse increasing about 20 to 30 each day. The temperature remained practically negative from the fourth day after beginning of first symptoms until thirty hours before death, and there was not a cardinal symptom of appendicitis or peritonitis at any time.

Autopsy (made by Dr. Harlow Brooks seven hours after death).—The body is that of a slight, but well-formed female child about nine years old. Rigor mortis is present in both extremities and in the muscles of the trunk and neck. It still retains some animal heat. The tips of the fingers and the toe nails are moderately cyanosed. The mucosa of the lips is somewhat bluish, but the skin of the face is white and clear. The integument, as a whole, is anæmic and free from any manifestation of disease, except that there is slight posterior cyanosis. The abdomen is not distended, and is but slightly tympanitic.

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*Read before the Pathological Society of New York City.

The amount of subcutaneous fat is fairly abundant, but it is highly colored, as though recent absorption had been rapid. The musculature of the thorax and abdomen is well developed and is in normal condition.

Both visceral and parietal peritoneum is covered with a thick but tenacious exudate—apparently representing an early stage of peritonitis, though the capillaries of the peritoneum are but moderately injected, with exceptions to be noted later.

The stomach is small, and contains a small amount of slightly bile-stained fluid. It is otherwise in normal condition.

The jejunum is normal throughout, but is moderately distended with gas. It contains a fluid substance, which contains rather more than a normal amount of mucous (calomel?).

The ileum is also normal except for about 7 cm. of one of its lower folds, which lies in immediate contact with the cæcum and appendix. This portion of the gut encloses a very fetid dark-colored substance, and the walls of the gut at this point are dark, and the capillaries congested.

The caput coli is normal, though quite markedly distended with gas, except where the appendix is given off. Its peritoneal coat is congested, dark in color and approaches the appearances now to be noted in the appendix.

The vermiform appendix is 6.2 cm. long. It is of large lumen, averaging about .7 cm., but at its root it measures 1 cm. in diameter. It is free from adhesions, but is stiff, almost erect, standing up from the cæcum and resting upon the portion of gut described. It is dark bluish in color at the tip, this hue fading to a fairly bright pink at the base. The capillaries of the peritoneal covering are much injected, and appear on the dark gangrenous surface as bright red lines. The peritoneum is also covered with a recent thin purulent exudate. The lumen of the appendix is distended with a thin, dark-colored pus, and the mucosa is found gangrenous in spots, though no points of perforation through the peritoneum are present. Many deep ulcerations down to this coat are found. No foreign bodies are present in this portion of the intestine.

The colon is distended with gas in the ascending and transverse portions, but is flaccid in the descending part. It contains a considerable amount of fluid fæces.

The mesenteric lymph nodes are almost universally enlarged. Their tissue is firm and apparently fibroid. There are no evidences of tuberculosis, and the cervical nodes are not found enlarged.

The ovaries are large, and, together with the tubes and uterus, are perfectly formed and entirely normal for a child of this age.

The bladder contains a small amount of urine; it is normal.

The kidneys are of normal size. Fœtal lobulation is not evident, and the organs present no gross evidence of disease except for a slight injection of their capillaries.

The adrenal bodies are large and apparently natural.

The pancreas is large. No lesion is present.

The spleen is enlarged about one-half volume. Its tissue is recently congested and its pulp abnormally soft. The malphigian nodules are large and very clearly seen.

The liver is of usual size. It presents nothing abnormal. The gall bladder contains a few cc. of bile. The duct seems to be in a natural condition.

The heart is large, and its walls are relaxed and quite soft, more so than normal. It contains a moderate amount of dark fluid blood and post-mortem clot. The valves, coronaries and the arch are in natural condition. The myocardium is pale in color and somewhat swollen, apparently showing a recent parenchymatous degeneration.

The pleural cavities are free and normal. The lungs are normal throughout, except that there is slight hypostatic congestion of the posterior portions of both lungs. There are no areas of bronchopneumonia and no scars of the apices.

Anatomical Diagnosis.—Gangrenous appendicitis, probably an acute attack following chronic appendicitis. Localized incipient gangrene of the small intestine. Acute parenchymatous myocarditis.

Miscroscopic Examination.—Heart: In places the heart muscle cells show a pronounced granular degeneration; the granules are small, highly refractive, and clearly not fatty. The interstitium of the heart shows no alterations except in the region of certain of the small bloodvessels, where areas of small round cell infiltration are frequently found. Otherwise the sections show nothing abnormal.

Lungs: The bloodvessels throughout are very much congested, and are filled with a fine granular detritus. Other sacs are partly filled with large œdematous, desquamated cells, evidently from the walls of the air space. None of the sacs contain red blood corpuscles, though a few enclose some leucocytes. Evidences of true inflammation are entirely wanting.

Liver: Many of the parenchymatous cells, particularly those about the intra-lobular veins, show a quite advanced fatty degeneration, but the cells in the periphery of the lobules are, for the greater part, in natural condition. The bloodvessels are moderately congested. There are no changes in the interstitium. There is a slight infiltration of small round cells beneath the capsule in places.

Kidney: There is an extensive sub-capsular infiltration of small, round cells, together with extravasations of blood over the entire capsule where examined. The cells of the convoluted tubules are swollen, very granular, and many of them are largely disintegrated. The degenerative changes are most apparent in the peripheral parts of the ascini, but are present in all parts of the cortex.

Mesenteric Lymph Nodes: There is extensive congestion of the vessels, and the parenchyma and cortex are both extensively infiltrated. In places necrosis is taking place, and in these areas numerous bacteria are demonstrable.

Appendix: The epithelial lining of the appendix is desquamated in all the sections. The glands are also broken down, and the inner portions are thrown off with the internal epithelial coat. The lymph follicles of the mucous layer are intensely inflamed and areas of necrosis are frequent. The most extensive inflammatory changes are found in the submucous and muscular coats, where the infiltration of small round and pus cells has extended deep down, and in many places through to the serous coat, which is infiltrated and in places necrotic. All the vessels are greatly congested, and in many the surrounding tissue has become the site of extravasations of blood cells, while nearly all are surrounded by areas of small, round cells. In many places the sero-fibrous coat has become completely eroded but where it still remains, it is found to be necrotic and infiltrated with bacteria and pus cells. Most of the vessels of this outer coat are thrombosed.

Sections stained for bacteria show the presence of very numerous bacteria, no particular sort apparently predominating. Bacteria are most frequent in the necrotic sero-fibrous coat, and in the peritoneal exudate which covers the portions of this coat which still remain.

This case possesses some extraordinary features.

At the post-mortem examination there were found none of the usual factors causing appendicitis; the appendix was straight, of large lumen, unobstructed by any foreign body, adhesions or malformation.

There was a bacterial infection of the peritoneum without perforation of the walls.

There was gangrene in that part of the lumen touching the appendix.

The infection killed the patient before peritoneal symptoms had developed.

Most extraordinary of all is the fact that up to its fatal termination it had not shown one of the cardinal symptoms of appendicitis.

A careful search of appendical literature has been made with the purpose of extracting only those facts, suggestions and observations which pertain to this case. Although no similar case was found, there were many which resembled it in some features. The material gathered is classified under the usual headings, with no intention of offering a treatise on appendicitis, but of presenting a compilation of those facts which have some bearing in the present instance.

Etiology.—The appendix is a functionless vestige, of parts once useful in our prehistoric ancestors, possessing necessarily a low vitality; and but feeble resisting powers. It is a test-tube containing a more or less stagnant culture media, which is the normal habitat of the bacillus coli communis and other bacteria.

It is the frequent habitat of the thread-worm.

It is a glandular organ, sometimes called the abdominal tonsil, and as such is subject to follicular, infectious, exudative, and ulcerative inflammations. It frequently contains foreign bodies, such as apple pips, seeds, bristles, shot, bits of bone, enteroliths.

It is said by Flint to be deficient in circular muscular fibers, rendering it unable to expel foreign bodies which may produce pressure, oligemia, obstruction and conditions favorable to virulent action of the contained bacilli.

It has a valve (Gerlach's), which is often inadequate and subject to conditions of cæcal mucous membrane. With the cæcum it lies on the ileo-psoas muscle, which is in more or less constant motion (unrest of ileo-psoas.)

It is dependent, so that its free end roams at will, gets twisted, bent, caught in hernias, adhesive bands, etc.

It is out of the fæcal current.

It has but one artery, which is terminal in the male, but anastomoses, with a branch of the ovarian, in the female—hence anything affecting the free circulation of blood in this artery, such as a bend, a twist, pressure from an inflamed mesentery, obstruction from within, as a thrombosis or embolism, will affect vitally the nutrition of the appendix and prevent the polynuclear leucocytes from reaching the scene of action to protect the organism with their nuclein.

It has a mesentery attached usually only to the inner two-thirds, which is often too short, causing a sharp bend of the appendix, and, owing its attachment to the ileum, it will drag on the appendix when that part of the intestine is filled with fæces or gas, thus causing a limited blood supply, congestion, and a catarrhal inflammation.

It has a lumen which is small when compared to the thickness of its walls, hence the slightest congestion or inflammation quickly obliterates its lumen and dams back the stagnant germ media.

The nerves are frequently atrophied from a chronic interstitial neuritis.

Bacteriology.—The bacillus coli communis and other bacteria are perfectly harmless in ordinary healthy conditions of the intestinal tract, but they become intensely virulent when they assume pathological activity.

They assume this activity whenever a "locus" of least resistance is present.

This "locus" is offered more frequently in the appendix than in any other organ of the body, owing to its histological and anatomical structure.

It has been fully demonstrated by Welch and Malvoz that bacteria can pass through an inflamed intestinal coat and cause peritonitis without perforation of the walls. This is also proven by Willy Meyer's case.

The three most active bacteria in appendical inflammations are the bacillus coli communis, the streptococcus pyogenes and the staphylococcus pyogenes.

Infection, at first, is always mixed, and in the early stages the streptococcus has most to do with the production of severe symptoms.

The streptococcus pyogenes. and the staphylococcus pyogenes are the most virulent. The bacillus coli communis infects more widely, leading to pylephlebitis, abscess of liver, etc.

The lymphatics are very active in children and bacteria work best in virgin soil, hence infection is more intense in children.

Pathology.—Suppuration may occur in the coats of appendix, or even necrosis, without necessarily bursting through the peritoneal coat or into the lumen of the appendix, but though they may appear slight to the naked eye, they are frequently followed by fatal peritonitis.

The rupture or perforation of an inflamed appendix is more virulent than ordinary fæcal extravasation, for the bacteria have already had full opportunity to grow and produce toxines. Gangrene is due to thrombosis of the artery, caused by the infectious process.

Gangrene usually occurs in twenty-four to thirty-six hours from the beginning of symptoms.

White reports a case where the gangrene and infection were so overwhelming that the adjacent part of ileum was gangrenous.

Semiology.—The gravest cases are initiated by a complexity of symptoms, which furnish no indication of the lurking danger hidden, and the mild cases present themselves attended by symptoms indicative of a far graver condition than really exists. Senn says: "I have operated on many cases in children in which constitutional symptoms were of severe type and found, to my utter astonishment, a plain case of appendicitis without perforation or peritonitis to any extent."

Taylor reports the case of a healthy man who had an appendix buried in a small abscess, who could knead his abdomen all over without the slightest pain or discomfort; also that he has seen slight local change in the appendix with manifestations of most virulent ptomaine poisoning.

He explains this by saying that a boil may give one man only a little local discomfort, while in another it causes most severe constitutional disturbance.

This difference has something to do with the virulence of the ptomaines generated, their absorption, the resistance to absorption, or their rapid elimination.

Keating says that young do not point to the region of the appendix as an adult. The physician is often compelled to find out for himself.

Treves reports one man as spending hours massaging his own abdomen, and another as drawing frequent attention to the absence of tenderness by slapping his abdomen, and both had septic peritonitis.

Tubby says that pain may be absent in gangrenous appendicitis, because the appendix is dead, nerves and all.

Mynter reports a case where a patient with gangrenous appendicitis lay quietly in bed with a normal T. P. R.; also that death may take place in appendicitis before any macroscopical lesion is present and before peritonitis occurs.

Fowler says, "A remission of all symptoms of the first, second, and third stage, save local tenderness, may take place, yet the disease goes on to a fatal termination."

Deaver says, "Tenderness is always present, but if, however, septic absorption has progressed so far that paralysis of nerve filaments has been caused, we may find tenderness has disappeared without any diminution in the progress of the disease." Also, "Abrupt cessation of pain indicates gangrene."

Dieulafoy states that the virulence of infection may suffice to kill a patient, while peritoneal symptoms are quite subsidiary.

In the foregoing we find, with one exception, a precedent for each of the unusual features of this case, the exception being that none of the cardinal symptoms of appendicitis were indicated, while in all others a diagnosis of appendicitis or peritonitis could be made some time during the course of the disease, from the presence of one or more of the cardinal symptoms.

This case declares that an infection can exist in the appendix which will end fatally, not only before peritoneal symptoms develop, but before giving any indication of its source. Therefore, if in the presence of constitutional symptoms of toxæmia, the source of which cannot be found, there exists the merest suspicion of abdominal involvement, is it not justifiable to make an exploratory incision for the purpose of diagnosis, and of further interference if necessary?

The Antitoxic Function of the Liver During Pregnancy.—Emanuele Viola has found, through his experimental researches, that during pregnancy the protecting power of the liver is diminished. This is shown by the fact that its neutralizing poweris diminished by nicotine, strychnine, and atropine, that the amount of glycogen is diminished during pregnancy, the amount of fat increased, and that the urine gives the signs of hepatic insufficiency. The liver, in fact, is in a pathological condition, and that the individual can remain healthy in spite of this, can only be accounted for by the supposition that some other organ acts in a compensatory manner. This organ the author thinks may be the spleen. The kidneys, also, are compensatory organs, and, for the reason that so much extra work is thrown upon them, are in a condition of increased vulnerability—hence the tendency to renal lesions. The depression of liver function is the chief cause of the unstable functional equilibrium during pregnancy, and this accounts for the special liability to contract marked conditions, and gives the anatomical basis for the occurrence of eclampsia.—*La Sperimentale.*

COSMETIC CONSIDERATIONS NOT THE ONLY ONES IN CASES OF STRABISMUS—THE IMPORTANCE AND THE POSSIBILITY OF SECURING BINOCULAR VISION.

By RICHARD H. DERBY, M.D.,
NEW YORK

WHATEVER the method of operation adopted in any case of strabismus, the result, both cosmetic and visual, may, and generally does, depend very largely upon what we may designate as the orthoptic treatment. Probably no ophthalmic surgeon would undertake the surgical care of a case of strabismus without a full and accurate knowledge of the refraction and the acuity of vision of the strabismic eye. It may be that before the tenotomy an effort has been made to relieve the strabismus by the use of glasses, or that after the operation itself a greater effect has been sought by properly adjusted lenses. So far as the writer has been able to observe, it is not the practice of many, at least of our ophthalmic surgeons, to avail themselves of methods of ocular exercise, which, practised before the operation, tend greatly to add to its success, and which, carried out after the operation, materially increase its effect. The strabismic eye is often amblyopic, but as is now well known, in many cases the amblyopia is such that patient treatment, especially when the subject is a child, can do much to ameliorate the condition.

The amblyopia in cases of monolateral squint has been described under at least three different forms. In the first the acuity of vision is diminished, but there is no change in the conductibility of the retinal elements. The condition is one of dulness of the retina. Again, there is a form of amblyopia in which the power of fixation is impaired. The patient makes tentative movement with the macula, which seems to be losing its predominance over neighboring portions of the retina. In the third form the inner half of the retina has better vision than the fovea.

In the first form, it is common enough to have an improvement of the vision after the tenotomy. In the second form the improvement is not immediate, but comes gradually. In the last form the chances of improvement of vision are small.

It is in the second category of amblyopia, and especially in the case of young children, that results can be secured by treatment. Of the first importance is the complete correction of the refractive error. While in practice I have learned to depend largely upon the ophthalmoscope, the ophthalmometer, and the use of glasses in estimating the refraction, it is not so with the strabismic child. Nothing less than repeated and complete atropinization is safe here. The ametropia once corrected, the isolated training of the amblyopic eye should be begun. To this end the closely fitting screen over the well eye is necessary, and for a half hour at a time daily, and in some cases twice in the day, the deviating eye is to be exercised. Exercises in reading and in writing under these conditions are to be insisted upon.

The following histories illustrate the advantage to be derived from long-continued daily exercise:

CASE I.—Julia W., a girl ten years old. Intermitting divergent strabismus of left eye. The right eye emmetropic, vision ten-tenths. The left has mixed astigmatism—1.50 Dc. (0°) combined with + 4Dc. (105°) V = one-tenth; the vision, however, is not lasting, and on looking at the test-types, the letters soon disappear. There is central fixation. Patient was directed to make daily exercise, the right eye under a screen and the refraction of the left completely corrected. The vision of the squinting eye rose slowly, and the best attained was three-tenths, or letters of Monoyer's fourth line. Together with the monocular exercise, the use of the stereoscope was enjoined, and at the present time, more than twenty years after the patient was first seen, there is dynamical equilibrium and comfortable binocular vision. No operation was made in this case at any time.

CASE II.—Henry R. N., a boy of eleven years. The right eye hyperopic 1D, with vision normal. The left eye hyperopic 5D, and with less than one-tenth vision, but central fixation. The boy received an exercise glass of 5D, and practised daily exclusion of the good eye, depending on the amblyopic eye for an increasing period each day. This was continued without intermission from December 31, 1894, to April 28, 1896, when the vision had risen to three-tenths. The boy had learned to shoot with a Flobert rifle, using the amblyopic eye, at glass balls, and had become a good shot. He now began stereoscopic exercises. He is now a bookkeeper, and while the vision of this weaker eye is not four-tenths quite, still he works on and without asthenopic symptoms. He habitually wears lenses correcting the refraction of both eyes.

A most important step in the orthoptic training of the strabismic eye is the effort to revive in the patient a desire for binocular vision, and thus recall to the eye its faulty position. The use of the red glass before one eye will, in some cases, provoke diplopia, or a prism with its base up or down before one eye will often cause double vision. It is, however, especially the stereoscope that develops the desire for binocular vision. It is the fusion of the double images in every direction of the axis of vision that is the absolute cure of the strabismus.

It is, perhaps, needless to say that in using the stereoscope we are not concerned alone with the convergence of the eyes, but with the accommodation as well, and as the strabismus itself consists in an alteration of the relations between accommodation and convergence, we must first correct the ametropia.

The stereoscope that I continue to use, and which has been elsewhere described, permits the placing of the half-pictures at any point that may be required to meet the faulty position of the strabismic eye. If this eye has a visual acuity of less than two-tenths, it may well be that but one half-picture at first is seen, or, if at all seen, that it soon disappears. With children my practice is to use the familiar cards "Jockey" and "Horse." According to the position of the eye, the horse is perhaps seen, and for an instant its rider. The jockey is, perhaps, on the tail of the horse or on his neck, and the half-pictures must be either approximated or separated to meet the faulty convergence or divergence of the visual axis of the deviating eye. This stereoscopic exercise is to be followed daily, and the actual lateral distance of the half-pictures from the median line noted. Together, hand in hand with this exercise, the monocular exercise of the amblyopic eye should be continued.

CASE III.—Rosamond G., seven years old, strabismus convergens of the right eye. For all distances the inner margin of the cornea of the right eye reached the inner canthus, by fixation of the left eye. With +3Dc (90°) the vision of the right was less than one-tenth, and central fixation was uncertain. The left eye with +.50Dc (90°) had normal vision. The child was first seen in March, 1899. She received full correction of the refractive error, and her governess was instructed to see that every forenoon and afternoon for a half hour each eye in turn should be bandaged, while the fellow eye was assisted by the correcting lens. This practice was maintained for several months, and with great regularity. Between these monocular exercises the little patient wore her spectacles always. In July, 1899, central fixation could be definitely demonstrated, and by Monoyer's tests the vision was two-tenths; but the patient complained that the letters M P could be seen only for a moment and then disappeared. A special card was now made for the stereoscope, on which an L and an F were almost in contact, and with this the patient could secure binocular vision. During the summer the exercises (monocular) were continued, and the patient was encouraged to depend more and more upon the amblyopic eye, playing at cards, games, etc., with the good eye blindfolded. The stereoscopic exercises were continued, and in the autumn she could see properly many of the Kroll and Dahlfeld cards. In the winter of 1899–1900 the vision of the weaker eye had risen to three-tenths, and at that it continues to the present time. The child has had the most varied exercise for this amblyopic eye. She has, for months, for a half hour daily, written sentences at dictation, while the sound eye was bandaged; she has shot with a bow and arrow at a target, using always the weaker eye. The apparent strabismus is not entirely corrected, and it may be that a tenotomy will yet be required; but a useful eye has been secured, and the visual acuity raised by unremitting care.

It will be said that it is difficult to make a patient take any interest in the training of an amblyopic eye when the vision of the other is good and there are no asthenopic symptoms that do not disappear when the refraction is corrected. This may be true, and doubtless in the one-sided amblyopia of hypermetropes of sixty and over we find many who have never had any inconvenience from it. But the cases that I have cited are those of children, and many other similar ones might be adduced. In cases I and III long persistent training, without operative interference, resulted in the one case in a restoration of binocular vision, and in the other in a decided cosmetic and some visual relief.

In his "Manuel de Strabisme" Javal brings forward many such cases. This author, whose views are entitled to the highest respect, says of the amblyopia ex anopsia that he recalls no case of a child under six years of age where central fixation had been sacrificed (p. 239).

If this be true—if there is a period in child life when systematic exercise of the amblyopic eye may result in improved acuity of vision, should we not in all cases see to it that the weak organ be made strong and the infinite advantage of binocular vision be secured?

Laryngeal Perichondritis in a Diabetic Subject.—A case of this rare combination of lesions is reported by Hutchison, the patient being a man of thirty years. Laryngeal symptoms were ushered in by an attack of dyspnœa, dysphagia, pain in the neck and some stridor to the breathing, while a distinct acetone odor was appreciable in the breath. All that could be seen in the larynx was a large red swelling, running from the back of the arytenoid region to the epiglottis, completely hiding the left cord. The right arytenoid region was considerably swollen, partially hiding the right cord. Externally the laryngeal region was swollen and tender, especially on the left side. The patient died in an attack of dyspnœa. The whole condition developed inside of one week. Syphilis and tubercle could be excluded as the cause of the perichondritis, and it was concluded that, owing to the low tissue vitality, the ordinary pus germs were able to penetrate the laryngeal mucosa and to flourish in the deeper tissues.—*Journal of Laryngology.*

THE TREATMENT OF INTERNAL HEMORRHOIDS.*

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So much has been said and written upon the hemorrhoidal disease that I approach the subject with some trepidation. However, as there still seems to be some diversity of opinion among surgeons as to the best method of treatment, my experience of the past five years with the different operations and their results may be of value. I shall not attempt to give an account of the peculiarities of individual cases requiring certain modifications in the technique of the treatment. In such cases the operator must be governed by his common sense and experience.

In my opinion, there are only four well-recognized methods of operative interference worthy of the name. They are the injection method, the Whitehead or American operation, the ligature, and the clamp and cautery. If it were not for the fact that some surgeons still prefer the first and second methods, this paper would never have been written. It is to these surgeons that I would appeal and hope to influence. It is beyond my comprehension why these methods were ever introduced, and it is still more difficult for me to understand why they are employed to-day. Surgeons have had ample time to study results and compile series of cases, and at least every hospital surgeon must have had opportunity of observing for himself serious life-long injuries to the performance of the normal functions of the rectum, resulting from these forms of treatment.

The injection method consists in the passage of a hypodermic needle either into the substance of a hemorrhoidal tumor or the interstitial tissue of the rectum, followed by the injection of some bland, irritating or caustic medicament. Personally, I have had no experience with the injection treatment, and never expect to have so long as there are so many better and more satisfactory methods at our command. The description of the technique of this method, therefore, is necessarily taken from the literature upon the subject, and also from my experience with patients in whom injections have been tried and have failed to accomplish the results desired, the patients having subsequently come into my hands for further treatment.

The patient is placed on the table, either in the dorsal or Syms position, and an examination is made. If internal hemorrhoids are not seen protruding through the anus, an examination is made with the finger and a speculum in the orthodox fashion. The patient is then given a soap-sud enema and told to strain hard and expel it. If the patient has hemorrhoids of any size they will be prolapsed when he returns to the table. If no protrusion of hemorrhoidal tissue occurs, the operator is compelled to administer the injection through a speculum, which is a difficult procedure. The operator now prepares the hypodermic syringe and fills it with the favorite solution. The most popular medicaments for this purpose are carbolic acid in 5 per cent., 10 per cent., or even 50 per cent. solution, fluid extract of hamamelis, ergot, sperm oil, and tincture of iodine, all of which may be employed either alone or combined in various ways. The needle is then inserted into the center of one of the smaller piles, and from five to thirty drops of the solution injected. This causes the patient more or less pain, depending on the strength of the solution used. The operator, judging from his experience of the amount of inflammatory reaction the individual rectum will stand, then ceases the operation for the time or recontinues and injects one or two more hemorrhoids. The prolapsed mass is then replaced in the bowel and the patient told to return in two or three days for further injections. This method seems to be part and parcel of the outfit of charlatans and irregular practitioners of to-day.

Its execution does not require any great amount of surgical training, and will secure in the majority of cases, if cleverly done, temporary benefit, without confining the patient to bed, or the aid of a general anæsthetic or necessitating suspension of business. All of these factors are of the greatest importance to the patient, who cannot see danger ahead. This method, however, is decidedly unsurgical, and its effects in a really troublesome case of hemorrhoids are far from lasting. Furthermore, it is applicable only to certain kinds of hemorrhoids, and is of no value in the thrombotic, œdematous or septic and cutaneous types. Nearly every reputable practitioner, using this form of treatment, has his own technique and injection fluid, while each one claims as his own all the advantages and none of the disadvantages which may accrue to the method. The ultimate object seems to be the same; namely, to produce contraction of the bloodvessels, and excite the formation of adhesions between the hypertrophied mucous membrane and subjacent interstitial tissue.

The cellular spaces existing between the rectal mucous membrane and submucosa are very large and easily ruptured. This can readily be demonstrated by the injection of air through a blow-pipe introduced beneath the mucous membrane of the bile-bearing area. Almost immediately a ring of mucous membrane will bulge at the anus. If the injection is continued, the mucosa will prolapse below the anal margin. The obliteration of these cellular spaces between the mucous and submucous tissue is what is sought for in the injection method. The injection of ten minims of any solution will frequently cause the formation of a small nodule at the margin of the anus. This is always quite painful, and consists of prolapsed mucous membrane, filled with the remnants of ten minims of fluid plus nature's serous effusion, due to irritation. This is spoken of by the "Injectionist" as prolapsed hemorrhoid. Following this irritation a few adhesions between the mucous membrane and the submucosa will occur, and a patient suffering from a few hemorrhoids will no longer be troubled by their prolapse, and in consequence will have no active symptoms of the disease. The continuation of this same process produces well-marked adhesions, which will persist for a varying length of time and thus relieve the patient. If the material injected is not readily absorbed or becomes infected —and no one can tell when this is going to happen; probably in your most important case—a small abscess forms at the anal margin, which causes the patient more pain than he ever experienced from his hemorrhoids. The abscess is either absorbed or opened by the attending surgeon, leaving a granulating wound, which, it is more than likely, results in a superficial fistula, extending from the site of the injection to the anal margin. This is the most frequent untoward result observed. It is not dangerous to life, but it causes much inconvenience and pain and usually calls for surgical interference.

It is difficult to explain these things to a patient who is told that he will suffer no pain from the treatment, unless he can be convinced that he is suffering from a complication of strangulated hemorrhoids, to which the charlatans usually attribute every disagreeable symptom incident to their treatment. If the injection is made a little too deeply or the inflammation spreads at all, a deep abscess with constitutional symptoms, high temperature, agonizing pain, and danger to life are apt to occur.

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*Read before the New York County Medical Association.

If it is left alone, perirectal cellulitis or peritonitis may result. The only other complication which to my mind requires consideration here is that condition in which the injection material used causes considerable inflammatory reaction and a slough of the mucous membrane, followed by the formation of an ulcer. Time will not permit me to discuss all the details of such a case, but anything from three or four bloody discharges in twenty-four hours to an incurable stricture may result.

Some authorities claim that pyæmia, embolism and even death have followed the use of injections. The literature at my disposal, however, does not show any well-authenticated case of death from these causes.

As usually understood, the Whitehead operation, briefly stated, consists of the denudation of the pile-bearing area of the rectum. This operation begins by an incision just inside of the margin of the anus. The mucous membrane is dissected up for an inch and a half to two inches inside the bowel. The mucous membrane then hangs loosely in the bowel as a tube. The distal end is then seized with a clamp and pulled down as far as possible. Two inches of this freed mucous membrane is then excised.

This amputated membrane is supposed to contain all the so-called "pile-bearing area." and, of course, all the other structures contained in the lower two inches of the rectal mucous membrane. The free end of the mucous membrane remaining in the rectum is then loosened at the edges and sutured to the original line of incision. In other words, a complete circle of mucous membrane is removed from the bowel, and its place is taken by drawing down the mucous membrane from a higher plane.

It can readily be seen that the proper performance of such an operation requires considerable surgical training and the exercise of great care. Indeed, it is no simple matter to dissect off mucous membrane from the underlying tissues, especially if engorged and bleeding. As an illustration I will mention a case in my own practice:

About eighteen months ago a patient, who had been operated upon for piles by one of New York's specialists, called at my office. A Whitehead operation had evidently been attempted, but in its performance the operator had apparently cut out and discarded the external sphincter as "pile-bearing area" and part of the mucous membrane. Instead of occasional attacks of painful piles now, the patient suffered from incontinence of fæces, and was doomed to wear protectors and to soil himself at all times and in all places. This patient seemed to feel that the remedy was worse than the disease.

Of course, no thoroughly competent rectal surgeon could quite get such a result as that. But no matter how competent the operator may be, if he persist in doing the Whitehead operation he must rely on securing primary union in the bowel, which is a difficult thing to do under the most favorable circumstances. The rectum is a difficult organ to sterilize and to keep so for any length of time. The mucous membrane, which has been drawn down and stitched to the anus must be in a more or less constant state of tension. A suture is likely to pull out during a paroxysm of coughing, vomiting, or at defecation. The result is an ulcer.

If all the sutures pull out, as occasionally occurs, it is extremely doubtful if a stricture of the anus can be prevented. Such a case was seen by me, in consultation, a short time ago.

The patient had been operated upon one week previously. The lower two inches of the bowel was completely denuded of mucous membrane. The mucous membrane that had been stretched down was curled up at the top of the wound and glued together by inflammatory products. The cause of failure in this case seemed to be that the patient had vomited very forcibly after ether and the cat-gut sutures had become softened, loosened, and untied by the wet dressing that had been applied. Here I gave an unfavorable prognosis, and advised a second operation, with sutures, preferably of silk. It was impossible for me to trace the case afterwards, but I am convinced that, in spite of any further operation, the patient probably has bad stricture at the anus or, at least, has lost control of the sphincter from the induration of the tissues, due to the extensive cicatrix. The probability of securing primary union in such a case is very much lessened. The freshening of such a wound in the hope of primary union is a difficult surgical feat, and even the most expert is liable to include in the excision more than mere granulating area.

My observations of a number of other cases, in addition to the two striking instances just referred to, make me marvel why any surgeon would to-day venture to do this operation. Fortunately, I believe it is done once to-day where it was done ten times some years ago.

To-day the ligature operation, sometimes referred to as Allingham's operation, is, perhaps, the favorite mode of treatment for internal hemorrhoids. It is, no doubt, more popular in England than in America. The technique preferred is as follows: The bowels of the patient are kept loose for a day or two previous to the operation. The patient is anæsthetized and placed on the table in the dorsal position, the legs being confined and held out of the way by a Clover's crutch. When anæsthesia is complete, the operator should insert the index finger of each hand into the anus and separate them slowly and carefully, until the sphincters are thoroughly dilated and temporarily paralyzed. If any fecal matter remains in the bowel, this is washed away with a weak solution of bichloride. A wire speculum is then inserted, separating the walls of the bowel, and allowing the hemorrhoids to prolapse into the lumen of the speculum.

The operator should then decide the extent of the disease, and which hemorrhoid it is advisable to ligature first. He should be governed in the matter by a desire to avoid too much cicatrix later, and by a desire not to have the field of operation covered with blood. In other words, he should ligate first the piles on the posterior wall and close to the anus. If the base is too large and close to the cutaneous margin, it is wise to cut the hemorrhoid loose from the skin and the submucous tissue with a pair of scissors. This cutting should be made parallel to the longitudinal axis of the gut. The remaining part of the hemorrhoid, now mainly vessels and mucous membrane, should be tied off with a strong ligature. Silk is preferable, although catgut, which is not absorbable for at least two weeks, may be used. This ligature is now tied, and the hemorrhoid excised. Care should be taken not to cut the hemorrhoid so close to the line of ligature that, when there is no longer tension on the mucous membrane, it will slip. Serious hemorrhage might result. Several deaths have been reported from such an occurrence. After all the hemorrhoids have been tied and removed in like manner, the speculum is again inserted, to see if any have been overlooked. Any cutaneous tags should be snipped off and a tight compress of gauze, covered with vaseline, applied.

The patient is kept in bed until the ligatures come away, which is usually in about a week. The bowels should not be allowed to move for two or three days. They can be controlled by the administration of a bismuth and morphine powder given a few hours before the operation.

It is well to inform the patient that he will have some pain for a few days following, and also with the first movement, a little blood. This can be avoided to a certain extent by the administration of a licorice powder on the morning of the third day, and when the bowels are inclined to move a soap-sud enema.

The clamp and cautery operation was first introduced by Cusack of Dublin, then was adopted by Smith of London, and Kelsey of New York.

After dilatation of the sphincter, as described in the ligature operation, the hemorrhoid is drawn down with a double tenaculum and its base seized with the clamp. The hemorrhoid is then cut off with a pair of strong scissors, and the stump burnt with the Paquelin cautery. The grasp of the clamp is then loosened, and the eschared mucous membrane is allowed to slip slowly back into the rectum. Care should be exercised not to cut the hemorrhoid off too close to the edge of the clamp, but to leave enough tissue to burn thoroughly and make a thick eschar. The clamp should always be adjusted, so that the eschar, when released, lies in the longitudinal axis of the bowel. Any number of grasps of the clamp may be made without danger, if this be observed, but three are generally sufficient if the amount of tissue in each grasp is carefully and intelligently regulated. When this has been accomplished a T-bandage is applied, and the patient is returned to bed. In comparison to the ligature, this operation possesses, to my mind, a few advantages. In the ligature, the irritation from the sutures generally cause some vesica tenesmus, which has to be relieved by catheterization. The pain in the ligature operation is somewhat more constant and severe. It persists until the ligatures have all sloughed off. The convalescence is more prolonged than in the clamp and cautery; the average time in bed being about nine days, while in the clamp the patients are repeatedly up and around on the fourth day.

The ligatures may be caught by a lump of fæces and torn off, considerable hemorrhage resulting, while I have never seen the sloughs from the clamp and cautery give any secondary complication. As far as a cure of internal hemorrhoids is concerned, either operation, when properly performed, will produce a satisfactory result. My own feeling in the matter is that the ligature operation is a little more to be followed by recurrence than is the clamp and cautery operation. I have never seen a recrudescence after the clamp and cautery operation. However, if my cautery should give out during an operation, I should feel perfectly safe in completing the operation by the means of the ligature. In conclusion:

The injection and Whitehead methods should be abandoned. The only value the injection method can possibly possess is its applicability in the case of dangerously ill patients, to whom an anæsthetic cannot be administered. The risk, however, is too great, and it is, therefore, safer for the physician to adopt one of the palliative methods, with which all of us are so familiar, such as suppositories, poultices, ice cloths and laxatives. The Whitehead method has no advantages. I am at present working upon an operation which can be performed in the office upon those individuals who refuse or are unable to take an anæsthetic. Thus far, however, I have been able to make use of it in but a small number of cases, and I am, therefore, unprepared to give it to the profession. When I have convinced myself that the operation is in every way superior to the injection methods for office treatment, I will venture to describe it in detail.

The ligature and the clamp and cautery operations are the proper procedures to employ, the latter possessing the advantage of a more speedy and painless cure and less liability to complications.

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IS THE MIND AN ENTITY?

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This question has been suggested to me by a perusal of Dr. J. Allen Gilbert's article, "The Psychic Half," in the Medical Record for December 7, 1901, in which he takes the affirmative side of the question. It is not my intention to offer a criticism upon Dr. Gilbert's essay; I only desire to present the other side of the question.

The present state of our knowledge will not admit of a demonstrable solution of the problem. Whether the future will solve it remains yet to be seen. The best we can do at this time is to take the data at our command, hold them up in the broad light of reason, and, looking at them from every possible standpoint, arrive at our conclusions.

Is mind an entity? To get at the essence of this query we must go to the very foundation of mental phenomena and ask, Is consciousness an entity? Every one must agree that consciousness is the root of all mental acts, and that from it arise all the manifold phenomena of the mind. To undertake to define consciousness would be to undertake to tell the neural process by which it is brought into existence. Any one who, in the present state of our knowledge, tries to define this element of mentality must resort to tautology, with the result that, in the end, he has not defined it at all. Thus, says one, consciousness is "the power by which the mind knows its own states and actions." This is equivalent to saying that consciousness is consciousness, which tells us nothing. The impingement of a stimulus upon the psychical neurones, the instigation of sensation, and the arousal of consciousness are so closely related, so intimately blended, if we may not say fused, that it is difficult to determine just what relations they bear to each other in the manifestation of mental states. Thus a stimulus falls upon the psychical elements of the brain, which results in a sensation; closely following, and almost simultaneous with it, there arises a consciousness of the sensation. Just what mediates between the sensation and the manifestation of consciousness we cannot tell. What neural process takes place in the interim we do not know; but that some physical process does take place at this time within the cells of the psychical neurones by which consciousness is evolved, and we become cognizant that a stimulus has upset the quiescent balance of the neural relations seems so rational, so positive, that, to my mind, at least, it does not admit of question. How much more reasonable seems such a theory when compared with one which states that immediately upon the reception of a sensation there steps in an entity, called mind, spirit, soul, which asserts that "I know"! Can it be that sensation is the result of a physical process, and consciousness is not? Nothing is plainer than that sensation arises in consequence of the disturbance of the psychical elements incident to the impact of a stimulus which has been transmitted to the brain over the afferent nerves. Sensation is certainly a psychic phenomenon, and if one of the phenomena of psychic life can be called into being by the intrusion of a physical force, is it not reasonable to suppose that all may be so manifested?

In dealing with the psycho-physical side of the question, then, it may be assumed that, as a result of the impingement of a stimulus upon the psychical neurones, sensation has its birth; that coincident with, or immediately following sensation, in some inexplicable manner, consciousness arises; that the recurrence of identical conscious states constitutes memory, and that reason arises as the issue of the comparison of remembered conscious states. These phenomena all have their origin either directly or indirectly in a physical impulse. Sensation is dependent upon it, consciousness cannot arise except it be called up by the influence of an extraneous stimulus, memory would be a thing of naught were there not something to suggest it, reason could not be exercised in the absence of a remembered conscious state. Take away the stimuli of our environment, and of what use would be the organ of mind? If every avenue over which impulses travel to the brain could be effectually blocked, so that not the slightest thrill could gain access into the mental precincts, how long, think you, would mental processes continue? The present thought might go on a few seconds, but only a few, for no sooner would the normal stimuli of the psychical cells be withdrawn than the processes of all the psychical neurones would fall out of functional relation with each other, and the brain would pass into an eternal, dreamless sleep.

Because we cannot tell just what physiological process takes place within the psychical cells at the moment when consciousness emerges as a necessary product from sensation, is no reason for asserting that it is not essentially a physiological product. It does not clarify the matter one whit by saying that consciousness is an entity, a reality, a substance without spatial relations, and that it has an existence outside the functions of the brain.

Mind and body are related because neural activity and the bodily functions are interdependent. All the organs of life are presided over by the nervous system, and these organs, in turn, supply the motive force of the nervous system. It is true that the great majority of stimuli which play back and forth between the nervous system and the bodily tissues by way of the sympathetic nervous system do not reach the psychical apparatus of the brain at all, and, consequently, do not give rise to conscious states. They are what may be called reflex nervous phenomena. When these stimuli become so intense that they overflow their boundaries, or when the reflex paths become incompetent to transmit the volume of stimuli, a portion of it switches off to the cerebro-spinal system, and arriving in the psychical precincts, gives rise to a peculiar sensation, which we are pleased to call an emotional state. And, vice versa, when mental impressions arise of such intensity as to overflow the carrying capacity of the cerebrospinal system of nerves, the excess passes off into the sympathetic nervous system, upsetting the normal balance of tissue metabolism, which upon being retransmitted to the brain, is there again interpreted as an emotional feeling. In this way, and in this way only, are mind and body related. Emotional feelings and the esthetic sense arise in consequence of stimuli emanating from the tissues of the body. The stimuli which call into being these peculiar sensations are carried in over the sympathetic nervous system. The character of a sensation depends upon the quality of the stimulus which calls it into existence. Thus, etheric vibration produces the sensation of sight, atmospheric vibration that of hearing, contact that of touch, and disturbed metabolic processes that of emotion. The relation between the sympathetic functions and the manifestation of emotional states is well exemplified in the blush of shame, the pallor of fear, and the flush of anger. The phenomena are so clearly dependent upon outside stimuli for their manifestation that it seems like a waste of words to argue further upon the question. If we are ever to understand the physiology of the mind, psychology and theology must be divorced. If we locate the soul of man in the brain and assign to it mental attributes, we erect a barrier which says to physiological psychology, "Thus far shalt thou go and no further." There is nothing in physiology more certain than that the brain is the organ of mind, and as the liver secretes bile, the muscles produce energy, so do the myriad millions of psychical cells of the brain generate thought.

Are the behests of the will called upon for occasion, and are we strictly responsible for our acts? If the mind is a creature of circumstance, depending upon the chance stimuli which find their way into the brain, the answer must be "No." If under certain conditions I perform an act to-day, to-morrow, if every condition be exactly repeated, I would perform the same act and in precisely the same manner. Mind you, I say *every* condition; this includes every environment and mental state. Under such circumstances I would be driven blindly into a repetition of the act absolutely without recourse. But if some passing stimulus, gaining access to my brain, should divert my train of thought in the least possible manner, then my conduct would change proportionately. I would not dispense with courts of justice, nor withhold punishment for the commission of crime, for the fear of retributive vengeance in the mind of the criminally inclined may serve as the stimulus to bend his mind into better channels.

To the medical man the mind must be looked upon as being a purely physiological product—a product capable of being warped and bent by its environments. A mind made of such material may be influenced and diverted into channels of mental and bodily health, but a mind whose essence is distinct and separate from the bodily functions could not be reached by human means.

Hemorrhages from the Ear in Hemophilia.—A case of this nature is reported by T. Samu occurring in a boy of two and a half years, with restlessness, insomnia, and fever. Inflammation of the left middle ear was made out, and paracentesis was done. The child did well for about a week, when blood began to flow from the ear, though after the latter had been syringed no cause for the bleeding could be discovered. The bleeding continued at intervals for eight days in spite of plugging the meatus, and a fatal result was feared, but on the ninth day the bleeding ceased and did not return. The family history seemed to indicate hemophilia. Throughout the whole duration of the hemorrhage no blood had leaked into the Eustachian tube. On the sixth day a small blood-clot was removed from the auditory meatus in order to investigate it microscopically. The preparation showed pus-cells embedded in mucus. After the cessation of the hemorrhage, improvement speedily set in. The ear discharge entirely ceased, and the hole in the tympanic membrane healed within four days. The child became quiet and slept well. In three weeks the membrana tympani appeared normal and the child was perfectly well.—*Medical Press and Circular.*

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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GOVERNMENTAL CONTROL OF THERAPEUTIC SERUMS, VACCINE, ETC.

Public Health Reports, January 17, contains an account, prepared, under the direction of the Surgeon-General, by Past-Assistant-Surgeon H. D. Geddings, U. S. M. H. S., Acting Director of the Hygienic Laboratory of four of the principal European countries relative to the preparation, sale, and distribution of therapeutic serums and other analagous products.

The laws in France are fairly stringent, providing that attenuated viruses, therapeutic serums, modified toxins and analagous products, applicable to the prophylaxis and therapeusis of contagious diseases, and injectable substances of organic origin, of undefined chemical composition, applicable to the treatment of acute or chronic affections, shall not be marketed under an actual or trade name until they shall have been, in point of view of manufacture and origin, the recipient of a governmental authorization, rendered according to the judgment of the consulting committee of the Council of Hygiene of France, and of the Academy of Medicine. These products will be granted a temporary or revocable license only, and shall be submitted to the inspection by a commission appointed by a minister having competent authority.

Regulations are also in force providing for the mode of issue of such products, but animal or humanized vaccine virus is not included in the regulations.

In the German Empire diphtheria antitoxin is the only one of the serums which s governed by the trade ordinance of the country.

The restrictions placed by the Government of Italy upon the production and sale of therapeutic serums are more comprehensive and thorough than in any country of the world. The law provides that no one shall, without consent of the Minister of the Interior, prepare for sale (*a*) vaccine; (*b*) virus; (*c*) therapeutic serums; and (*d*) toxins, antitoxins, and other similar preparations. The conditions for this consent and the special instructions in regard to the preparation and the sale to be determined by the Government after hearings from the Council of Health.

The Russian Commission for the Prevention of the Introduction of the Plague, at its sitting of May 3, left the preparation of anti-pest serum with bacteriological institutions which have given the necessary guarantees, on condition (1) That no money shall be paid to the Crown to such establishments; (2) That no obstacles shall be placed by the local authorities in the way of the preparation of these serums; (3) That the serum shall be prepared harmlessly—that is to say, by means of dead microorganisms or toxins, and not by means of living cultures; (4) That the serum prepared shall, before being sent from the Imperial Institute of Experimental Medicine, be tested; and (5) That the Commission reserves the right of disposal of the serums to the places and institutions which have the most need of it.

It will be noticed that no mention is made of any laws on the subject in Great Britain, and that, with the exception of Italy, no country controls the manufacture or sale of vaccine.

Of late, owing chiefly to the accidents which have occurred recently in this country from the use of diphtheria antitoxin and vaccine virus, there has been a movement in favor of Government control of such products. This proposition is not only highly proper under present circumstances, but absolutely imperative. But here governmental control of commercial products should stop. No municipal or State board has any right to manufacture such products for sale, and thus compete with private manufacturers. There is no objection to any health board making virus and antitoxins for its own use among the poor and for free distribution in the interests of public health; but beyond this it should never go.

No government has the right, morally, legally, or commercially, to enter into any business for pecuniary profit. There is no possible excuse for such a course, no matter how charitably it may be viewed on the score of guaranteed purity of product or its cheapness to consumers. The purity of any chemical product can be vouched for by proper inspection, but there is no good reason why any health board should enter the list of traders in such articles, and openly, under cover of official sanction, advertise its wares in the open market. Such a course would imply that all chemists outside of the board were either incompetent to make these articles or professedly dishonest in their methods. The advantage is an unfair one in every respect, as it is well known that the products in question are made with the greatest care by several large firms, and their purity is never questioned. In fact, with many of them the facilities for manufacture are so far superior to those of ordinary health boards as to be beyond the need of contrary argument.

There is no excuse, either, that the funds from the sale of these health-board serums are necessary for progressive bacteriological work. All appropriations for the latter should come from public funds, and not even indirectly from the legitimate profits of firms who honestly strive to do business on fair business principles.

We notice incidentally that the *Drug Reporter* of this city has taken up the subject from the same point of view, and has circulated a petition, which is to be presented to Mayor Low for his action in the matter. Our esteemed contemporary takes a very proper view of the question, and forcibly urges the necessity of forbidding the sale of serums and virus by the Health Department. It very truly and pertinently says that the present practice "is contrary to the principles of political science, unjust to mercantile interests, and exercises a disturbing influence on commerce."

In other words, it is the Government's business to inspect products, but never to manufacture them for sale. A municipal laboratory is not a shop.

CONGRESS AND PURE-FOOD LEGISLATION.

A very excellent bill now before Congress, regulating and restricting the sale of adulterated food-stuffs and providing penalties for fraud in connection therewith, is of much interest to the medical profession, by reason of the character of the evidence given by witnesses before the Congressional committees with respect to the material and methods commonly employed in the preparation of a large number of articles of food. In their efforts to meet trade competition without going into detail, it appears that there is scarcely a food preparation in ordinary use which is not subject to imitation, adulteration, and substitution by the unscrupulous. It comes also as a shock to learn that a number of the larger and supposedly trustworthy business firms are not among the least sinners in this respect, and that they are placing on the market preparations which are either directly deleterious or are intended to deceive the purchaser into believing that he is securing an article of superior quality. Of course, these adulterations are particularly intended for a cheaper class of trade, and thus it is the laboring classes, whose first requisite is an abundance of nutritious food of good character, who are the chief victims of commercial greed, and who especially require the protective legislation proposed.

Naturally, the firms whose fraudulent money-making schemes are threatened are bitterly opposed to the enactment of pure-food legislation, and are doing everything they can to prevent the proposed reforms. For several weeks the Congressional Committee rooms have been crowded with their representatives in the effort to convince Congress that the public is the lawful prey of the individual, and that the general health and welfare is quite subordinate to personal commercial ends. One manufacturer of food-stuffs complained bitterly to the committee because of the interference with his "business interests" resulting from legislation in a certain State requiring him to label as imitation the composition "jellies" prepared by him. He stated that his sales had fallen, in respect to these "jellies," from a thousand buckets to twenty buckets a day, as a result of this legislation. He admitted, on further inquiry, that his "currant jelly" was made from apple cores and parings, or other fruit refuse, boiled to a pulp, stiffened with starch, sweetened with glucose, colored with an aniline dye, and artificially flavored. He did not say, however, and which is probably the case, that his delectable article of food had been kept from putrefactive changes by chemical food preservatives, such as salicylic acid or the sulphites. He could see no objection to labelling his preparation as pure currant jelly and putting it on the market to compete with a pure article of the latter. Other witnesses contended that the adulterated preparations sold by them were not injurious to health, but they were forced to admit that these were sold under fraudulent brands denoting that they were first-class goods. Misleading labels were found to be a very common means of evading existing laws, even though complying with the letter of these laws.

All the manufacturers represented before the committee united to vigorously oppose the imposition of any penalty for infringement of the proposed pure-food laws. If such legislation was to be enacted, they strongly objected to any provisions by which it might be made effective, and offenders, in this respect, punished. By their attitude they showed exactly how far they would observe such laws in the absence of penalties compelling them to do so and also the value they attach to the public interests as compared with their private gain.

These men plainly menace the welfare of the communities upon which they prey. They are making a strong fight to perpetuate present conditions and prevent urgently needed reforms. They are well supplied with funds; the trade in which they are engaged shows them to be thoroughly unscrupulous, and their cry of "injury to business interests" is one which appeals strongly to Congress. They are on the ground to prevent effective pure-food legislation, and are united to form a political power, the strength of which is not to be underestimated. In their efforts to exploit the public, they can be best opposed by their own political methods; and to this end all health officers and those interested in public hygiene should urge upon their Congressional representatives the necessity for pure-food legislation, based upon the admirable bill introduced into the House by Mr. Hepburn. This is an instance where a united medical profession should be utilized as a political lever to force the enactment of legislation favorably affecting the public health and welfare. The importance of uniting the medical men of this country into an effective political unit, to be used for non-partisan ends in the interest of humanity and medical science, cannot be too strongly emphasized.

Dentistry as a Specialty of Medicine.

Dr. O. N. Heise, of Cincinnati, read before the Cincinnati Odontological Society a paper dealing with the above subject, which, from one point of view, treats of the situation clearly and frankly.

Many dentists have been for long impressed with the idea that as their profession now requires a scientific training, so should the entrance examinations and the course throughout be raised to a much higher standard than at present prevails.

The dental student needs to have a fair knowledge of anatomy, physiology, pathology, materia medica, chemistry, and bacteriology, and especially of the first three. Thus, looked at from this standpoint, there would seem to be good reasons for conducting the training of the medical and dental student upon almost identical lines and in the same class.

Dr. Heise was very outspoken in the expression of his ideas on the matter, and spoke in part as follows: "That the dentist should have a thorough medical training is, in my mind, a settled fact, and it seems to be it cannot be obtained in the average dental college. Why should not the student acquire his knowledge of medicine at the fountain head, from men who have studied these branches more thoroughly than any dentist would or has the opportunity to do? Where, also, he can have the advantage of practical laboratory courses of instruction in all the various branches, which the dental college does not give. Again, the hospital instruction and clinical work are of paramount importance in giving broader ideas than he can get from spending all his time in the dental clinic. The chair of oral surgery gives the dental student an opportunity to witness operations other than the strictly dental ones, but he should see more than a few such operations during the year. He should obtain a knowledge of general medicine not from books alone, but by clinical instruction as well.

One of the strongest points brought forward by Dr. Heise in support of the view that the dental student should have a fairly thorough medical training is that the administration of anæsthetics, the injection of cocaine, etc., as ordinarily done by dentists, is likely to bring discredit upon the profession. Patients are given nitrous oxide gas when the dentist has no idea of their general condition. In fact, is the average dentist equipped to ascertain, even in a general way, the condition of the heart, lungs, kidneys, etc., and in case of any serious trouble during the administration, is he qualified to take care of the patient?

In the discussion that followed the reading of Dr. Heise's paper some of his professional brethren voiced their agreement to, while others dissented entirely from, his views.

Those who were of the contrary opinion founded their principal objections upon the belief that this broadening of the dentist's education would tend to lessen his digital skill and dexterity of manipulation—in short, the greater theoretical knowledge that he gained would be more than counterbalanced by his lessened expertness in the practical work of the profession.

Some, too, argued that the dental colleges of the day afford the same advantages to the student in histology, pathology, bacteriology, and physiology as do the medical schools.

The honors of the debate would appear to have fallen to Dr. Heise, and his contention—that it is to the disadvantage of dentistry that it was ever divorced from the medical profession, for it would have been further advanced as a science and have been more efficient in many ways than it is to-day if that separation had never taken place—is based on sound reasoning.

A New Work of Fiction by Dr. Sprigge of London.

Dr. Squire Sprigge, chief of the editorial staff of the London *Lancet*, author of "The Life of Thomas Wakley," and who has recently edited the autobiography of his friend, the late Sir Walter Besant, now appearing, is just about to bring out a novel entitled "An Industrious Chevalier." This work is very highly spoken of by the reviewers on the other side, and is the history, told in a series of episodes, of a gentleman who has been compelled, by the force of circumstances, to prey upon his fellow creatures. The book, which may really be termed a collection of studies in criminology, is highly diverting and ingenious, while the style is chaste, forcible, elegant, and pointed. Dr. Sprigge's long training in literary work shows itself in the truly artistic finish of his present effort, and ranks him among the many medical men who have adorned fiction with realistic representations and dramatic situations. Doctors as a class see life in all its forms, and when capable of delineating it, are always sure of an appreciative audience.

One of the Defects in Lunacy Bill No. 368.

Lunacy Bill No. 368, which has recently passed, and received the approval of the Governor, contemplates some radical changes in the Manhattan State Hospital, on Ward's Island, which should not go unquestioned. The two departments of this institution are consolidated, thereby displacing one or other of the two medical superintendents, and placing four thousand patients under the supervision of one medical officer. The proposition is an absurd one on its face, and calls for prompt modification. A supplementary bill should be introduced restoring former conditions of administration. No medical superintendent should be expected to look after more than a thousand patients. On Ward's Island this number was doubled under the old plan, and now an apparent improvement is sought by quadrupling the duties of supervision. Surely this is reform with a vengeance. Where does improvement of administration manifest itself with such slack provision for so large a class of helpless sufferers?

Filters for French Army.

If troops on the march, or in camp, could be supplied with pure water, the propagation and spread of typhoid fever would be largely prevented. Filters are the only means, at present, by which this object can be even partly attained, and none of those in use approach perfection.

The question of easy transportation of such apparatus is important for troops on the march, and it has been found that no filter at present invented combines lightness, efficiency in purifying water, and celerity in the process.

During the past year, according to a statement in the New York *Sun*, March 16, a new model of the Pasteur-Chamberland filter has been introduced into the French army, and special instructions for its care and management have been issued.

The candle of unglazed porcelain is enclosed in a metallic tube, the latter being screwed at top to the water spigot. In this way the necessary water pressure for rapid filtration is obtained, provided that pressure corresponds to a height of column of about forty inches. Otherwise the proper pressure is obtained by means of so-called accumulators, which are cylindrical vessels of sheet iron, capable of withstanding a pressure of three atmospheres, in which the required pressure on the surface of the water is produced by means of an air pump.

The experiments at Versailles show that with a pressure of two atmospheres, even with very impure water, a single candle will furnish twenty-four litres of pure water a day, and will, therefore, be sufficient for seven men.

Such filters possess defects, as do all up to the present time brought out, which render them more or less useless for troops constantly on the march, but at the same time they might prove of value to soldiers stationed at camps or posts where the water supply is unsatisfactory.

The Sale of Quinine in Italy.

The Government of Italy is distinctly paternal, and looks after the interests of its subjects, as regards their bodily welfare, with untiring zeal—not, however, unmixed with pecuniary considerations.

Dr. J. M. Eager, Past-Assistant Surgeon U. S. M. H. S., reports from Naples that there is at present an interesting project of law before the Italian Parliament to give the Government control of the sale of quinine in the kingdom. The design has hygienic bearings. One of the most noticeable street signs in Italian cities is that of "Salt and Tobacco." The sign, carrying also the Government arms, is placed above the doors of shops where the commercial forms of salt and tobacco are sold at retail. At restaurants, when a customer wishes to buy cigars or cigarettes, he must send a messenger to a neighboring official store. A tray containing an assortment of these articles is brought in by an agent. A slight advance in the established price is customarily charged when the goods are dispensed outside the ordinary place of sale. Now, it is proposed to include quinine with tobacco and salt, and should the project become law, as seems probable, it will not be possible to buy the drug elsewhere than at the official dispensaries.

There has been of late a considerable propaganda in the journals, both medical and lay, impressing the prophylactic value of conchona derivatives in malarial sections. The desolation which has for many years past spread itself over large territories otherwise productive, but notably malarious, has given popular interest to all measures designed to restore to prosperity the afflicted regions. The designs to restore the Roman Campana from the utter waste that has reigned there for centuries are cases in point.

Dr. Eagan refers to the measures of railroad hygiene that have been enforced on lines running through the paludal portions of Italy, and at stations situated in places rendered almost uninhabitable by malaria, and says "The regulations of the Italian railroads, which are owned by the Government, require all employees exposed to malaria to take quinine at intervals. The same practice is insisted upon in other public services similarly exposed, while it is proposed to distribute quinine gratuitously in dangerous districts. . . . Thus the spread of malaria is in, a degree, checked."

The public control of quinine, aside from assuming freedom from adulteration, is likely to be a considerable source of revenue, because of the fact that in many parts of Italy quinine is as great a necessity as its proposed commercial associate salt, and quite as much in habitual use as tobacco. There is no excuse, however, on the mere pretense of preventing adulterations for the Government to compete with its own merchants in the sale of these products.

CRIME AND EDUCATION.

Education is, perhaps, the most prominent factor in the suppression of crime. The most highly cultured and intelligent nations have less crime than those which occupy a low position in the scale of civilization. The London *Spectator*, of a recent date, has an article on the above subject, in which it says:

"The ignorant races are by no means innocent races. Life and property are safer in Scotland than in Sicily, and though race and creed may be, in part, the causes, still the latter, at least, must be one of the results of comparative intelligence. Crime, more especially violent crime, seems, on the whole, to diminish with the spread of education, though it must be admitted that in some countries, especially France, there are ugly breaks in the completeness of the evidence. The stupid are often cunning, and there is in the ignorant a disposition toward violence, which the late Mr. Hutton, a keen observer of mental peculiarities, always traced to a consciousness of mental weakness, and its resultant, a wish to manifest strength in some direction, and so preserve self-respect.

"The educated are naturally better aware of consequences, and are, simply because they have been trained, less liable to be carried away by those fierce waves of excitement, the causes of which are still not completely traced. . . . The drunken rough is more disposed toward outrage than the drunken gentleman, because the latter retains more completely some relics of intelligence. The evidence of those engaged in education is, we believe, nearly unbroken in the same direction."

In this country the truth of these remarks is being constantly demonstrated. Deeds of unbridled violence occur more often in the Southern States than elsewhere in America. It has been recently shown that illiteracy is more common not only among the negro population of that section of the continent, but also among the whites, than in any other portion of the United States. Race and climate have an important bearing on the matter, but it would seem that these sink into relative insignificance beside that of education. Ignorance does not mean innocence; but, on the contrary, evidence goes to show that where ignorance predominates there will vice and crime flourish exceedingly.

ANNUAL REPORT OF THE BOARD OF HEALTH OF NEW JERSEY.

The twenty-fourth annual report of the New Jersey Board of Health has recently been issued, and contains, as usual, a large amount of matter of much interest.

During the statistical year ending June 30, 1900, the number of births reported and recorded in New Jersey was 32,270. The number of deaths recorded in the same period was 31,474, and the population of the State, by the United States Census of 1900, is 1,883,669. The death rate for the year was, therefore, 16.70 per 1,000.

The infant mortality was greatly reduced. This reduction, it is believed, was largely due to the partial sterilization of milk, which has, within the past six years, been commonly practised among the more intelligent classes throughout the State.

The death rate from pulmonary tuberculosis has been lower during the past five years than at any previous period since the records of the Bureau were begun in 1879. Typhoid fever caused 356 deaths. In the previous year the deaths from this disease numbered 486.

During the twenty-two years, 1879–1900, cancer caused 13,991 deaths in New Jersey, an average of 635 each year. The number of deaths from this disease for the year ending June 30, 1900, was 921, this number being 25 less than during the previous year, but being 286 in excess of the average for the whole period during which records have been made by the Bureau. Malarial fevers have shown a decided diminution, while smallpox, although of a decidedly mild type, has been somewhat on the increase.

State laws securing the better enforcement of maritime quarantine have been passed with good results. State laws relating to contagious and infectious disease, including medical inspection of schools, and the provision of isolation hospitals have also been passed, and strictly enforced.

The careful inspection of public water supplies has been enforced, and, on the whole, it may be said that New Jersey has no reason to complain of her water, either as regards quality or quantity.

In the report of the bacteriologist, it is stated that the diagnostic work has consisted chiefly in the examination of specimens from suspected cases of the following diseases: Diphtheria, tuberculosis, typhoid fever, gonorrhœa, and malaria. During the year 2,380 such specimens were examined.

In 1900 several bills relating to public health were passed in the State Senate and Assembly, and there is every evidence that the Board of Health of New Jersey is ever on the alert to propose and execute any measure which might tend to prevent disease, and to preserve the health of the inhabitants of the State.

News of the Week.

The Tri-State Medical Society of Iowa, Illinois, and Missouri will hold its tenth annual meeting at the Great Northern Hotel, Chicago, April 3 and 4, 1902. All members of the regular medical profession of Iowa, Illinois, and Missouri in affiliation with the aims and practices of the American Medical Association are invited to attend the meeting.

McKinley's Doctors' Bills.—The bills for attendance on President McKinley have been formally presented. The sum total is said to be in the neighborhood of $100,000. Senator Hanna will present the bills to Congress for payment.

Quarantining Against Consumption in Colorado.—The members of the Colorado State Board of Health are seriously concerned over the fact that repeated statements have been made, and emphasized in a prominent medical journal, that Colorado has gravely considered quarantining against consumptives. The State Board of Health, therefore, wish to make a decided and categorical public denial of such assertion, and have sent to us a statement, signed by the medical members of the Board, repudiating the idea that any action with this object in view has been contemplated by the Board.

Annual Dinner of Eastern Medical Society.—The Eastern Medical Society of New York City held its annual dinner at the Broadway Central Hotel, Saturday evening, March 22. The attendance was the largest in the Society's history. After the dinner was served the following toasts were responded to:—"Man and Mind," by Rev. Dr G. Gottheil; "Our Specialties," by Dr. Emil Gruening; "Our Hospitals," by Dr. Arpad G. Gerster; "Our Sister Societies," by Dr. Parker Syms; "Our Own Society," by Dr. R. Abrahams. Dr. Wm. S. Gottheil acted as toastmaster. The dinner was concluded by a dance.

To Prevent the Introduction of Yellow Fever into Havana, with its subsequent development and spread, an order has recently been issued by the Military Governor, as follows:

"All persons non-immune to yellow fever coming to the city of Havana from places infected with yellow fever shall report at such time and place as directed by the chief sanitary officer of the city of Havana. The chief sanitary officer shall be the judge as to immunity and infection, and shall serve proper notice upon persons concerned. Violations of this order shall be punished by a fine of not less than $5.00, nor more than $50.00, United States currency, or by imprisonment of from one to ten days."

The provisions of this order will enable the sanitary officer to keep all possibly infected strangers under observation during the yellow fever incubation period, and to take prompt measures to stamp out the infection should a case of this disease develop.

Testimonial Banquet to Prof. Elisha H. Gregory of St. Louis.—The St. Louis Medical Society of Missouri will tender a testimonial banquet, at Planter's Hotel, April 17, 1902, to Elisha Hall Gregory, M.D., LL.D., commemorating his fiftieth anniversary as a teacher of medicine. The committee having the matter in charge is composed of Drs. Lutz, Carson, Bryson, Hughes, Oulten, and Loeb.

Department of Physical Culture.—Senator Mason has recently introduced a bill providing for the establishment, under the Government, of a department of physical culture. Under this bill it is provided that the head of this department shall do everything he can to advance the cause of physical culture in improving the human race, as well as the improvement of the conditions under which people live. Among the purposes of the proposed department are the securing of shorter working hours, and the establishment of public playgrounds, gymnasia, public theatres, baths, laundries, etc.

Florida Medical Association.—The twenty-ninth annual meeting of the Florida Medical Association will be held at Tampa, Florida, April 9, 10, and 11, 1902.

New York Polyclinic.—Dr. M. D. Lederman has been elected Adjunct Professor of Laryngology and Rhinology at the New York Polyclinic Medical School and Hospital.

International Conference for the Prophylaxis of Syphilis.—The second meeting of the International Conference for the Prophylaxis of Syphilis and the Venereal Diseases will be held in Brussels, Belgium, September 15 to 20, of the current year.

Verdict Against a Hospital.—At a fourth trial of the action of Miss Helen D. Ward, sister-in-law of Henry E. Howland, the lawyer, to recover damages for personal injuries from St. Vincent's Hospital, a verdict for $18,000 was rendered before Justice Beach in the Supreme Court yesterday. Miss Ward had gone to the institution for an operation and, while recovering from the effects of the ether administered to her, a nurse applied a hot water bag scalding the patient. The suit was for $30,000 damages. At the first trial the complaint was dismissed. The jury disagreed at the second. The jury at the third trial gave her a verdict of $10,000. The judgment was set aside on appeal and the present trial ordered.

Defining the Status of Contract Dental Surgeons, recently added to the Army, the Secretary of War has decided that these dental surgeons have no official relation to the surgeon of a post, nor have their enlisted assistants—except that the latter may occasionally be attached to the hospital corps detachment for rations and quarters. When, for any reason, it becomes necessary to recommend the excuse from duty of an officer or enlisted man on account of dental disease, the contract dental surgeon will report the case to the surgeon of the post, who will take it up on his register of sick and wounded, but in other cases no report of dental operations will be made except by the contract dental surgeon.

Brevet Rank for Gallant Conduct.—A list of nominations of army officers to brevet rank for gallant conduct during the war with Spain and since, recently sent by President Roosevelt to the Senate and confirmed by that body, includes the names of a large number of surgeons of the regular army and volunteer forces.

The following were advanced one grade by brevet, "for distinguished conduct in the presence of the enemy in attending wounded under fire, Santiago, Cuba, July 1, 1898":

Major Rudolph G. Ebert, Surgeon, U. S. A.; Major Henry S. Kilbourne, Surgeon, U. S. A.; Major Samuel Q. Robinson, Surgeon, U. S. A.; Capt. W. B. Banister, Assistant Surgeon, U. S. A.; Capt. Henry C. Fisher, Assistant Surgeon, U. S. A.; Lieut. L. A. Fuller, Assistant Surgeon, U. S. A.; Lieut. T. J. Kirkpatrick, Assistant Surgeon, U. S. A.; Capt. James Stafford, Assistant Surgeon, Seventy-first New York Volunteers; Lieut. James R. Church, Assistant Surgeon, First U. S. Volunteer Cavalry; Major W. D. McCaw, Brigade Surgeon, U. S. Volunteers (Captain, Assistant Surgeon, U. S. A.).

Other brevet advancements were as follows:

Capt. Paul Shillock, Assistant Surgeon, U. S. A., "for distinguished gallantry in action near Tabuan, Negros, Philippine Islands."

Major Charles M. Drake, Surgeon, U. S. Volunteers, "for distinguished gallantry in action at San Fernando, Luzon."

Major Henry F. Hoyt, Surgeon, U. S. Volunteers, "for distinguished gallantry in action near Marilao, Luzon."

Major Paul F. Straub, Surgeon, Thirty-sixth U. S. Volunteers (Captain, Assistant Surgeon, U. S. A.), "for distinguished gallantry in action at Florida Blanca, Luzon."

Major George F. Shiels, Surgeon, U. S. Volunteers, "for distinguished gallantry in action at the Tuliehan River, Luzon, March 25, 1899; at the Grande River, Luzon, April 27, 1899; and at the Zapote River, June 13, 1899."

Capt. George W. Mathews, Assistant Surgeon, Thirty-sixth U. S. Volunteers (Lieut., Assistant Surgeon, U. S. A.), "for distinguished gallantry in action near Porac, Luzon."

Lieut. Isaac W. Brewer, Assistant Surgeon, Thirty-sixth U. S. Volunteers, "for distinguished gallantry in action near Florida Blanca, Luzon."

Intemperance and Disease in the Army.—In view of the rapid increase of certain diseases among troops in the Philippines, and at other tropical stations, an order has been issued to commanding officers enjoining upon them the strictest scrutiny over the habits and morals of their subordinates, and requesting them by personal example to influence the soldiers to preserve their health, both by abstaining from drink and the liability of contracting preventable disease. The order says, in part:

"The only really efficient way in which to control the diseases due to immorality is to diminish the vice which is the cause of these diseases. Excessive indulgence in strong drink is absolutely certain to ruin any man, physically and morally; while disease due to licentiousness produces effects which are quite as destructive and even more loathsome. It is the duty of regimental, and particularly of company officers, to try, by precept and example, to point out to the men under their control, and particularly to the younger men, the inevitable misery and disaster which follow intemperance, moral intemperance and vicious living. The officers should, of course, always remember that the effect of what they say must largely depend upon the lives they themselves lead."

The Cure of Chronic Bright's Disease by Operation.—Dr. A. Rose writes: "Permit me to correct a printer's error which I noticed in my letter under the above heading published in the recent issue of your esteemed journal. It reads that Rose (E. Rose, not N. Rose) performed 'nephrectomy,' while I had meant 'nephropexy.' The reader will recognize the error, because this operation of Rose's is mentioned again in the same paragraph as nephropexy. I may, notwithstanding, be allowed to waive all responsibility for such a barbarous word in my writings as 'nephrectomy' for two reasons: first, because ectomy means castration; and, second, in Greek the preposition 'ec' cannot be used in the middle of a synthesis."

The Graduation Exercises of the Army Medical School, Washington, D. C., will be held in the hall of the National Museum on April 4, when twenty-three young army medical officers will have completed a five-months' course of instruction intended to fit them to enter upon a military career. The exercises include the delivery of an oration by Surgeon-General Sternberg, the founder of the Army Medical School, the presentation of diplomas by Secretary of War Root, and an address by Lieutenant-General Miles, commanding the Army. Immediately after graduation the student officers will leave for the Philippines, where they have been ordered for duty. The course of instruction given at the Army Medical School is intended to amplify or supplement the professional training given by the ordinary medical schools, and pays special attention to the subjects in which the courses given in the latter are notably deficient. Particular importance is attached to the sanitary training of the army medical officer, eleven hours weekly being devoted to military hygiene and sanitary chemistry, and ten hours weekly to bacteriology and clinical microscopy. Military medicine and surgery, optometry, duties of the medical officer and hospital corps, drill and first aid are also taught, so that the young medical officer is sent out to his first station well equipped for the performance of his new duties.

Resolutions of the New York Obstetrical Society in the Death of Dr. Paul F. Mundé.—*Resolved*, That in the death of Dr. Paul F. Mundé, we have lost an old friend and comrade, who for over a quarter of a century has been foremost in our counsels and scientific work. Strong and aggressive in his personality, but always generous and warm-hearted, we shall remember him as one who rose by his own efforts to a place of great honor, but never lowered his standard of professional duty.

Resolved, That this resolution be inserted in our minutes and that a copy be sent to the family of our late Fellow.

J. E. Janvrin, M.D.,
Clement Cleveland, M.D., } *Committee.*
Henry C. Coe, M.D.,

Cholera at Manila.—Asiatic cholera has appeared in Manila, sixteen cases with fifteen deaths having been thus far reported. It is believed that the disease was introduced from Hong Kong. Strict quarantine has been enforced.

To Study Cancer.—Provision is made for an investigation into the best method of treating cancer by an appropriation of $15,000 in the annual supply bill embodied in an amendment by the Senate Finance Committee. The money is to be spent at the Laboratory, in Buffalo.

New York Infant Asylum.—Dr. Charles Gilmore Kerley has been appointed Attending Physician to the New York Infant Asylum, West Sixty-first street and Amsterdam avenue.

The Pure Food Bills.—There are now two pure food bills before Congress. One, known as the Corliss bill, is discriminative in its provisions and is supported principally by the Retail Dealers' Association, while the other, known as the Hepburn bill, requires that every article offered for sale shall be branded or marked just what it is.

Addition to the Newport (R. I.) Hospital.—A new ward for this hospital is being built by Mrs. Cornelius Vanderbilt as a memorial to her deceased husband. This building, which is to be constructed of limestone, is to be one hundred and twenty-five feet long, forty feet wide at either end and fifty feet in the center. It is to be three stories high. The first floor will be for the treatment of outdoor patients, the second and third floors will be arranged in rooms, with a separate children's room.

Kaiser's Decree with Respect to the Use of Preservatives in Meat Products.—The Emperor of Germany has recently issued a decree which enforces stringent laws against the use of preservatives in meat products. This decree will hurt American exports in such products considerably. According to the

New York Herald, "the German Government's contention on boracic meat is not a protective tariff question, but is simply in the interests of health. Its exclusion rests on the results of experiments made by the Imperial Health Office. If the United States Agricultural Department can demonstrate to the Imperial Health Office that boracic meat is not deleterious, no political object will stand in the way of admitting it from America."

Philadelphia Polyclinic.—Dr. J. Alison Scott has been elected professor of Clinical Medicine and Therapeutics in succession to Dr. S. Solis-Cohen, resigned.

Automobile Accidents in Paris.—The Paris correspondent of the *New York Tribune* writes from the French capital on March 22, telling, among other news, of the many injuries and even fatalities caused by automobiles. The writer, after mentioning that at the date of his letter the casualty list was two killed and fourteen wounded during the preceding ten days, goes on to quote from the *Soleil* on the subject. A leading article in that journal declares that the disease known as speed insanity has broken out in Paris, and urges the Legislature either to stop automobile circulation in Paris altogether, or else to see to it that the city ordinances are strictly observed. It might be judicious to follow such a course in New York also. At present reckless automobile drivers are often a terror to the unwary pedestrian. In connection with this matter, it may be said that the Cocks bill limiting the speed of automobiles has been passed by the Assembly.

Concentration Camps in South Africa.—These camps are said to be now in a far better condition than they were a few weeks ago. The committee of women who went to South Africa at the instigation of the British Government for the purpose of making a careful investigation into the actual state of things prevailing in the camps, have reported that many former statements on the subject were greatly exaggerated; the death-rate among the children is still large, but the food is good and sufficient, the sanitary arrangements are as efficient as could be expected under the circumstances, and that, upon the whole, no grave cause of complaint can be brought against the authorities on the score of inhumanity or of neglect.

The Water Supply of London.—There are many schemes on foot to furnish London with a pure and sufficiently large water supply. An expert, writing on the question recently in an English magazine, gives a description of the various plans suggested, the most ambitious of which is that of the retiring engineer to the London County Council. Briefly, he proposes to bring, by the simple action of gravitation, an additional 200,000,000 gallons a day all the way from Wales to London. This will insure a total supply of 500,000,000 gallons a day, but if at some distant date even this enormous quantity should prove insufficient, the scheme provides for a second line of aqueduct to bring yet another 200,000,000 gallons.

Seizure of Meat Condemned as Unfit.—Inspectors of the Health Department seized, on March 22, at Washington Market, large quantities of veal alleged to be unfit for human consumption. The action was taken upon information given to Dr. Ernst Lederle by Charles A. Wieting, State Commissioner of Agriculture. It is said that 62,085 pounds of so-called "bob" veal were seized and destroyed in New York City during the week ended March 22.

Miss Addams on the Sweatshop Evil.—The New York *Herald*, March 23, contains an abbreviated account of a lecture on the subject given on Saturday morning, March 22. Miss Addams said in part that the Chicago charitable arrangements were much more primitive than those of New York. Speaking of the sweatshop system, the lecturer said that a woman working in the sweatshops in order to earn enough to support her children was not able even during the rush season to lay aside anything for use during the dull times. The principles upon which the sweating system is carried on are wrong in every respect, whether regarded from the standpoint of health or morals. It would seem to be in the interests of all concerned that the authorities should investigate the question, and abolish at least the most glaring defects of the system.

Charges Against Physicians.—The *New York Herald*, March 23, reports that charges are being made against Dr. Allen Fitch and Dr. Austin Flint, in a suit for large damages brought against them by a Mrs. Egan, who claims that by means of their connivance she was detained in an insane asylum, when, as a matter of fact, she was in full possession of her senses. The physicians in question, as might be expected, rebut these charges.

Plague in India.—The latest reports from India, with regard to the plague, reveal a fearful condition of affairs in some parts of that country. The death rate is appalling. One dispatch to the Exchange Telegraph Company from Lahore, Punjab Province, March 22, places the mortality at two thousand daily. It is said to be the worst epidemic on record, and the failure of the authorities to check its spread is largely due to the policy of non-interference where caste customs are concerned.

Gift in Aid of Medical Research in Liverpool.—Mr. William Johnston, a wealthy shipowner of Liverpool, has just donated the sum of $125,000 to the university of that city, $50,000 of which is to be set aside to found a chair of chemical biology; $30,000, at 5 per cent. interest, for the permanent endowment of three Research Fellowships of $500 a year each, and the remaining $45,000 to be spent in building a laboratory for the accommodation of the Tropical School, the professors of chemical biology, experimental medicine, comparative pathology, and the serum research department.

Distribution of Plague.—As regards the Mauritius, a telegram from the Governor, received on February 28, states that for the week ending February 27 there were seven cases of bubonic plague, three of which proved fatal. As regards Egypt, during the week ending February 23, eight cases and five deaths from plague have been reported from all Egypt. All these cases occurred among the native population.—*Lancet.*

Diagnosis of Smallpox in London.—The *London Hospital* says that, in order to facilitate the diagnosis of smallpox, the London County Council has issued a list of medical men in different parts of London who are willing to be consulted in doubtful cases of chicken-pox, the Council paying the necessary fee.

The Cure of Lupus.—According to the *Medical Press*, March 12, the Emperor of Austria has given $4,200 from his private purse for the foundation of an institute for the cure of lupus.

Compulsory Vaccination in France.—The news has been recently announced that at last France has adopted compulsory vaccination and re-vaccination.

Treatment of Inebriety in Victoria, Australia.—The *Australasian Medical Gazette*, 1902, states that a committee has been formed in Victoria, to investigate the different cures for inebriety. About half a dozen methods of treating alcoholics have been brought to the committee's notice, and many individuals have submitted themselves as willing to be treated.

Memorial to the Late Sir William MacCormac.—It has been decided to erect a permanent memorial to the memory of the late Sir William MacCormac, in form of a bust, to be placed in the central hall of St. Thomas' Hospital, the institution with which he was so long connected.

Complete Excision of the Stomach for Cancer.—The operation of excision of the whole stomach was performed by Mr. R. H. Parry, at the Victoria Hospital, Glasgow, on February 14. The case was one of extensive malignant disease, and the patient has so far made favorable progress. It is believed to be the first time that the operation has been performed successfully in Scotland.—*Lancet.*

Dr. Thomas Dunn English Ill.—Dr. English, the venerable poet, and author of the world-famed song, "Ben Bolt," is lying ill at his residence, Newark, N. J.

Obituary Notes.—Dr. W. W. Johnston of Washington, D. C., died March 22 in Atlantic City, N. J., of pericarditis. He was one of the best known physicians in Washington. During the closing hours of President McKinley's life he was summoned to Buffalo to consult with the physicians in attendance there, but arrived too late to be of any service. He was about fifty-nine years of age. A widow, four daughters and two sons survive him.

Dr. Robert G. Ellegood died at Laurel, Del., on March 22, at the age of seventy-four years. He was graduated from the Philadelphia Medical School in 1852.

Dr. Oren Day Pomeroy of this city, the well-known eye and ear specialist, died March 20, of apoplexy, at Whitestone, L. I. He was sixty-eight years old. He was the author of several standard works on his specialty; was surgeon to the Manhattan Eye and Ear Hospital, ophthalmic and aural surgeon to the New York Infant Asylum, and consulting surgeon to the Paterson (N. J.) Eye and Ear Infirmary. He gave up active practice several years ago on account of failing health.

Dr. George W. Cushing of Brooklyn, N. Y., the well-known gynecologist, died on March 20, at his home, at the age of fifty-three. He was a lecturer, a member of the Kings County Medical Society, the New York State Medical Society, and Long Island Council of the Royal Arcanum. He is survived by a son and a daughter.

Dr. John E. Richardson, who has been ill for a year with cancer, died March 22 at his home, No. 127 South Oxford street, Brooklyn. Two daughters and two sons survive him. He was born fifty-one years ago at Albany, and was the son of "Deacon" William Richardson, former President of the Atlantic Avenue Railroad Company. He received his early education at the Brooklyn Polytechnic Institute, and began work as receiving teller in the Broadway Bank. Later he took up the study of medicine, graduated from the College of the Physicians and Surgeons in 1877, and spent several years at Vienna and Berlin. He later became an interne of the Brooklyn Hospital. For a number of years he was the chief surgeon of the Long Island Railroad, the Atlantic Avenue Railroad, and of the Brooklyn police. He was a member of the Oxford, Riding and Driving, and Crescent Athletic Clubs of Brooklyn.

Dr. Mauricio W. Gillmer died of pneumonia in Philadelphia on March 17, at the age of forty years. He was born in Brazil, where his father was American Minister, and was graduated from Jefferson Medical College in 1881.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

PARLIAMENT—CARDIAC PAIN—ANDERSON FUND—MEDICO-CHIRURGIC—EPIDEMICS—RECENT DEATHS.

London, March 17, 1902.

Most governments have treated the wishes of the medical profession with indifference—at times almost with contempt. The present cabinet seems inclined to be distinctly hostile, though one might have imagined that its political troubles were sufficient to make it unwilling to incur further resentment. It may be admitted that the apathy of the profession, and its reluctance to use its influence on political matters, have encouraged this attitude of successive ministries. It is certainly time for the profession to wake up. Look at the Midwives' Bill, which threatens to establish an inferior order of practitioners. The mass of the profession is dead against it—only a few selfish supporters of the illegal action of the Obstetrical Society are in its favor. Even the General Medical Council, at the last meeting, reaffirmed its resolution against it.

What matters it? The council has before been flouted by ministers, and now the Home Secretary pleaded for the bill that it gave less than many of its supporters asked for! And who are these supporters? Women—so-called philanthropic women—who want to push the employment of the sex, and the few accoucheurs who. to please them, betray their profession.

The Obstetrical Society ought to know that their diploma traffic has been more than once a cover for abortionists—a danger ever present among ignorant women.

This Government, which is again flouting the profession, is the inventor of the "conscientious objector" to vaccination, and has only recently refused to annul its action in this matter—and that in face of an epidemic of smallpox. The excuse is that the act will expire next year, and then may not be renewed. But we do not forget that it was only passed by dangling before opponents the prospect of legislation as to revaccination, which prospect is as distant as ever.

Though not exactly a medical measure, the profession has a special interest in the water supply, and the new bill of the government is condemned by all medical and sanitary experts. But we must leave the opposition to the rate payers, who are to be saddled by it with some £5,000,000 in excess of the value of the present investments, as a sop to rich shareholders; and the control of the supply is to be handed over, not to representatives of the ratepayers, but to a cumbrous board of sixty-nine members, irresponsible to those who have to find the millions!

Cardiac pain was discussed at the Medical Society on the 24th ult., when Dr. Markham Skerritt read the paper. Passing lightly by the protective influence of pain generally, and excluding neuralgia and acute diseases, he pointed out that disturbance of the balance between power and work may give rise to pain in various degrees of intensity, in normal as well as diseased hearts. Thus over-exertion, particularly by persons out of condition, will bring on severe pain when the heart is quite sound; but then rest will quickly relieve. He regarded vasomotor angina as due to excessive peripheral resistance, amounting to spasmodic contraction of the vessels, and, hence, painful embarrassment of the heart's action; sometimes contraction of the coronary vessels might add anæmia of the cardiac muscle. This angina is seen in early adult life, and in neurotic women at the climacteric, and in men from abuse of tobacco or alcohol. It may be induced by cold, by sudden exertion, with excitement, and by emotional disturbances. Blood conditions conduce to it, as uric acid, absorption of ptomaines from the bowel, and some drugs. Dr. Skerritt next considered pain when the heart was diseased. Valvular disease was not an important cause of angina. It is most frequently met with in aortic cases and, in Dr. Skerritt's experience, in regurgitation; though other observers have found it more common in stenosis. In the latter, compensation by hypertrophy may restore the balance between power and work, but in regurgitation the ventricle is so severely taxed that dilatation and hypertrophy ensue, and, later, degeneration of the wall—conditions likely to lead to distress and pain. When the coronary arteries were affected, degeneration of the walls would follow, and the enfeebled heart could not do its work without giving signs of distress. The distress would be much greater if arterial tension were increased—say, by renal disease or senile degeneration of vessels.

The various theories of angina pectoris were then mentioned. As to the treatment of cardiac pain, Dr. Skerritt said it was easier to lessen the work of the heart than to increase its power. Hence, the use of vasodilator drugs to diminish vascular tension.

Dr. Symes Thompson would have liked to hear more about the treatment of the pain. He thought functional disorder gave rise to the pain more frequently than organic lesions, instancing hysteria and hypochondria, to which I would add dyspepsia as still more common. Dr. Sansom would discard the word functional, as he thought it probable there was always some organic change. Nothnagel's vasomotor angina gave rise to discomfort, rather than pain. The right heart was first affected, but soon recovered, from over-exertion, which was less mischievous than usually supposed. In athletics hypertrophy of the left ventricle was not a harmful thing within due limits. He had seen relief from regulated exercises, but the cases in which cardiac was persistent were very few.

Dr. de Haviland Hall thought hepatic colic was sometimes mistaken for cardiac pain, and described a case which was benefited by blue pill and white mixture after nitrites failed, and which later proved to be due to gallstones.

Dr. Allchin said that usually in cardiac disease the pain radiated over a large area, especially along the left arm. Visceral disease gave rise to little pain until the serous coat was involved. He thought degeneration of the walls the most frequent cause of angina. He said the heart muscle differed from others, as it was not liable to cramp—which term should not be used concerning it.

Dr. A. Morison thought the term cramp useful.

In some fatal cases of angina fragmentation of muscle had been noticed which might possibly indicate rupture of fibers during an attack. He considered that the pain originated in the heart itself, and suggested some irritation of the nerve supply, which was very rich about the coronary arteries and aortic orifice.

Dr. Rolleston doubted if fragmentation was evidence of cramp; it was more likely to be produced by rigor mortis.

Dr. P. Weber favored the localized cramp theory of angina, and referred to the defective removal of the waste products of muscular action.

Dr. Pasteur said pain was rare when compared with distress. The worst cases were due to degeneration.

Dr. H. C. Pope said the pain was sometimes referred to the right side, as well as the left, and mentioned a case of sudden death when there had been no anginal attack, but atheroma of the coronary vessels was found. He thought tea was a common cause of pain in the cardiac region.

The R. B. Anderson fund has not received the support it deserved. The late Dr. Anderson sacrificed himself on behalf of his rights and his profession, and if medical men went into the case as they should, they would raise a couple of thousand more easily than they have done a couple of hundred. His case originated an association for the defense of civil rights, but that does not seem to have done much.

The annual meeting of the Medico-Chirurgical Society was held on the 1st inst. The retiring president, Dr. Pavy, delivered his address, commemorating the Fellows who died during the year.

The report of the council was adopted, after some discussion, as to letting a part of the premises. Mr. Alfred Willett was elected president for the ensuing year.

The smallpox cases for the last four days have been ninety, seventy, fifty-six, and sixty-nine. The number in hospital is approaching 1,500.

Influenza is spreading.

Dr. Seymour G. Toller of Cairo, where he was hospital physician and professor of clinical medicine, died on the 19th inst. He was only thirty-five years old, but he had achieved no little success. Four or five years ago he was elected on the staff of St. Thomas's Hospital, but was soon obliged to resign on account of ill health. Tuberculosis attacked him and he went to Egypt. There he worked actively, but, like many other brilliant men, eventually succumbed at so early an age that his friends ask each other what might he not have done had he had good health and longer life?

Among other recent deaths are R. T. Kent, M.A., Oxon. F.R.C.S., late Professor of Anatomy, Glasgow, aged forty-eight years.

Dr. Maxwell Simpson, M.D., LL.D., F.R.S., aged eighty-seven years, on February 26.

Dr. Ernest Elliott, late R.N., on February 27, aged eighty-four years.

Dr. S. A. K. Strahan, M.D., and also a Barrister-at-Law, died suddenly on the 21st ult., aged forty-eight years.

W. H. Cooke, M.D., J.P. of Aldridge, Staffordshire, on the 20th ult., aged sixty-seven years.

Dr. T. W. Pearse of Plymouth died there on the 20th ult., aged seventy-four years. His labors there in the cholera epidemic in 1849 are gratefully remembered. Another Plymouth senior was Dr. J. H. Eccles, Consulting Surgeon to the Eye Infirmary, who died on the 1st of March, aged eighty-seven years.

Fleet-Surgeon Henry Beaumont, R.N., on the 12th ult., aged fifty-seven years. He served in the navy for twenty-one years, retiring on pension in 1891.

Dr. J. Loudon, on the 26th ult., aged seventy-seven years; the life-long friend of Livingstone.

Dr. J. N. Cooper of Acorington, on 26th ult., from an overdose of a narcotic.

SUCCESSFUL MEASURES FOR THE PREVENTION OF THE SPREAD OF SMALLPOX, ADOPTED AT THE NEW YORK STATE REFORMATORY AT ELMIRA.

To the Editor of the Medical Record:

Sir: In view of the prevalence of smallpox, and the ease with which the virus seems to find its way through the community, it may be of interest to the medical profession to note briefly the facts in connection with three cases which recently developed in the New York State Reformatory at Elmira, with the view of, perhaps, suggesting to those in charge of large institutions what may be done to prevent the spread of the disease.

Upon June 8, 1901, we received, from the jail at Goshen, N. Y., two prisoners, who, as is our usual custom, were at once bathed, vaccinated, furnished with new clothing, and placed, for purposes of culture and military drill, in what is institutionally termed the "Awkward Squad." On June 17 a communication by telephone was received from the sheriff in charge of the Goshen jail, informing me that a case of smallpox had been detected in the jail, and calling our attention to the two prisoners recently received by us from his institution. Of course, no time was lost in examining the prisoners, with the result that the temperature of one of them, whom, for convenience, we will hereafter refer to as "A.," was ascertained to be a little above the normal; the other, whom we will designate as "B.," having a normal temperature.

There is, at this institution, no isolated building suitable for the care of patients suffering from contagious diseases, hence the question as to what should be done with our "suspects" at once presented itself. Our hospital occupies four floors at the extreme end of the south extension of the main building; the second floor being utilized in the care of those suffering from contagious diseases, and after consideration it was decided to remove the suspected cases to this isolation ward, which consists of two large rooms, capable of accommodating twenty patients. The hospital is separated from the prison proper by a brick wall, in which are doorways leading to each ward, and there is also an elevator shaft communicating with all the wards. I immediately caused to be bricked up both the doorway leading from the contagious ward into the prison proper and also the one opening from the contagious ward into the elevator shaft, in this way completely cutting off direct communication between the isolation ward and the prison proper and shaftway; entrance to the ward being gained by means of a doorway cut for the purpose, and which opened directly from the ward into the prison yard, or enclosure. Prior to the placing of the "suspects" in this ward, a number of dishes and tight barrels, suitable for the reception of refuse, etc., were placed therein—no article of furniture, or other utensil whatsoever, being permitted to be taken to or from the ward after it received the "suspects." The only person having access to the ward was the assistant physician, Dr. Denis Lucey, who, directly upon receipt of the information, had assumed the entire charge of them.

All windows opening into the inner court of the institutions were kept closed, and the use of the rooms beneath the extemporized smallpox ward was discontinued. All openings for the admission of steam and water pipes were carefully closed with cement, as were also certain catch-basins situated in the main institutional halls, but communicating with a sewer coming from the hospital. In connection with this it may be interesting to note that several times during the progress of the disease this sewer beneath the hospital became obstructed, causing an overflow into the adjacent yard, and necessitating the taking up and repairing of the sewer. When this was done, however, precautions were taken to pour a considerable quantity of the bichloride of mercury (in the proportion of one to one thousand) into the sewage and about the opening, and, fortunately, no spread of the disease resulted from the temporary opening up of the sewer while making the repairs.

The ward is divided into two rooms, the inner being occupied by the patients. The food was brought to the door of the outer room by an attendant, who unlocked the door, placed the food within the outer room, and retired, closing and locking the door behind him; after which, an immune inmate attendant, unlocking the door leading from the inner room to the outer came to the outer room and carried the food to the patients within the inner room, upon each occasion locking the door after passing through. Care was taken to frequently sprinkle the floor of the outer room with a strong solution of bichloride of mercury, and, as a further precaution, the yard about the hospital was similarly treated during the entire period in which the smallpox cases occupied the ward.

Upon the evening of June 18 A. commenced to exhibit marked symptoms of the disease, which developed and progressed until July 4, at which time this patient began to convalesce, and B. was taken with the disease. Upon July 9 another inmate of the institution, C., complained of pains in his back, etc., and was at once removed to the smallpox ward, and placed for observation in the outer room; we were, however, reasonably sure that he was infected with the disease, and additional symptoms of the disease appearing on the following morning, he was also placed in the inner room.

On August 26 the three cases were so far recovered as to be in a fit condition to be removed from the ward, and, together with the two immune attendants, were instructed to divest themselves of their clothing, and go into the outer room, where they took a bath (bichloride of mercury in the proportion of one to two thousand), after which they shaved themselves, clipped short their hair, and were then marched a distance of about fifty feet to the bath-house, where they were given a shower bath by means of the Geigenstrom apparatus. Immediately upon the removal of the inmates from the infected ward measures were adopted for the sterilization of the same, and one hundred and fifty pounds of sulphur ignited, after which the formaldehyde gas generator was put in operation. I might mention as an evidence of the effectiveness of this method of sterilization that, upon the conclusion of same, twelve mice and a considerable number of bugs were found dead upon the floor of the ward.

The convalescents, and the immune attendants, were then supplied with new clothing, the former being, for a period of two weeks, placed in cells for further observation, while the latter were returned to the contagious ward, which they further proceeded to cleanse with a solution of bichloride of mercury, after which the ward was newly whitewashed and painted. All of the wooden furniture which the ward contained was then destroyed, and the fragments placed in barrels, which, in turn, were tied up in sheets saturated with a bichloride of mercury solution (one to one thousand), the whole being finally loaded upon an old wagon, and drawn to a considerable distance from the institution, and wagon and contents burned.

After the immune attendants had completed the whitewashing and repainting, they were again bathed in a solution of bichloride of mercury, new clothing issued to them, and, on October 1, were removed from the ward.

While it is customary to vaccinate every inmate upon his arrival, some of the inmates had been in the institution for a number of years; hence it was deemed advisable to immediately vaccinate those whose periods of detention had exceeded four years. As a final means of precaution, however, we vaccinated the entire population, with the exception of those who were able to show two good scars of quite recent origin. Upon investigation, it was found that an attempt had been made to vaccinate A. about one year prior to his reception here, although no scar appeared. B. was vaccinated on June 18, "prior vaccination" after his arrival here. As there was no reaction from this vaccination, he was revaccinated a week later, and the scar exhibited evidence of taking a day or two before he came down with the smallpox. An attempt had been made to vaccinate C. in February, 1901, but the scar left by this appears not to be a normal vaccination mark, and, in all probability, he was not successfully vaccinated.

A careful search failed to reveal the means whereby the disease was transmitted to the inmate of the institution who was last stricken (C.), and it could not be found that he had been in contact with either of the two initial cases since their reception in the institution; and, as his cell was situated at a distance of 150 feet from the hospital, it is still a mystery as to how he contracted the disease. Our inmate population, at the time of the outbreak of the disease, numbered, approximately, 1,400, and to care for these we employ about 130 officers.

I might further add that, immediately following the removal of two "suspects" to the isolation ward, the cells which they had occupied since their reception here were disinfected and subjected to a thorough sterilizing, the apparatus employed for this purpose consisting of a wagon, constructed of iron, in which a fire of coals is ignited, the whole being then wheeled into the infected cell, and connections made between the wagon and a blowing apparatus, placed in the corridor outside. The blower is then set in motion, fanning the fire, which, after a period of something like two hours, produces a temperature in the cell of from 500° to 600° F., and it is kept at this point for about twenty minutes, the heat, meantime, rushing up through, and thoroughly sterilizing, the ventilating flue leading from the cell to the roof above. The clothing of all inmates, immediately upon their reception here, is placed in the steam sterilizer, and, for a considerable period, subjected to a steam pressure of about twenty-five pounds per square inch; hence, although the garments are afterward placed in our storeroom, to be eventually given out to inmates upon their release, we were, in this instance, not much alarmed at the possibility of harm arising from infection being carried in the clothing.

In conclusion, I would state that it has been our good fortune to be able to check, even in such a densely populated community as ours, the spread of the disease, and where, in our judgment, it further appeared necessary that the patients should be cared for in the same building in which were confined the non-infected prisoners, for the reason that each of the infected cases was a prisoner having to serve a maximum sentence of five years; and the establishment of a pest-house outside the institution would of necessity have afforded, especially during the night time, possibilities of escape, which, if successfully taken advantage of, would have resulted in the loosing into the community, not only of criminals, but of sources of infection as well.

Frank W. Robertson, M.D.,
General Superintendent New York State
Reformatory, Elmira, N. Y.

NON-BRITISH VIEW OF BOER WAR.

To the Editor of the Medical Record:

Sir: Your "London Letter" in the issue of March 15 throws a peculiar light upon some features of the deplorable conflict in South Africa. According to your correspondent, the British Government inspector of the concentration camps suggests that the continental critics "should see the camps themselves." Since when are they permitted to do so? But if allowed to make an inspection, they would see that "the Boer children in the camps have been all along faring better than the thousands of children of the poorer classes in England." And why, in the name of English humanity, is this war continued! Why not care better for the poor wretched children at home—and in Ireland? Such a condition goes far to explain the inability of a quarter of a million British soldiers, many from those poorer classes, to terminate the war.

Indeed, the examples given by your correspondent prove the "ignorance, credulity, and the extremely dirty habits of the Boer parents." I do not think they have grown that way under British protection in the camps; they certainly must have been ignorant, credulous, and dirty when living in freedom on their farms. And if these three factors are named as contributing to the extremely high mortality in the camps at present, they may be named with equal right as having contributed in the past to the production of a people whose endurance, heroic patriotism, and adherence to the rules of civilized warfare command the admiration of the greater part of civilization.

I do not wish to debate with your correspondent on this subject; I am simply opposing my non-British view to his view. J. F. Baerecke, M.D.

CAN CHLOROFORM BE ADMINISTERED TO A SLEEPING PERSON WITHOUT AWAKENING HIM?

To the Editor of the Medical Record:

Sir: Perhaps as a result of the relative lack of study and non-use of chloroform in the Northern cities in America, we note what we consider to be incorrect evidence in the Rice case.

The report is that a Philadelphia doctor testified that he had never been able to administer chloroform to a sleeping patient without causing him to wake.

Unfortunately, the scientific value of expert testimony in the United States depends upon which side the expert testifies.

Without consulting works on medical jurisprudence, I am quite sure that the testimony of the doctor referred to is contrary to the experience of those who use chloroform, as the Southern profession does.

And there are numerous well-authenticated cases in which robbers have successfully chloroformed persons while they slept. And the *modus operandi* of the robber chloroformist gives a lesson to numerous doctors.

He does not use an appliance to be closed at one end by the subject's face and virtually closed at the other by cotton or by the hand of the anæsthetizer.

There has been much written as to whether chloroform kills by inhibition of the respiratory, or of the circulatory, centers. But after a long experience, it is entirely clear to the writer that most deaths from chloroform are indirectly due to the brain of the administrator. Formerly it was taught that chloroform was contraindicated in certain valvular defects of the heart, but if this were true, there would have been many more deaths recorded. Particular care is to be used in chloroforming muscular young men. With skill, with a pure article, given in the early morning hours, and preferably in the summer, chloroform is about as safe as is any other potent article in the pharmacopeia. THOS. R. EVANS, M.D.

BECKLEY, W. VA.

Progress of Medical Science.

The Boston Medical and Surgical Journal, March 20, 1902.

Case of Combined Extra- and Intra-Uterine Pregnancy.—H. P. Perkins reports a case in which the symptoms were of a perplexing nature, but led to a diagnosis of hematocele. Upon opening the abdomen from twenty to thirty ounces of fluid and clotted blood escaped, A mass of adherent tissue was broken through, and the bleeding point found to be in the right Fallopian tube, which was enlarged and ruptured close to the uterus. The ovary was found considerably enlarged and cystic, more than three-quarters of its structure being involved. Great care was taken not to disturb the uterus, in the hope of saving the normal pregnancy, but five days after the operation flowing began, and the remains of an eight weeks' fœtus had to be removed. The patient made a good recovery, and since the operation has had but two short hysterical attacks, whereas she was previously subject to hysteria, convulsions of minor grade, and occasional attacks of hystero-epilepsy. An interesting feature of the case is that the patient had had two mild attacks of appendicitis, and that during the operation the tip of the appendix was found to be adherent to the ovary, the appendicular-ovarian ligament being obliterated. The appendix contained no concretion or fecal matter, but was congested and swollen. It is probable that the diseased ovary had some influence in producing the inflammatory attacks of the appendix.

Osteo-Arthritis of the Spine; Spondylitis Deformans.—Joel E. Goldthwaite says that this disease is probably in part a trophic process, and consequently all medicines or methods of treatment which debilitate should be carefully avoided. This includes so-called rheumatic remedies, which are depressing if used for any length of time, and various baths or courses of treatment, which tend to debilitate. The general treatment should be nourishing and stimulating, care being taken to see that the eliminative functions are ample. Extra diet, stimulating bathing, massage of the unaffected parts, electricity in a mild current, are all of value, and also dry heat, if not used to the point of debilitating. Iron, arsenic, and strychnia are the drugs of greatest value, with phosphate of soda, the bicarbonate of potash, or such simple remedies as tend to increase the eliminative functions. Cod liver oil and alcohol, in medicinal doses, are also useful. The mechanical treatment consists chiefly of some form of support which will limit the motions at the seat of the disease. The disease is apparently aggravated by injury or irritation, and this must be prevented as far as possible. If the symptoms are very acute, complete fixation of the spine is indicated, and this is best accomplished by some form of support which entirely encircles the body. The author further describes apparatus and reports cases which are accompanied by very clear illustrations.

Journal of the American Medical Association, March 22, 1902.

The X-Ray in Determining the Limits of the Frontal Sinus.—J. H. Philip comments on the fact that the frontal sinus is sometimes lacking, thereby possibly leading to a wounding of the dura mater in operative work. He suggests the use of the *x*-ray to determine previous to operative intervention the existence and outlines of the sinus. He records the clinical history of a case in which this procedure was followed, and he found that the limits of the cavity were very clearly defined.

The Use of Tropa-Cocaine in Spinal Surgery.—W. P. Illing advises the use of this remedy, as it can be easily sterilized and is far less liable to cause untoward effects than is cocaine. Recovery from its effect is much more rapid. Upon the nerve centers it acts by first stimulating, then paralyzing from the brain down in decreasing degrees, but it prevents complete paralysis of the spinal cord or respiratory centers. Illing thinks its action is a little slower than cocaine hydrochlorate, and finds in using cocaine hydrochlorate that the anæsthesia usually appears in from four to ten minutes, while with tropa-cocaine it seldom appears earlier than ten minutes. After an injection of tropa-cocaine there is usually no complaint of thirst, heat, vomiting, pallor, nausea, or perspiration; no marked increase or decrease in the pulse; no facial expression of anxiety; no marked increase or decrease in respiration; no dyspnœa; but he has noticed relaxation of the sphincters, with involuntary evacuation of fæces, in two of his cases, which occurred while the patients were on the table; in one the bowels continued to move after being returned to bed. It is his belief that to obtain perfect anæsthesia we can safely count on one-sixth of a grain of tropa-cocaine producing anæsthesia for fifteen minutes, and sometimes even longer.

Prolonged Intubation.—E. Rosenthal would divide the causes of prolonged intubation into: (1) The type of disease; (2) The result of the disease or its sequel; and (3) The result of the operation, the wearing of the tube. Those familiar with the treatment of croup by intubation have noted a primary as well as a secondary type. The first, in which the disease begins in the larynx; the second, in which it is a continuation of a previous nasal or faucial condition. The latter may be taken as the type giving rise to prolonged intubation. By far the greatest or most frequent cause for prolonged intubation is referable to the sequelæ of the disease. The most common lesion is paralysis of the cords. Injuries are often caused by the presence of the tube. Its irritation sets up an inflammation, which, in its turn, results in edema or suppuration. Some authors claim that such results are chiefly due to traumatism—laceration produced by efforts in intubation or even extubation. Lacerations may be produced in the former by using too much force in an irregular attempt; in the latter, by missing the opening of the tube by the lips of the extracting instrument, and by dilating the blades during withdrawal. The most common condition met with in connection with prolonged intubation is edema, but this may also result from other causes. Rosenthal believes that hydrogen peroxide causes much irritation. Its use is permissible, but it should be employed in very weak solution.

A New Method of Dealing with Bowel Perforations Communicating with Pelvic Abscesses.—T. W. Huntington says that such lesions as are noted in the title of his article present a two-fold aspect: (1) As regards the immediate risk to life from general septic peritonitis and (2) As to the likelihood of establishing a permanent fecal fistula, with its external outlet through Douglas's pouch or through the abdominal wound. In a case of the nature under discussion, the bowel perforation was temporarily closed by a purse-string suture, the ends of the latter being left uncut and a sponge attached for identification. This was dropped into the pelvic cavity and the incision which had been made in the median line was closed. An anterior colostomy incision was then made over the sigmoid. Through this the buried sponge was recovered and the bowel perforation was drawn up into view. The bowel was then carefully sutured to the parietal peritoneum, thereby completing a formal colostomy. The median incision was sealed and a loose dressing applied to the lateral opening. Median line incision healed without interruption. All fecal matter passed by artificial opening subsequent to operation. Several days later an elliptical incision was made encircling the artificial anus, the peritoneum being opened throughout. Through this the colon was drawn out and exposed for a distance of three inches above and below the perforation. About four inches of the colon was resected. An end-to-end anastomosis was accomplished by the Connell suture method. The abdominal wound was then closed by through-and-through sutures.

New York Medical Journal, March 22, 1902.

Tripartition in the Study of the Female Pelvis.—By this term A. E. Gallant refers to a system of classification in the study of the female pelvis. He arranges its component parts under the three general headings of anatomical, functional and pathological. From this starting point he elaborates a series of charts, each main heading having throughout the entire system three subdivisions. He believes that this system has the following advantages: (1) It is conducive to consecutiveness, conciseness and clearness; (2) It aids the student to clearly comprehend, note and fix points, and (3) Is simple in its application to the individual patient.

A Skiagraphic Study and Researches in the Direction of Obtaining Pictures which Are Both Shadow and Substance of Bone, Muscle, and Ligaments.—J. Rudis-Jicinsky says that if we wish to make a skiagraph in a given case of the muscles, ligaments, bones, and sometimes even some arteries, of a human body, we must place two or more sensitized *x*-ray plates, with the film sides up, in a casket or within yellow and black envelopes, and use two Crookes' tubes, one under the subject and the other one over the same. The tubes must be of about the same vacuum, which question is easily decided with the help of the fluoroscope. All of the plates will be affected, but in decreasing degree. Against the film of one plate we may lay a calcium-tungstate intensifying screen of very fine grain, and may get one picture showing the internal structure of the bones, muscles, ligaments, etc., exclusively; while the second plate, for instance, is a full exposure for certain parts only, and may show the muscles, ligaments, and a shadow of the bones, without the internal structure; the third one only the muscles, etc. Quite a number of plates or films may be exposed this way at once to the *x*-rays, and thus an equal number of varying revelations of the same case may be obtained by one exposure. To have still better contrast, and sometimes, perhaps, to see the arteries also, we have to use a plate of lead, about one-half or one inch in thickness, under the photographic plates as a support. This plate seems to act between the two Crookes' tubes as another and new cathode, and, with the intensifying screens between, we may easily demonstrate how clearly the *x*-ray can show us the very texture of the bone on one side, and bring us to a correct diagnosis on the other. If the print could be made equal to the negative in the minuter details, the skiagraphs would be better than the photographs of the bone itself.

American Medicine, March 22, 1902.

Skin Eruptions in Malaria, with the Report of a Case of Urticaria.—David Riesman concludes that (1) Skin eruptions are not rare in malarial infection; (2) The most frequent are herpes and urticaria; (3) Neither of these presents any specific characters; (4) Both may occur in any stage of the malarial paroxysm, although urticaria is most frequent in the febrile and herpes in the sweating stage; (5) In obscure cases, herpes and urticaria, especially the former, may have considerable diagnostic value; (6) Three types of urticaria are recognizable: that accompanying the paroxysm, usually the febrile stage; that taking the place of a chill; and that replacing the entire paroxysm; (7) In their appearances, these three do not differ among themselves, nor from urticaria due to other causes; (8) In cases of urticaria of obscure etiology, the blood should be examined for plasmodia. Whether found or not, quinine is worthy of a trial.

A Simple Exploratory Laparotomy as a Palliative and Perhaps Curative Measure in Inoperable Carcinoma of the Breast; Preliminary Report of a Case.—E. R. Corson reports the case of a negress from whom, nearly ten years ago, he removed the left breast, a partial operation being done. Nine years later, following a vaccination, there was a recurrence, involving the entire chest. Seeing that the case was inoperable, Corson decided to try the Beatson operation. When the abdomen was opened, there was discovered a fair-sized uterine fibroid, with tubes, ovaries, and bowels adherent to the uterus. Just as the adhesions were about to be broken up, the patient stopped breathing. She was resuscitated, and the abdomen was closed at once. One of the skin tumors, which has been examined, proved to be carcinoma. At the end of forty-eight hours a great change for the better was observed. The right breast had gone down one-half, the pigskin appearance was gone, and the breast lay wrinkled and flabby on the chest. The subjective symptoms had also disappeared. There has been progressive improvement since the operation, and, although this covers a period of only three weeks, the outlook is certainly encouraging. The writer believes it due to stimulation of the lymphatics.

Pneumogalactocele of the Breast, with an Unidentified Organism.—J. Milton Mabbott gives an account of this interesting case. The patient was a primipara, aged twenty years. After her delivery, during the operation of perineorrhaphy, she sank into a state of syncope, requiring immediate resuscitation. Saline infusions were given under each breast. The injection needle was discovered later to have passed through the outer margins of the mammary glands. Febrile symptoms developed at once. There was ordinary suppurative mastitis of the left breast. The right breast had been constantly distended from the third day after delivery. The general distention gradually subsided, and at the end of the third week the tumor had become localized in the upper and outer quadrant. It was larger than a flattened goose-egg, measuring 4x2½ inches. It felt like a thin-walled cyst, and gave tympany on percussion. It was aspirated and about six drams of clear, colorless gas were collected in an inverted tube. The quantity was insufficient for identification. The result of the bacteriological examination would indicate that the germ found was a non-pathogenic organism, or at least one devoid of any pathogenic properties, since the inoculations made were productive of no effect on animals. No further material was obtainable. Anaërobic cultures might have exhibited another microbe with gas-forming propensities. The clinical history suggests the *Bacillus mucosus capsulatus* as being most probably responsible.

The Philadelphia Medical Journal, March 22, 1902.

The Implantation of the Tubercle Bacillus.—F. Flick concludes that: (1) The seed supply for new implantations of tuberculosis is derived, almost entirely, from human sources, especially the sputum of consumptives; (2) Seed supply for new implantations of tuberculosis can be derived from animal sources; (3) The tubercle bacillus enters a host through the lymphatic system in the alimentary canal, the respiratory tract, and the skin; (4) The forces which convey the tubercle bacillus to its place of destination within a host are the lymph current and the blood-current; (5) The place of deposit is no indication of the port of entry, except when deposit has taken place in the bronchial lymphatic glands or in those of the mesentery; (6) Interference with the circulation of a part, whether by traumatism, inflammation, or vasomotor disturbance, prepares the part for tubercular deposit; (7) Germination and colonization do not always follow tubercular deposit.

The Use of Methylene Blue as a Sedative.— D. E. Hughes and E. Lovelace review a number of cases treated with this drug. They were nearly all cases of wild excitement when the drug was used, and in but six did it fail to produce a calmative effect, which did not resemble the sedative action of other drugs, but seemed a natural calm condition. The excitation was relieved, but there was no dullness or hebetude. The effect was apparent three to four hours after a dose was given, and lasted from fifteen to twenty hours. There was only one case in which any depression resulted. It is a safe drug. Only two of the patients were healthy, and each improved while taking it. If future administrations confirm the results already obtained, a most valuable addition has been discovered for controlling many annoying chronic incurable mental cases, excitement in which causes so much trouble in insane hospitals.

Medical News, March 22, 1902.

Malnutrition as Shown in Congenital Syphilis.—C. G. Kerley states that tardy malnutrition is the most remote manifestation in the offspring which tells us that the child has congenital syphilis. Persistent malnutrition in the absence of apparently adequate cause and in spite of supporting treatment may mean congenital syphilis without any symptom other than malnutrition. The writer has seen six cases of this nature in which the fathers confessed to having had syphilis. In three the diagnosis was further confirmed by successful antisyphilitic treatment. Two of the cases were brother and sister, aged seven and five years, respectively. Both parents were strong and vigorous. No treatment with the children succeeded until after the confession of the father, when bichloride of mercury and iodide of potassium were begun. In six months, under specific treatment, which was changed from time to time, the children became strong, active, and well-nourished. The writer has learned to look with suspicion upon puny, delicate children of parents who are in average health, when there is no apparent reason for the malnutrition, and who persistently resist hygienic and supporting measures.

A Report on the Use of Antiphthisic Serum T. R.—E. S. Bullock divides his cases in which this serum has been used into four classes: In the first class, the serum was discontinued on account of the apparently permanent rise of temperature produced. The elevation of temperature continued as long as the serum was used. Seemingly in this class there was an idiosyncrasy against the serum. In the second class, little change occurred during the treatment, *i. e.* the action of the serum was negative. These cases illustrate the chronic type of the disease in which all changes are slow, and which are for the most part stationary. In the third class, the period of failure dated from the beginning of treatment and ceased with its withdrawal. In the fourth class the patients improved during the treatment, but the writer does not attribute this to the treatment alone, as in the same number of equally favorable cases the results will be fully as good without any specific medication. The patients treated were all, with few exceptions, very favorable ones indeed, and excluding those in whom there is every reason to believe the serum positively injurious, the same results are attained as during a limited period of non-specific treatment; in a certain proportion of cases there is improvement, in others the condition remains stationary, and in still others, there is retrogression. The writer believes that the results of this treatment are nearly comparable to those obtained without it.

The Lancet, March 15, 1902.

Gangrene of the Skin During an Attack of Enteric Fever.—The history of a case is reported by A. S. Barrow. On the twenty-sixth day of the illness there was severe hemorrhage from the bowel, which was repeated twelve hours later, and the patient then passed into a typhoid state, from which it was difficult to arouse her. Two days after the hemorrhage a small bulla appeared over the left outer malleolus and a large bulla over the right buttock; in twenty-four hours the bulla shrivelled up, leaving a black patch beneath devoid of sensation. The site of the bulla over the malleolus formed a slough, which was removed, leaving a punctiform ulcer one inch long by half an inch wide, exposing the subcutaneous tissue. The site of the bulla over the buttock formed a slough more gradually, but, in ten days from the appearance of the bulla, a large slough was removed, which left a deep excavated ulcer with sharply-punched-out edges one and a quarter inches deep, three inches long, and two inches wide. The ulcer over the malleolus speedily healed, although that over the buttock took longer, but with the patient keeping the prone position, a good result was obtained. The patient never had a "bedsore," and was very carefully looked after by a trained nurse.

Rupture of the Coverings of an Umbilical Hernia with External Protrusion of the Intestine.—The patient of F. T. Travers was a woman, aged sixty years, who had a small umbilical hernia, and had suffered for some years from winter cough. During a coughing spell something "gave way." Examination one-half hour later revealed a mass of intestine protruding through an aperture in the side of the hernia. It was covered with folds of warm cyanide gauze and supported by bandaging until removal to hospital was accomplished. On arrival ether was at once administered, and after the cleansing of the abdominal wall the gauze wrapping was removed and about six feet of small intestine were found to be protruding from a rent one and a half inches across the side of an umbilical hernia. The gut was irrigated with warm chinosol solution (1 in 2500) and was wrapped in warm sterilized towels. The wound in the skin was enlarged till the bowel could be reduced. A portion of omentum which was adherent to the interior of the sac was ligatured and cut away, and the walls of the sac were freed and sutured. The sides of the opening in the fascia were laced together by a continuous suture, and after cutting out the portion of skin around the rent the wound was closed. After the operation, which occupied half an hour, the patient's condition appeared to be better; she, however, soon began to run down again, and died from cardiac failure thirty-eight hours later.

Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis.—In the third Hunterian lecture, W. Y. Eccles continues the discussion on pathology, speaking first of cysts. Of these there are four varieties: (1) Cysts formed upon the epididymis; (2) Cysts found in the testis proper; (3) Cysts due to fœtal remains; and (4) Dermoid cysts, teratomata. In addition, malignant new growths may occur in the imperfectly descended testis, notably sarcoma and carcinoma. So also there may be a complicating hernia or a hydrocele. Concerning the former, Eccles says that a hernia which accompanies the testis into the tissues of the perineum may be designated a superficial perineal hernia, it being termed superficial to distinguish it from that rare form of perineal hernia which leaves the pelvis through the gap in its floor. The course of the descent of a superficial perineal hernia is from the abdomen, along the canal, through the superficial ring, past the scrotum near its entrance, and then backwards toward the margin of the anus. This form of hernia is necessarily rare, for perineal ectopia of the testis is uncommon, and even when present, an accompanying hernia is seldom seen. It appears as an elastic swelling on one side of the perineum with an expansile impulse on cough, frequently resonant on percussion, and usually reducible on pressure. After the return of the contents of the sac the testis, sometimes well developed, can be felt lying by the side of the anus and often tethered by a band, probably of the gubernaculum, to the region of the external sphincter or tuberosity of the ischium.

Some Remarks upon "Internal Derangement" of the Knee Joint.—H. W. Allingham analyzes fifty-nine cases, all of which presented the usual features, with locking of the joint, or else weakness with recurrence of pain and swelling, which is often the only evidence of damaged semilunars. The following conditions were found: (1) Semilunar cartilage, internal or external, split, loosened or displaced, torn from either or both extremities or from coronary ligaments; (2) Loose bodies, quite free or attached by a pedicle; (3) A torn or hypertrophied alar ligament or hypertrophied fringe of synovial membrane; (4) Rheumatoid arthritis—roughened cartilage, thickened synovial membrane, and osteophytic outgrowth, and (5) No obvious derangement.

In the cases of damage to a semilunar cartilage there are generally these features: (1) Distinct history of injury originating the trouble; (2) A well-defined site of pain on the inner or outer side of the knee, according to the cartilage damaged; (3) No foreign body palpable; and (4) No creaking in the joint. These same features also characterize generally cases in which the lesion affects an alar ligament, or consists in localized hypertrophy of synovial membrane. In the cases in which a loose body is present, the symptoms, again, may be exactly similar to those caused by semilunar damage. Sometimes, however, the body will be able to be moved into widely-separated portions of the joint and felt in its different situations. Similarly, a very loose semilunar cartilage may sometimes be diagnosticated with certainty through its being protruded at the side of the joint. Such a cartilage, however, may be most confusingly imitated by an excrescence due to rheumatoid arthritis.

Certain Diseases of the Bloodvessels.—In the second Lettsomian lecture, A. Pearce Gould considers obliterative endarteritis, and gives at length the clinical histories of several cases. He alludes to the various theories of causation, but says that we really know so little of the ultimate causes and processes of disease that it is difficult to accept or to reject any of them. Of all known causes syphilis is perhaps the most certain; influenza, alcoholism, erythromelalgia, cold, contusions, and previous thrombosis or phlebitis may be regarded as more or less important factors in originating the disease. Diabetes sometimes causes gangrene by exciting this disease. Concerning treatment he says that, in the earlier and less advanced stages of the malady, prolonged rest of the affected part is certainly called for. Local warmth should be carefully supplied. Anodynes often in large quantities may be necessary for the relief of pain. Massage carefully carried out has also an important influence in furthering the opening out of collateral vessels, in promoting absorption through the lymphatics, and in freeing the muscles and other tissues of their waste products. In the acute stage the parts are too tender to admit of it; in all early cases it must be most cautiously employed; where the disease seems to be arrested and we have to deal with its effects only, it may be used a little more vigorously. Small, mummified areas may be left to separate naturally, especially in the hand. For more extensive gangrene, which is always of the "mixed" form, amputation is necessary; the relief to pain that the operation affords always reconciles the patient to the mutilation. The operation should be done high above the gangrenous spot and at a place and by a method that throws least strain upon the vessels of the part. Thus amputation through the lower part of the thigh is to be preferred to disarticulation at the knee, and musculo-cutaneous flaps are to be chosen in preference to skin flaps.

British Medical Journal, March 15, 1902.

Survival of a Premature Child Weighing Two Pounds; Sequel.—R. Jardine notes the birth of a child (six and one-half months) which was reared in an incubator. When she was dismissed from the hospital at four months of age she had gained from one and three-quarter pounds to slightly over three pounds in weight. At ten months she weighed six pounds and twelve ounces, but about two weeks later she died of broncho-pneumonia. She had been perfectly well till then and, with reasonable care, ought to have survived.

Posture and Heart Murmurs.—W. Gordon believes that recumbency tends to increase all "hæmic" murmurs except the venous hum, which it tends to obliterate; to increase the murmurs of initial regurgitation, tricuspid regurgitation, and aortic stenosis, and to leave little, if at all, affected, the murmur of aortic regurgitation. The effects of gravity and of change in chest depth seem to account for the influence of recumbency. Therefore, in describing and discussing murmurs which posture modifies, the patient's position at the time of observation should be stated.

A Plea for a More Continuous Treatment of Gastric Ulcer.—F. Gill approves of giving the stomach complete rest for a period of several weeks while an ulcer is healing. He has given his patients six to eight ounce injections, consisting of white of eggs, milk, and beef-tea, with liq.

pancreaticus every four hours, and in very debilitated cases a couple of peptonized milk or meat suppositories in the intervals. Absolutely nothing has been given by mouth. Thirst has not been troublesome. In one case where it was complained of, the quantity of the injection was increased and the symptom immediately disappeared. The writer believes in as little manipulation of the bowel as possible. The results of this treatment have been most happy.

On a Convenient Terminology for the Various Stages of the Malaria Parasite.—E. Ray Lankester states that the malaria germ which is brought by the stab of the anopheles into the human blood vessels is a reproductive particle, a spore. The exotospores enter the blood by the agency of the mosquito's stab, and immediately penetrate, each one, a red corpuscle. The amœbula exhibits amœboid movements within the red corpuscle, enlarges and finally breaks up into spherical spores, which are liberated with destruction of the red corpuscle. The enhæmospores penetrate fresh red blood corpuscles, and after a certain growth as amœbulæ break up into a new crop of enhæmospores, by which the infection of the red corpuscles is extended. This process appears to go on for several generations, and for a varying duration of time. The crescents or crescent-spheres remain quiescent in the human blood. They are male and female. The zygote or sexually-produced embryo remains unicellular, but increases in size and becomes pyriform. The spore-cysts lying outside the stomach wall of the mosquito, bathed in the insect's blood, receive abundant nourishment. The single-celled vermicule enclosed undergoes rapid changes; it increases greatly in volume, and breaks up by normal cell division into a number of spore-mother-cells. In the process of this division and the later stages of the final development of the "spores" (exotospores), the "spore-forming cyst" increases in size to twenty times its initial diameter. The spore-holding cysts burst and liberate the exotospores into the blood of the mosquito. Thence they readily pass into the ducts of the salivary gland, and so are conveyed by the mosquito's stabbing beak into human beings. The mosquito ejects the secretion of its salivary gland into the punctured wound which it makes in the human skin.

Deutsche medicinische Wochenschrift, February 27, 1902.

Etiology and Treatment of Pruritus Vulvæ.—L. Seeligmann discusses the essential or idiopathic form of this disease, which has been regarded in many quarters as generally neurotic in character. This disease is essentially different, both clinically and pathologically, from kraurosis vulvæ. The latter condition shows pathological changes in the connective tissue and nerve endings of the vulva, while these are absent in pure pruritus. The vulva in pruritus is œdematous, inflammatory and moist in appearance, while in kraurosis it is shrunken, dry, and has a grayish white color. Seeligmann has observed a considerable number of cases of pruritus in which no cause could be discovered. In such cases he obtained from the vulva in pure culture a diplococcus, which is very similar to the gonococcus in appearance, but which does not decolorize by Gram's stain, and which is readily cultivated in bouillon and upon gelatine, agar and potatoe. Inoculation experiments were not attempted. He regards this organism as the causative factor in the production of idiopathic pruritus vulvæ. In the treatment of this disease the author has for many years used guaiacol-vaseline (10 per cent.) as a local application with marked success. Experimentation shows that this substance kills in a very short time the diplococcus isolated by Seeligmann. Occasionally it is necessary to increase the strength of the ointment to fifteen or twenty per cent. The vulva should be thoroughly cleansed before the application of this substance, which is to be used once daily, preferably at night. Two or three applications generally suffice to bring about a cure.

Nephralgia, Nephritic Hematuria and Nephritis.—James Israel answers Senator's criticism (see Medical Record, March 22, 1902) of his views concerning these subjects. Senator's contention that upon operation only two of the fourteen cases showed increased tension of the kidney, and hence the results obtained by the incision of this organ in the remaining twelve could not be reasonably ascribed to the lessening of a tension which did not exist, is inopportune, as Israel has always maintained that the congestion and consequent increased tension were periodical and not permanent in character, and were only present during the attacks of nephritic colic. No other conception than this can be reasonably held, for if the increased tension is the cause of the colic, as Israel believes, permanent increased tension will necessarily give rise to permanent pain, which is never present in these cases. Cases which are operated on during the colic do show an increased tension of the kidney. Senator states that nephritic colic and hematuria are seldom seen in Bright's disease. Israel denies this, and claims that such an association is quite frequent.

Senator further says that there is no such condition as a unilateral Bright's. This is certainly true, since the name "Bright's Disease" has been reserved for those cases in which both kidneys are affected. There is no doubt, however, but that there occur unilateral kidney lesions which are identical with those found in Bright's disease. Various authors, including Israel, have reported several cases which prove this.

Berliner klinische Wochenschrift, March 3, 1902.

Functional Kidney Diagnosis.—Examinations made by F. Strauss included: (1) An estimation of the molecular concentration of the urine by means of its freezing point; (2) A quantitative analysis of chlorine; (3) A quantitative analysis of the nitrogen, and (4) A quantitative analysis of sugar following phloridzin inoculation. The fact should be emphasized that the molecular concentration of the urine in any given case depends very largely upon the quantity of liquids ingested. Hence, in order that comparative results of value in freezing-point tests be obtained, it is necessary that a statement should be made in regard to the quantity of liquids ingested by the patient during a certain time previous to the examination. In examining his cases Strauss estimated the functional activity of each kidney during the same period of time; also the functional activity of each kidney during the same length of time but at different periods. In this manner it was possible to compare the functional activity of the kidneys with each other and, furthermore, to make a comparative estimate of the activity of each kidney at different periods. In this way it was shown that under normal conditions the functional activity in toto of each kidney is the same during a given period, but that such activity constantly varies in each kidney both as compared with itself and with its neighbor. The same functional variation holds true under pathological conditions, but that kidney which is diseased shows the greatest variations.

Embolism of the Superior Mesenteric Artery.—R. Sievers reports the case of a woman, fifty-six years of age, who for about nine months had complained of marked asthmatic symptoms. During this time a left-sided pleural effusion œdema, of the lower extremities, and a small amount of ascites had been present. All of these symptoms had, however, been favorably influenced by the administration of strophanthus and diuretin. The heart was irregular in action, but the sounds were clear. The urine contained a large amount of albumen. She was suddenly seized with severe abdominal pain, accompanied by nausea and vomiting. Great prostration developed, and the pulse became so weak that it could only be counted with difficulty. The entire abdomen became swollen and slightly tender upon pressure. Constipation with marked tenesmus was present, but no fever. No intestinal hemorrhage occurred. The severity of the symptoms rapidly increased, and death took place within twenty-nine hours from the beginning of the attack. Upon autopsy an aneurism of the decending aorta was found opposite the fourth and fifth dorsal vertebra. The aneurism contained a thrombic mass, upon removal of which it was seen that its internal wall was markedly sclerotic and lined with chalk plates. A non-adherent thrombus 6 cm. long was found lodged in the superior mesenteric artery near its origin from the abdominal aorta. This case adds another instance to those which have previously been reported in which embolism of the superior mesenteric artery is not accompanied by intestinal hemorrhage, and shows that such is in no way pathognomonic of this condition.

Acute Syphilitic Nephritis.—Erich Hoffman reports the exhaustive study of a case of acute syphilitic nephritis, the existence of which has been denied by many authors. On presentation the patient showed a mixed syphilitic eruption, which was partly macular and partly papular in character. The initial lesion had been received about two months previous and was still apparent. There was a generalized enlargement of the superfical lymphatic glands. Mucous patches were present in the mouth. The patient was very intelligent, and, upon close questioning, gave no history, either hereditary or personal of any previous kidney disease. He stated that about two weeks previous he had noticed a sudden change in the character and quantity of his urine in that it had been markedly reduced in quantity and had appeared of a dark-red color, becoming solid on boiling. Its specific gravity was 1057, and a large number of hyaline casts were found, and also a small number of leucocytes and red blood cells and a few renal epithelial cells. A quantitative estimation of the albumen showed that it was present in 7 per cent. by weight in one specimen and in 8 per cent. in another. Under anti-syphilitic treatment the cutaneous syphilitic manifestations and the urine gradually improved. Soon thereafter the patient was lost sight of, but returned in two months with a recrudescence of symptoms. Iodide of potash and mercury were given. The albumen rapidly disappeared from the urine and the eruption gradually vanished. Hoffman thinks that this case is, without doubt, one of acute syphilitic nephritis. Many authors have regarded syphilitic nephritis as always of the hemorrhagic type. This case shows that this view is not always correct. Hoffman thinks that the microscopical examination proves that the nephritis is produced by the action of the syphilitic poisons upon the bloodvessels of the kidney, especially of those of the glomeruli.

Münchener medicinische Wochenschrift, February 25 and March 4, 1902.

Treatment of Tuberculous Joint Affections of the Lower Extremities.—Wagner points out the fact that in addition to fixation, removal of pressure and extension, certain other measures are necessary in order to obtain the best results in the treatment of tuberculous joint affections of the lower extremities. In all cases a certain amount of exercise in the open air is necessary, and sea or salt-water baths are of great utility. Hitherto these measures have been principally used in the earliest stages of this disease or as an after-cure. The reason why these means have not been more generally employed during the acute stage is that they have been thought incompatible with proper fixation and extension, which are imperative during this period. The combined use, however, of the so-called "lime" bandage and Hessing's apparatus satisfactorily secure the latter objects and render possible at the same time the employment of the above hygienic measures. During the bath the Hessing apparatus may be removed and the "lime" bandage protected from the water by a rubber covering or by moistening with a few drops of formalin, which answers the same purpose. Experience has shown that cases treated systematically in this manner progress more favorably than those treated solely by fixation and extension.

A Case of Puerperal Fever which Gave a Positive Widal Reaction.—Felix Sommel reports a case of puerperal fever which gave a positive Widal reaction in a one to eighty dilution. For this reason the diagnosis of typhoid fever was made. Death took place and the true nature of the condition was discovered at the autopsy. The fever developed on the second day following labor and a primary diagnosis of puerperal fever was made. Appropriate treatment was instituted without success. The fever continued unabated for a week, when, upon examination, the spleen was found enlarged. A Widal test conducted at this time under all precautions was positive (one to eighty). Only one test was made. The urine contained a small amount of albumen. On the following day death took place. At the autopsy no typhoid lesions were found, but the uterus was found in a state of septic inflammation. No bacteriological work was done in connection with the case, and the exact microbic basis of the disease was not ascertained. The author reviews the literature of the past few years which relates to the interagglutination between colon and typhoid bacilli and comes to the conclusion that in this case the uterine infection was due to the former microorganism either alone or in combination with some other microbe, and that the presence of the positive Widal is to be accounted for on this supposition.

Avoidable Appendicitis Complications.—A. J. Ochsner considers the following as avoidable appendicitis complications: Circumscribed and general peritonitis, infection of the tubes and ovaries, infections of the gall bladder, abscess of the liver, empyema, endocarditis, meningitis, various joint infections and metastatic abscesses in different parts of the body. Ochsner believes that the inflammatory process may be localized by the following treatment: All nutrition by the mouth should be withheld and the stomach washed out. Small quantities of hot water should be given by the mouth at frequent intervals, with nutrient enemata of four ounces each four times a day. Cathartics and large enemata should be avoided. Absolute rest in the horizontal position should, of course, be enforced. In this manner the small and large intestine, together with all the tissues in the region of the appendix, are put completely at rest, and the localization of the infection to the appendix is strongly favored. This is shown by the marked improvement in the local and systemic symptoms. After a few days the appendix is removed without the infection of other tissues. Even when the appendix is gangrenous and perforation has taken place the infection may be localized by carrying out this plan of treatment. The author reports 620 cases of appendicitis which have come under his observation during the last three and one-half years. Twenty-one of these showed a complicating general peritonitis. Four of the latter were moribund when first seen and died without operation. The remaining seventeen were treated in the above manner and operated on after the subsidence of acute symptoms. Of these, eight (55 per cent.) died; 192 showed perforated or gangrenous appendices with beginning circumscribed or general peritonitis. Treated similarly, nine (5 per cent.) died; 407 were first seen during the interval or within the first thirty-six hours of the attack. They were operated on immediately. One (¼ per cent.) died.

Jolles' Clinical Ferrometer.—E. Boetzelen reports the use of the improved ferrometer recently devised by Jolles. The estimation of the amount of iron in the blood is made by comparing the color of the solution to be tested with that of a graduated colored glass wedge similar to that used in the Fleischl-Miescher hemometer. Boetzelen first tested this ferrometer by the means of solutions containing a known amount of iron, and found that the readings obtained were correct. He then examined a number of normal individuals, and found that in men the normal reading was 85 to 98, while in women it was 80 to 92. Lower readings may be considered pathological. In health the ferrometer and hemometer readings are practically identical. In disease, however, they may show wide variation.

Use of Alcohol in Tuberculosis.—As the result of experimental and statistical research, St. Mircoli believes that alcohol is of undoubted use in the treatment of tuberculosis. The blood serum of many healthy individuals possesses antitoxic properties when added to Maragliano's tuberculin and inoculated into guinea-pigs. Under these conditions such serum is often able to entirely protect the animals against the development of tuberculosis. The serum of alcoholics in good general condition shows much more antitoxic power than does the serum of non-alcoholics. In those alcoholics, however, in whom alcohol has produced pathological changes, particularly of the nervous system, the blood serum possesses very little antitoxic power. Such pathological effusions as ascitic fluid show marked antitoxic power. From a statistical review, the author shows that among moderate users of alcohol tuberculosis is less frequent than it is among total abstainers. From these observations, and as the result of further experimentations, the following conclusions may be drawn: (1) Alcohol in proper amount aids the body in its endeavors to produce an immunity to tuberculosis; (2) Its internal and local use in this disease is therefore recommended; (3) The result of statistical research adds strength to this recommendation. It is to be remembered, however, that the excessive use of alcohol is detrimental rather than beneficial, and that all alcoholic excesses are to be carefully avoided.

Arterio-Sclerosis.—Karl Grassmann considers the etiology, pathology, diagnosis, sequelæ, and treatment of arterio-sclerosis. Hereditary influences play a certain part in its causation. Syphilis and alcohol are prominent etiological factors. Gout, rheumatism, and various acute infectious diseases must also be considered as causes. In certain instances toxins and ptomaines ingested with food are to be held responsible for the development of this condition. In pronounced cases the peripheral arteries may visibly palpate, and have a sinuous appearance, but such may not be apparent even when a considerable degree of sclerosis is present. Among the pulse symptoms the so-called "stability of the pulse" should be especially mentioned. This is shown in that the number of radial pulsations remains the same in the horizontal as in the upright position. When this is combined with accentuation of the second heart sound it may be considered as pathognomic of the disease. Recently the Röntgen rays have been brought into play in diagnosis, and have rendered valuable service. So-called intermittent claudication is also a diagnostic symptom of value. Here marked pains, with partial loss of function, are present in certain muscles of the lower extremity upon slight exercise. If with this no pulsation can be felt in the arteries of the feet, it may be inferred that arterio-sclerosis is present. Of the many diseases for which arterio-sclerosis is at least in part responsible, diabetes mellitus should be particularly mentioned. In this disease the arteries of the pancreas are very frequently affected in the manner above described. In the treatment of arterio-sclerosis iodine takes first rank, and of its various preparations sodium iodide is to be preferred. Suitable hygienic and dietetic measures should also be instituted. Especial attention should be given to the causative factors present in each case, as only in this manner is it possible to permanently benefit the condition.

French and Italian Journals.

The Included Bodies in the Giant Cells of Tuberculosis.—F. Sprecher concludes, from his researches into the nature and origin of these giant cells, that they are not formed of amyloid or pseudo amyloid substances, nor are they made up of altered elastic fibers. He holds that they are the result of a slow and retrogressive metamorphosis of the cellular protoplasm, upon which, at a later period, are deposited salts of iron and of lime. He describes in detail his processes of research.—*Archivio per le Scienze Mediche.*

Some Cases of Snake-bite Treated with Calmette's Serum.—A. Boddaert cites several cases in which persons bitten by snakes were successfully treated by Calmette's serum injected subcutaneously. The author has no new cases to report, but desires to call the attention of physicians to a form of treatment which is as simple as it is efficacious, and to impress upon colonial government officers the necessity for the greater diffusion of a method which in British India alone would save the lives of more than a hundred thousand persons annually.—*Janus*, February 15, 1902.

Examination of the Blood in Doubtful Cases of Syphilis.—Guisippe Verrotti states that under specific treatment the blood of syphilitic patients undergoes certain changes. There is a percentage increase of newly-found red blood cells, and progressive improvement in their physical and physiological properties, an increase in the total number of red cells and of the hemoglobin, and an increase in the density of the blood, with a tendency to a return of the normal number of leucocytes and of Bizzozero's plaques. The many local changes caused by specific medication are apt to be misleading, unless accompanied by observations of the general systemic improvement, and the most certain and definite information can be obtained by examination of the blood.—*Giornale Internazionale delle Scienze Mediche*, February 15, 1902.

The Prevention of Death from Chloroform Narcosis.—An editorial states that, as the first source of danger consists in reflex cardiac syncope, we must combat it by methods capable of lowering the general peripheric sensibility, especially the naso-pharyngo-laryngeal, and by reducing the moderating power of the centers in the medulla, and the excitability of the vagi or of the inhibitory ganglia with which they are connected. This can be accomplished by giving general and local analgesics before the chloroform is administered. As a rule morphine is the most valuable, in association with atropine. Duquesnel's soluble narceine is useful in cases where morphine is considered unsafe. Sparteine is also valuable. Local applications of cocaine on the nasal and pharyngo-laryngeal mucosa are most efficacious in preventing the arrest of heart or respiration. To combat the second danger, which is that of the toxicity of the chloroform itself, there are the various methods of artificial respiration, including rhythmical traction of the tongue.—*La Tribune Medicale*, February 19, 1902.

Experimental Researches in Regard to Tuberculosis Toxin and Bacilli Contained in the Spermatic Fluid of Tuberculous Animals.—Angelo Maffucci concludes that the semen may contain both the toxin and the bacillus of tuberculosis. This toxin may cause sterility in the female, or intoxication. A fœtus born of a tuberculous father may die prematurely, although having no tuberculous lesions. Premature death and abortion are in direct relation to the gravity of the tuberculous process in the father at the time of impregnation. A female rabbit fecundated by a tuberculous male may die whether it has aborted or gone on to term, and the rapidity of the fatal issue also depends on the condition of the disease in the male at the time of fecundation. Tuberculous poison injected into the vagina of the rabbit causes marasmus. Impregnation by a tuberculous male is more dangerous as regards intoxication than in reference to tuberculous infection. Abortion and early death of the new-born animal may result from the transmission of the poison through the placenta.—*Rivista Critica di Clinica Medica*, February 22, 1902.

The Gastric Functions as Observed in a Patient Whose Spleen had been Removed.—Pietro Gallenga gives the following as the chief facts noted after splenectomy: (1) Insufficient and retarded digestion of albuminoids; (2) Increased and protracted secretion of HCl.; (3) Absence of abdominal fermentation; (4) Retardation in the emptying of the stomach; (5) Increased activity of artificial digestion by the addition of pepsin or of splenic extract from a lamb to the gastric filtrate; (6) Absence of subjective phenomena on the part of the individual with the exception of a certain hyperexcitability of the stomach towards Ferannini's paste (150 gr. of pounded meat, one egg, 250 gr. water), and a slight loss of bodily weight. The conclusions drawn are that the spleen probably plays an active part in the digestion of albuminoids depending on some internal secretion influencing either the quantity or the activity of pepsin. Although the peptonization of albuminoids is diminished, it is to a certain extent secured by the compensatory action of some other organ, and by the increase in the hydrochloric secretion.—*Il Policlinico*, February, 1902.

The Journal of Tropical Medicine, March, 1902.

Notes on the Supposed Transmission of Plague by Fleas and of Relapsing Fever by Bedbugs.—George H. F. Nuttall holds that there is no trustworthy experimental evidence in support of Simond's hypothesis that fleas may serve as agents for the dissemination of plague. He experimented with upwards of 250 infected fleas and bugs, but was quite unable to infect mice and rats through their bites. Neither has he had success with the infection of animals by bedbugs which had sucked the blood of relapsing fever patients.

Two Notes on Malarial Fever in China.—W. G. K. Barnes gave the treatment of this disease by inunctions of creosote a trial. In no case did he obtain a cure, but headache and nausea, if present, disappeared absolutely, and the temperature would drop about five degrees. There was little or no after depression. Perspiration was excessive. He used ʒss. of creosote to ʒi. of lanolin. The author calls attention to a symptom found in two thirds of the cases in a severe epidemic of malarial fever, namely, the deflection of the tongue markedly to one side, usually the left, when protruded.

The Edinburgh Medical Journal, March, 1902.

The Immediate Position of the Arm After Removal of the Breast for Cancer.—Thomas Carwardine is convinced that the practice of fixing the arm to the chest, after this operation, is a bad custom and answerable for much of the impairment of utility and of edema of the arm which frequently ensue. The best position for the arm, in order to give wide range of movement, will be that (*a*) which gives the longer base to the axillary triangle, (*b*) which approximates the base to the apex, and (*c*) which prevents the tissues being missaplied during the healing process. The abducted position meets all these indications. The author protests against adduction as being anatomically, physiologically and pathologically wrong, and urges the universal adoption of the abducted position of the arm after removal of the breast. The apparatus is simple—a pillow on which to rest the arm, and a binder to fix the forearm to the pillow being all that is necessary.

Post-Operative Hematemesis, with Notes of Eleven Cases.—Robert Purves says that it is clear that all cases of this affection are not due to any one cause. In some cases it may be attributed to gastric ulcer, or rupture of a vessel, in some to injury, and a non-infected embolus from ligatured omentum. But in the majority of cases the origin is of an infective nature. The prognosis is always grave. The more marked the septic reaction is in a case, as shown by discharge from the wound and temperature, the better is the chance of recovery. Subdued or marked infection, with subnormal temperature and rapid pulse, a rapidly increasing vital depression, the vomiting tending to become regurgitant, all render the prognosis graver. If bilious vomiting appears *after* one or two hematemeses the prognosis is favorable. The line of treatment to be adopted is one similar to that used in cases of septicemia. Stomach washing with 2 per cent. soda solution, followed by washing with a 1 to 1,000 nitrate of silver solution; in collapse, infusion of normal salts olution and strychnine hypodermically.

Some Practical Suggestions for the Prevention of Malarial Fevers.—G. T. Birdwood considers the matter to be largely one of sanitation. If we improve the ventilation of native houses, the less anopheles will we find in them. If we relieve the overcrowding in the houses of native cities, the fewer victims will the mosquito find. If we improve the surface drainage of towns, the fewer opportunities for their development will there be. Nutall has shown that anopheles mosquitos are by no means extinct in England, and it is more than probable that malaria has become extinct in England very largely from the improved sanitary conditions of our towns and villages, and also from the better housing of the poorer classes; and it is because the sanitary surroundings of people living in Indian towns and villages is still so far from perfect that the death-rates from malaria are still so high.—*Indian Medical Record.*

Society Reports.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, Held March 17, 1902.

PARKER SYMS, M.D., PRESIDENT.

Smallpox and Its Differentiation.—Dr. CHARLES S. BENEDICT read a paper with this title. He said that it was amusing to note how the nomenclature had been modified by the frantic efforts made in certain quarters to find a diagnosis other than smallpox. It was in this way that smallpox had recently become known as "Cuban itch" and as "Philippine measles." Smallpox was often called varioloid in the hope of avoiding the correct diagnosis of smallpox with all its attendant inconveniences and penalties, but varioloid was not recognized officially, and should not be looked upon as anything more than a mild type of smallpox. The presence of a rigor, followed by high temperature, headache, angina, lumbar pain and prostration should at least lead the careful physician to search thoroughly for an eruption. Anomalies of fever were very frequent in the early stage of smallpox, and the initial fever was apt to suddenly fall by crisis. Later on the secondary fever would develop, and might be as high as the initial rise of temperature. Vomiting was frequently observed in children, and delirium in adult alcoholics. The eruption makes its appearance from twenty-four to thirty-six hours after the chill, and in fourteen days dessication occurs, and is followed by desquamation. The latter usually terminates in three weeks. The eruption was at first macular, and was completely developed in about twenty-four hours. In a general way, the intensity of the disease was in proportion to the extent of the integument involved. The macule of smallpox was dark red in color, and about one-eighth of an inch in diameter, disappearing on pressure. It was followed, in a few hours, by the hard, shot-like papule. By the sixth day the vesicles were perfectly formed, and by the ninth day they were converted into pustules. By the fourteenth day the odor of putrefaction was usually well marked. The fulminating form of smallpox was hemorrhagic, and usually terminated fatally within forty-eight hours. When the ocular conjunctiva was involved, it indicated a severe type of the disease. In making the diagnosis of smallpox it must be differentiated chiefly from varicella, measles, scarlet fever, malignant endocarditis, cerebrospinal meningitis, erythema multiforme, papular syphilides and pemphigus. In varicella umbilication was rarely if ever seen, and the shot-like feel of the smallpox papule was absent. It was only in the confluent form that much difficulty would be experienced in the diagnosis. The non-appearance of measles in the throat as a vesicle was a useful point in diagnosis. Those of considerable experience were more apt to confuse smallpox with measles than with varicella. Scarlatina might be taken for variola only in the earliest stage. The erythema of variola was of short duration, except in the hemorrhagic type, and then it did not, like scarlet fever, disappear on pressure. Two days would determine the character of the disease if a diagnosis could not be positively made at first. The mucous membranes in scarlet fever rarely, if ever, bleed, whereas this was common in hemorrhagic smallpox. Malignant endocarditis was marked by extreme prostration and a petechial rash, which, while it may suggest variola, is more apt to be mistaken for typhus fever. Dr. Benedict said that he had never noted ocular hemorrhages in endocarditis. Heart murmurs would not be of value in the differentiation, but the duration and course of the disease would lead to the correct diagnosis. Septicæmia following abortion and accompanied by streptococci in the blood might be mistaken for hemorrhagic smallpox, because of the hemorrhages under the skin, but the affection, being of longer duration, would usually lead to the correct differentiation. The differential diagnosis of erythema multiforme of Hebra from smallpox would not usually be required except in the early stages. A papular syphilide was sometimes a cause for anxiety in a smallpox epidemic. The appearance of the lesions in pemphigus and the absence of constitutional disturbance should prevent its being mistaken for smallpox. Vaccinia was frequently seen in vaccinated infants, being transferred from the vaccinal vesicles by the fingers. The individual lesion more nearly approximated that of variola than any other disease, but, of course, the lesions were scanty and the duration of the disease only nine days. The perfection of the lesion in vaccinia served to distinguish this affection from a mild type of smallpox. Pemphigus contagiosa could be diagnosed usually by the large elliptical crusts, occurring chiefly on the back of the neck, the buttocks and feet. In the early diagnosis of smallpox no one symptom or sign should be implicitly relied upon. While the eruption was the main guide to the diagnosis, the constitutional history must not be disregarded. Even the most expert diagnosticians were often unable to make the diagnosis immediately.

Smallpox and Its Treatment.—Dr. S. DANA HUBBARD read this paper. He said that at the present time the indications were that the cause of smallpox would soon be found, and if this were the case it was reasonable to suppose that greater success in the treatment would follow. Early isolation was, of course, most important, and should be the rule in all hospitals; indeed, in these institutions an excellent preventive of contagious disease was the provision of a reception ward, in which all new patients are kept for about two weeks. During this probationary period it was advisable to keep visitors away. In transferring a patient from his home he should be wrapped up, head and ears, in blankets. As neglect and filth usually lead to the direst results, any old shed was by no means suitable for a smallpox hospital. The surroundings should be as aseptic as possible. The wards should have a temperature of 70° to 78° F., and should be ventilated in such a way as to avoid draughts. Smallpox renders the mucous membranes very sensitive to draughts of cold air, and bronchitis and pneumonia are very likely to follow such exposure. Pneumonia was exceedingly fatal in persons sick with smallpox. A large, loose gown, rubber shoes, rubber gloves and a cap constitute the outfit to be worn by the person entering a room occupied by a case of smallpox. The fumigation of the room after the removal of the patient should be done in connection with moisture, and, if properly done, the fumes at the completion of the process would be so dense in the room that one could not see through them a distance of more than four feet.

Treatment.—The smallpox patient must be kept scrupulously clean, and the floor must be swept at least once daily after having been sprinkled. The attendants should be clothed in washable goods and canvas shoes, and should change the clothing and wash their hands of patients outside of the sick-room. The patient should receive a daily sponging. For the backache of the first few days it was well not to make use of counterirritation, because this causes a profuse eruption to develop in a very uncomfortable situation. The headache could be easily controlled by acetanilide, soda and caffein. The thirst should be quenched by the free use of water, lavender water, or ice and lemon juice. After the bathing the application of alcohol was usually refreshing, but if there was much itching it should be avoided, and instead the surface should be well rubbed with carbolized oil of a strength of 5 to 20 per cent. After the bath a pleasant application was a powder composed of subnitrate of bismuth, lycopodium and starch. The water used for bathing a smallpox patient in the stage of suppuration should contain from half a grain to two grains of permanganate of potassium to the ounce. In this stage of the disease it was also advisable to give quinine internally, but these patients would be found unusually sensitive to this drug, so that it must be given in small doses. The treatment of smallpox quite closely resembled the modern treatment of typhoid fever. In septic cases alcoholic stimulants should be given with a free hand. In this connection it was well to remember the advice given by a well-known physician regarding the use of whiskey in septic cases: "Don't let them die sober." The eyes should be frequently washed with boric acid solution, and if there was much swelling of the lids, cold cloths should be applied frequently. A mild alkaline mouth wash should be used to keep the mouth clean, and the tongue cleaned off with a celluloid scraper. The skin requires constant attention throughout the disease. During the vesicular and pustular stages an effort should be made to prevent rupture of the lesion. Wet applications should be used at first, and later, when the scabs form, oil. Very sick patients should be separated from convalescent ones. Very little had been accomplished even at the present day in preventing the pitting. He was of the opinion that if outside infection could be prevented, pitting would not occur. The nearer the approach to asepsis, the better would be the result in this respect. The too early removal of the scabs should be prevented. A mixture of boric acid and glycerin applied constantly under a mask had acted very well. After convalescence the body should be thoroughly scrubbed and scraped, and the little pits dug out. The patient should then go to another room and take a bath of bichloride of mercury solution. The following day this bath should be repeated before putting on his own clothes and leaving quarantine.

What Contitutes Efficient Vaccination?—Dr. FRANK S. FIELDER read this paper. He defined efficient vaccination as that which secures to those vaccinated: (1) The smallest proportion of smallpox cases per thousand individuals; (2) The longest duration of immunity among those who finally take smallpox; (3) The lowest mortality among those who contract the disease, and (4) The mildest course of the disease and the least amount of subsequent pitting in those who, having had smallpox, survive it.

Character of the Scar.—For several months after a successful vaccination the normal scar is red and usually depressed. After several years it is whiter than the surrounding skin and regular in outline, the edge being well defined, and the entire area slightly depressed with a smooth or slightly striated center. It is surrounded by a more or less deeply foveated ring. This ring corresponds to the area of active vesiculation, and the center either to the original area of scarification or to the cicatrix following the separation of a more or less deep central slough. The shape of the scar depends upon the shape of the scarification, while its size depends partly upon the scarification and partly on the activity of the virus. Sometimes the scar is poor even when the vaccination has run a well-marked and typical course, but, as a rule, a good vaccination gives a good scar.

Number of Insertions.—The speaker said that the number of insertions to be made at one time was a mooted question. Unfortunately there was not much recent literature in this country on this subject, because it had been the custom here for physicians to vaccinate in one spot only. Dr. E. C. Seaton and Dr. Buchanan had made observations during a smallpox epidemic in London in 1863 on more than 50,000 persons. Some of these had never been vaccinated, but most of them had been vaccinated in various manners and degrees. There were 360 per thousand who had been marked with smallpox, but had no vaccination scars, while of those having one vaccination scar there were 6.8; of those having two scars, 2.5; of those having three scars, 1.4, and of those having four or more vaccination scars, 0.67 per thousand had been marked by the disease. As to the quality of the scar, those with "bad" scars represented 7.6; those with "tolerable" scars, 2.35, and those with "excellent" scars, 1.22 per thousand. These tables show, therefore, that among more than fifty thousand persons examined, the smallest proportion of smallpox cases per thousand was found in those who had been vaccinated in four or more spots, and presented scars of excellent quality. These observers also noted that the better vaccinated persons showed less pitting than the poorly vaccinated ones when taken ill with smallpox.

Duration of Immunity.—With reference to the duration of immunity to smallpox following different methods of vaccination, R. Cory made observations between 1884 and 1887 on 448 persons who were pitted by this disease. Of the 210 vaccinated persons, the average age was 6.58 years; of the 105 alleged to have been vaccinated, but exhibiting no scar, the average age was 9.86 years; of the 47 vaccinated persons having one scar the average age was 17¾ years, while of the 31 showing two scars the age was 17.8, and of the 12 showing four scars, 18⅔ years. This table, although dealing with too small a number of scars for positive conclusions, seemed to show that vaccination by multiple insertion gives slightly longer immunity to smallpox than does the one-spot method. Again, Gayton, in the report of the Royal Commission on Vaccination, 1889–90, gives the following table upon 7,514 cases of post-vaccinal smallpox. Among the 2,289 cases showing one scar the percentage of deaths was 5.4; among the 2,464 showing two scars, this percentage was 3.6; among the 1,424 showing three scars the percentage was 3.1, and among the 1,238 showing four scars, this percentage was 1.6. This table pointed strongly to the conclusion that vaccination by multiple insertion gives better protection than a single insertion. J. F. Marson, for more than thirty years the resident physician of the London Smallpox Hospital, had made very careful observations on the number and quality of the scars in all the cases of post-vaccinal smallpox which had come under his care. From 1836 to 18613,094 cases of smallpox had been treated in the hospital. Of these, 290 showed no marks. About 50 per cent. of the patients admitted with smallpox had been previously vaccinated in some way. Among those who had never been vaccinated, the percentage of deaths was 35.5; among those alleged to have been vaccinated, but showing no scar, the percentage was 21.7; among the 1,357 showing one scar, the mortality was 7.5; among those showing two scars it was 4.13, and among 268 showing four or more scars the average was 0.74. From 1852 to 1867 Marson had continued his observations, treating 10,661 cases. Of those never vaccinated, the percentage of deaths was 34.9; of those alleged to have been vaccinated, but showing no scar, it was 39.5; among those showing one scar it was 13.8, and among those showing four or more scars this percentage was 0.9. Marson concluded that the efficiency of the vaccination was in exact ratio to its excellence and completeness, as shown by the number and quality of the resulting scars. W. M. Welch, who for twenty-five years had been in charge of the Philadelphia Smallpox Hospital, from a similar study of his cases, confirmed Marson's view that the protective degree of vaccination could be measured to a considerable extent by the quality of the scars. Among 2,415 persons showing one vaccination scar the percentage of deaths was 18.46; among 503 showing two scars it was 11.53, and among 429 showing four or more scars it was 10.49 per cent. This table showed that one good vaccination scar protected better than two, three or four fair or poor scars. Welch concluded that the quality of the scars was a far more reliable indication of the degree of the protection than the quantity, and that when the scars were typical it made no difference whether they were single or multiple. However, on comparing the total number of cases vaccinated by the different methods his own table showed that the mortality of one-scar cases was 18.46 per cent., while that of the cases showing four or more scars was 10.49 per cent. From the above evidence, Dr. Fielder said it seemed fair to conclude with Marson that "test the question in whichsoever way we will, the result is in favor of producing four vesicles at least at vaccination with lymph which leaves good, permanent cicatrices."

Dr. John H. Branth spoke of the old practice of inoculation against smallpox or "engrafting." He expressed the opinion that in England and, particularly, in Ireland, the great epidemics had been influenced to some extent by this factor, and raised the question as to whether it might not be safer to inoculate at a time when no epidemic is raging. It was certainly reasonable, he thought, to assume that during an epidemic the majority of the population was in a highly receptive condition for the virulent and unmodified form, if not protected, otherwise no epidemic could occur. In discussing the nature of the protection afforded by vaccination, the speaker, by way of illustration, referred to a very recently published article by Ernest Hutchinson, D.V.S., of Portland, Ore., a U. S. inspector of Animal Industry, in which it is stated that the tubercle bacilli from one species cannot be transplanted with the same success to other species, and that if successful a modification of virulence occurs. Dr. Branth said that "the grease" in horses, which occurs near the hoof, is said to give the same protection as cowpox vaccine. In the human being the epidermis and the involuted respiratory tract and the alimentary canal seemed to be the most vulnerable parts. He suggested that vaccina might be due due to modified virulence, such as claimed by Hutchinson tuberculosis for different species. The arm-to-arm vaccina "takes" in about four days, while cowpox vaccina "takes" in a longer time generally. The speaker then quoted the recent statistics of London, where compulsory vaccination laws had been relaxed. A report for one week, taken at random, showed that there were more than 500 cases of smallpox in London that week, while in all Prussia, where strict laws regarding vaccination are in force, there were only four cases. The antivaccinationists claimed that compulsory vaccination is an infringement of the personal liberty that should not exist in our free country, but, on the other hand, he would claim that the presence of an unvaccinated person is an infringement on his own personal liberty, being a danger to his well-being.

Smallpox in Cuba.—Dr. William Dolz referred to 1,300 cases of smallpox that he had isolated on the northern coast of the province of Santiago, and had treated on the plan sketched by Dr. S. Dana Hubbard. They were bathed with bichloride solution, 1 to 5,000, once, twice or three times a day, according to the intensity of the eruption; the worse the eruption, the more frequent the bathing. Half of the cases were confluent, two-thirds had not been vaccinated, and the conditions for treatment were anything but favorable. Allowing for this, the death-rate of 10 per cent., he thought, was a good showing. A smallpox epidemic had been sweeping over the country for over a year, and over 4,000 people had succumbed to the disease; yet in ten weeks the 1,300 persons isolated were discharged. In addition, about 10,000 persons were vaccinated. It was a most significant fact that, although three years had elapsed since then, no new case of smallpox had developed in that district.

Vaccination Immunity Sometimes Very Short.—Dr. David P. Austin objected to the hospital statistics quoted by Dr. Fielder. He said that in Germany, and in some other countries, the primary vaccinations were made in three or four places at the same time, and hence, in a subsequent investigation, all of these scars would count. Two vaccinations, made at different times, he claimed protected more fully against smallpox than one vaccination consisting of several simultaneous insertions. Dr. Austin then referred to 10,000 vaccinations made in the public schools of this city by himself, of which records had been kept. Of this number, between 60 and 65 per cent. resulted in a successful vaccination. It was found that among the cases that had been vaccinated only once previously, between 40 and 50 per cent. of successes were noted, whereas those who had been vaccinated four or five times previously yielded only 8 or 10 per cent. of successes. One vaccination should not be relied upon for protection for any length of time. Growing experience convinced him that immunity was more dependent upon the repetition of vaccination than upon the number of scars produced. Within three months it had been his fortune to encounter several persons who had been vaccinated in Germany by five simultaneous insertions, and who had developed varioloid in this country subsequently. One of these individuals had had varioloid twice. The speaker said that, in his opinion, immunity was that condition which protected the person from smallpox for the balance of his life. In some individuals it was necessary to repeat vaccination four or five times before this immunity was secured, but when once secured, this lasted for life. There was no foundation for the old notion that partial immunity lasted for seven years, and that, therefore, vaccination need not be repeated more frequently than once in seven years. To test this question, Dr. Austin said that on a certain day he had vaccinated ten children at his office, and all of them successfully. One month later he had vaccinated them all again, and in eight of them this second vaccination was successful. In another month six of the children were again vaccinated satisfactorily. Six of the children were vaccinated a fourth time, with four successes. This series seemed to prove the truth of his statement, that one vaccination must not be depended upon for any length of time.

Immunity to Smallpox and to Revaccination Not the Same.—Dr. Fielder said he thought it was generally admitted that two vaccinations done at different times were better than several insertions made at the same time. He was himself a firm believer in revaccination, but it was desirable to make each vaccination protect the person for as long a time as possible, so that if the person neglected subsequent vaccination he would be protected for the maximum time and the community likewise. He wished especially to call attention to the fact that immunity to smallpox and immunity to revaccination are not the same—in other words, that a person might be immune to smallpox and might yet be successfully revaccinated. A case in point was that of the resident physician on North Brother Island, who, in the midst of smallpox cases in the hospital, and without contracting that disease, was able to revaccinate himself successfully. The reason for this difference in immunity might, perhaps, be found in the fact that ordinary contact with smallpox cases was not so great an exposure as the actual introduction of the vaccine virus into the system. Dr. Fielder said that he, too, had performed experiments somewhat similar to those detailed by Dr. Austin, but he was surprised that Dr. Austin had repeatedly obtained such a large proportion of successes after such short intervals. He knew of no rule by which one could judge of the length of time a person would remain immune; nevertheless, among those vaccinated, the longest immunity and the least mortality, if smallpox occurs, would be found among those who had been vaccinated in several places at one time.

A Case of Tuberculosis of the Skin Following Accidental Inoculation with the Bovine Tubercle Bacillus.—Mazijck P. Ravenel reports the case of a physician who, while performing autopsies on two cows which were the subjects of experimental tuberculosis, slightly wounded the flexor surface of his wrist. The wound was merely washed in water and healed promptly. Four weeks later, the scar was seen to be red, prominent, and sensitive; it increased in size rapidly, and about two weeks later there was a nodule 15 mm. long by 8 mm. wide. This was removed, and with a portion of it two guinea-pigs were inoculated subcutaneously, and both developed generalized tuberculosis. Another portion of the nodule was examined, microscopically, and showed a large number of giant cells and tubercle bacilli.—*University of Pennsylvania Medical Bulletin.*

NEW YORK PATHOLOGICAL SOCIETY.

Regular Meeting, Held at the Academy of Medicine, February 12, 1902.

JAMES EWING, M.D., PRESIDENT, IN THE CHAIR.

Carcinomatous Ulceration of Duodenum, with Abscesses of Liver and Pancreas.—Dr. J. H. LARKIN, in reporting this case, said that for several years the society had been receiving reports on perforating ulcers of the duodenum, but the present case was of exceptional interest because of the complications disclosed by the specimen now exhibited. He had to apologize for the incompleteness of the history of the case.

The patient was a woman, forty-six years of age; an Icelander; and it was difficult to obtain any facts beyond this, that for about two months she had been ill, simply with pains in the lumbar region. No physician had seen her until two weeks previous to her being admitted to the hospital. At the time of her admission, the case was put down as one of ordinary destitution and starvation. Three hours before death she had a large and copious bloody movement from the bowels, then went into a collapse and died. At the autopsy an interesting condition of the organs was revealed; but before speaking of this, he wished to say a word about the symptoms. At no time, so far as could be ascertained, had there been any abdominal pain or vomiting At the autopsy he found the body markedly emaciated. There were no evident signs of peritonitis; some clear serum in the abdominal cavity; all the viscera were normal, except that they were pale and blanched from loss of blood. The sudden hemorrhage and collapse pointed to an intestinal lesion. He expected to find an abdominal aneurysm with perforation into intestine, but in this he was mistaken. In the stomach there were two pints of clotted blood, but the mucous membrane was perfectly normal. On going down to the duodenum he discovered a large, irregular ulcer, about the size of a dollar, with several small nodules at the periphery. In the center was a large necrotic mass directly through the duodenum, and the adjoining liver tissue was extremely necrotic, making a large abscess cavity filled with pus and recently coagulated blood. In the middle of pancreas was a small metastatic nodule, firm and fibrous. The blood vessels were dissected up and the superior mesenteric vein found necrotic and leading directly into the abscess cavity. Microscopical examination of sections taken from edge of ulcer in duodenum and mass in pancreas showed adenocarcinoma.

Acute Case of Gangrenous Appendicitis Without Indications for Operation.—By Dr. SAMUEL EVANS. (Vide page 486.)

Carcinoma of the Pancreas.—Specimen presented by Dr. A. E. THAYER. The clinical history dated from five weeks before the patient was admitted to the hospital. At that time he began to have severe pains in the lumbar region, which radiated forward into the abdomen, was partially relieved by pressure, and lasted half a day. Such attacks occurred at intervals until admission. He vomited at times, but there was no blood in the vomit. His strength and flesh had steadily diminished, and for about three days he had been jaundiced. His feces had been formed and yellow.

On admission the patient was poorly nourished; respiration was wholly thoracic; the abdomen was tense, retracted and generally tender on palpation; and in the epigastrium and reaching into each hypochondrium there was a prominent mass of irregular outline. Neither liver nor spleen could be made out. The urine contained no albumin nor sugar, but was bile-tinged. The entire surface was deeply jaundiced.

Patient's temperature varied between 99° and 101°; respiration about 28 to 30, and pulse 120 to 130, while he was in the hospital. An exploratory operation was performed, and from that time he sank, having diarrhœa, and vomiting a dark fluid, till he died from exhaustion, about three weeks after admission.

At the autopsy there was found a large mass in the pancreas, the older portions, about midway of its length, showing cystic softening, and involving the spleen and the left adrenal. The lymph nodes about the gland were generally involved. On the upper posterior aspect of the liver there was a single direct metastasis, which had nearly penetrated a large branch of the hepatic vein. The colon contained bluish-gray feces; the gall-bladder was a little distended. There was no dilatation of the stomach nor contraction of the duodenum. On microscopic examination, the tumor was found to be an adenocarcinoma. No trace of pancreatic tissue was left, and almost no splenic.

Dr. THAYER presented also a case of suppurative cholangitis, due to biliary calculi impacted in the common duct. There was no clinical history. The patient, a Russian of about forty-five years, was intensely jaundiced and much emaciated. Post-mortem six gall-stones were found impacted in the common bile duct, lying in a collection of pus. All the larger branches of the bile ducts through the liver contained pus and small grains of black pigment; and in the left lobe there were several abscesses, about 3 to 5 cm. in diameter The gall-bladder was much distended, contained grayish green, thickened mucous fluid and grains of pigment, and from its inner wall there grew a small soft fibroma. There was no distention of the pancreatic duct, no interstitial pancreatitis nor fat necrosis. There was complete hyperplasia of the left kidney.

The two cases were of interest as showing how little reliance can be placed in Courvoisier's law, so-called: that with bile stones the gall-bladder is small, and with malignant disease of the common duct it is large. A number of recent cases demonstrate that this view is untrustworthy. The relation between occlusion of the common bile duct and pancreatitis and fat necrosis also appears to be slight from these cases. Further, in each there might have been sugar in the urine, especially in the first case, where the pancreatic tissue was wholly replaced by a neoplasm, but, so far as the records show, there was none.

Dr. F. C. WOOD reported two cases of lymphocytosis simulating leukæmia. One was that of a small child with a tuberculous lesion of the hip, the lymphocytosis disappearing after drainage of the abscess; the other was a fatal case of anæmia without lesions in the bone marrow. Both cases will be reported in detail later.

The President said that the cases were important additions to the scanty knowledge which existed on this subject, and showed the importance of examining other things besides the blood before accepting a diagnosis of lymphatic leukæmia. One feature of extreme interest in the second case was its resemblance to pernicious anæmia. At the same time it differed so much from the reported cases of pernicious anæmia without bone marrow changes, that he would hesitate to accept it as such without study of all the antecedents.

Complete Double Ureter on Each Side, Pervious Throughout.—Dr. T. C. JANEWAY, in presenting this specimen, said he need not detain the society with any lengthy description, as it was simply a very rare anatomical abnormality. In looking over the transactions of the London Pathological Society and *Virchow's Archiv*, he had found only one exactly similar case, reported by Ewart. Specimens showing ureter double for a portion of its length on one side, and on the other side one normal ureter and one abnormal one emptying into neck of bladder or prostatic urethra, have been encountered by Weigert, Hoffmann, Tangl, and Wood. Double ureter on one side only seemed a much more common condition, cases having been reported by Weigert (seven in one year), Thompson, Durham, Kelly, and Voelcher. This specimen came from a middle-aged woman, who had died of chronic diffuse nephritis. It shows the separation of the pelvis of the kidney into two distinct cavities, common to all previous cases, but is unusual in that there is no crossing of the ureters, and that the upper ureter in each side opens above the lower in the bladder, the opposite of Weigert's findings.

Dr. **Warren Coleman** and B. H. **Buxton** presented a paper on "Paratyphoid Infections."

Gilbert proposed the terms "paratyphoid" and "paracolon" in 1893, to designate the intermediates of the typhoid-colon group of bacilli. Durham calls the intermediates the "Gaertner group." The group includes Bacillus enteritidis, Bacillus psittacosis, Bacillus paratyphosus, Bacillus choleræ suis, and some others.

The intermediates are pathogenic for man, Bacillus enteritidis producing epidemics of meat-poisoning, Bacillus psittacosis, a peculiar epidemic broncho-pneumonia with typhoid symptoms, and Bacillus paratyphosus, a disease closely similar to typhoid fever.

Attention is confined in our paper to paratyphoid fever. Thirteen cases have been reported in whose blood, stools, urine, or complicating inflammatory processes paratyphoid bacilli have been found. Four cases have been reported in whom the diagnosis was made by the serum reactions. We report a fourteenth case, clinically identical with typhoid fever, in whose blood a paratyphoid bacillus was found.

An analysis of the symptoms of the reported cases shows that the disease closely resembles typhoid fever. All the cases were regarded as such until a bacteriological examination revealed their true nature. None of the cases gave the Widal reaction, and it is thought that other cases of clinical typhoid fever which have failed to give the reaction may have been paratyphoid fever.

Bacteriologically, the bacillus isolated from the case closely resembled Bacillus typhosus in many biological characters, but produced gas in glucose media.

Dr. N. E. **Brill**, in discussing the paper, said he would like to say a few words in reference to the clinical aspect of the subject. About five years ago he called the attention of the medical profession to a group of cases which clinically bore some resemblance to typhoid fever, but in which the Widal reaction remained persistently absent throughout the disease and the subsequent convalescence. There could be no doubt about the absence of the Widal, as examinations were made every day of each patient, not only during his stay in the hospital, but after he had left. At that time, he said, he was impressed with the specificity of the Widal reaction, and on that account he attempted, as far as his resources permitted and the facilities of the laboratory at Mount Sinai Hospital afforded, to determine the cause of the infection in the seventeen cases of this class which came under his observation. He said it should be remembered that at that period, outside of Elsner's and Hiss' media, no differential method of culturing the Eberth bacillus had been suggested, nor had any attempts been made to differentiate the organisms whose biological situation was intermediate between the typhoid bacillus at the one side and the colon bacillus at the other. The bacteriological work, therefore, while it was serious, could not be taken, when viewed in the light of present methods, as very reliable. It was sufficient, however, to prove that in the feces and in the blood aspirated from the spleen—a procedure which he would not now countenance—of the cases reported by him the typhoid bacillus was absent. A bacillus answering to the ordinary tests of the colon bacillus was isolated. At that time, bearing in mind the specific nature of the Widal test, they tried the reaction of the blood in each of the seventeen cases with a culture of the isolated bacillus, but failed to get a reaction. In two of the cases the effect of the blood of the patients upon a culture of the bacillus obtained from each patient respectively failed to give a reaction. This showed that the speaker appreciated the fact that some other organism than the one isolated was the offending and disease-producing organism. The bacteriological work was finished before he read of Widal's observation of a paracolon bacillus from an œsophageal abscess which had casually come into the hospital in Paris. There was no clinical observation in the case of Widal's, as he remembered.

When he presented his paper based on the examination of these seventeen cases, Dr. Brill said, he insisted upon the view that these patients did not suffer from typhoid fever, but from some other infection. One of the strongest factors which induced him to form this belief was the fact that a nurse at the training school at the hospital had had an undoubted typhoid six months before with a Widal reaction, and became ill again after six months with an infection which clinically was similar to the first, but in which the Widal reaction was persistently absent, and in whose aspirated spleen blood no typhoid bacilli could be found, but a bacillus which they, at that time, regarded as the ordinary colon bacillus.

He said his view of the presence of another than the typhoid infection was bitterly assailed, and in speaking of the cases with Dr. Osler, the latter regarded them as typhoid. Shortly afterwards, Norman B. Gwyn, of Johns Hopkins, published a case which was similar to those which Dr. Brill had previously reported, and from whose blood Gwyn isolated a paracolon bacillus. The speaker said from this time on (from 1898) he had insisted at various societies that his cases were not cases that should be classified under the head of typhoid fever, but that they were most probably the result of a disease due to a paracolon infection. The expression of this view always called forth opposition, and it was only three months ago that the worthy President of this Society, Dr. Ewing, fiercely assailed it on an occasion when typhoid fever was the subject for discussion at a meeting of the New York County Medical Association; at which meeting Dr. Brill had again called attention to the fact that some cases reported as typhoid were not typhoid, but might probably be a disease due to a paracolon, or, as the reader of the evening called it, following Schotmüller, a paratyphoid infection.

In conclusion, he wished to say that clinically, as he had shown his paper nearly five years ago, these cases could be readily differentiated from typhoid, notwithstanding they so closely resembled that disease. Under all circumstances he contended that he had the right to claim priority for himself in clinically calling attention of the medical world to the possibility of some cases like his own being not a typhoid but a paratyphoid infection, and in accurately describing these cases.

He did not believe that his reported cases were of a solitary epidemic, because since then, and almost every summer, he had met with identical cases, and at that very moment two cases were in the hospital with a most probable paratyphoid infection.

Dr. E. **Libman** drew attention to a few points to show that the subject was by no means a simple one. On a previous occasion, this matter being under discussion, Dr. Meltzer had thrown out the suggestion that in some of the cases referred to there might have existed a mixed infection; cases in which an infection by a paracolon bacillus was followed by an infection by the typhoid bacillus. In connection with this, Dr. Libman referred to a case he was studying in which it was very probable that the reverse had occurred. In his case a paracolon bacillus was isolated from the blood twice during life and from the organs post-mortem. Typhoid bacilli could not be found, but the blood of the patient a few days before death gave a positive reaction with the typhoid bacillus in a dilution of 1–250.

The blood gave a thread reaction, so-called, with the paracolon bacillus in dilution of 1–20. Dr. Libman referred to the necessity of watching for this reaction at an interval of four to twenty-four hours after making the test.

He thought it highly probable that there were cases in which the infection by the paracolon bacilli was of a secondary character.

The **President** said that Walker's experiments in Tavel's laboratory would lead one to believe that unless sera were extremely potent and the dilutions very high they failed to produce the desired results. Dr. Coleman had spoken of the necessity of using different cultures in the differentiation of typhoid species. He had attempted for two months to get the Widal reaction in supposed cases of paratyphoid, but had met with no success which would lead him to the routine use of multiple cultures. He believed that the ideas on this subject would be better correlated if they retained the term typhoid in all these cases, and at the same time recognized that the bacterial causes of typhoid fever were more diverse than had heretofore been supposed.

Dr. M. Manges commented on the distinctive characteristics of these cases of paratyphoid, chief among which seemed to be the rather abrupt onset and termination, the short course, the absence of abdominal symptoms, and failure to respond to the Widal reaction. He believed that a further study of the subject would lead to a simplification and perhaps entire change of some of their views in regard to typhoid. He did not think these cases of paratyphoid infections could be distinguished clinically from true typhoid, as Dr. Brill seemed to think. Dr. Manges regarded the differential diagnosis as very difficult, at least in his own experience.

Dr. Charles Norris thought the term paratyphoid was a very poor one to use, and in adopting it they were making the same mistake as their forefathers did when they first used the term "typhoid fever." The group of bacilli giving rise to diseases resembling typhoid was a very large one, including many different varieties, from the hog cholera bacillus downwards; but it was becoming the custom to recognize nothing as typhoid except that which had the specific bacillus known as the cause of the disease and bearing the same name. Further confusion had been caused by two or three different names having been given to probably the same microorganism.

Dr. S. J. Meltzer said he was in some respects perhaps responsible for the name paratyphoid which had been applied to these cases; and he thought that at present it was the most appropriate term that could be used, inasmuch as the clinical symptoms resembled those of typhoid, and one could not very well employ the word paracolon, because there was no class of diseases known as colon diseases.

Dr. Coleman, in closing the discussion, repeated that the reason for calling the cases paratyphoid was that they bore such a strong clinical resemblance to typhoid.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held March 20, 1902.

Robert F. Weir, M. D., President.

Operations for the Relief of Paralytic Deformities with Special Reference to Tendon Transplantation.—This was the subject for the evening's discussion, the meeting being in charge of the Section on Orthopedic Surgery.

Introduction; History; Indications for Operation.—Dr. Royal Whitman read this, the opening paper. He said that the operations under discussion were intended chiefly to relieve the deformities following anterior poliomyelitis, and as in 80 per cent. of these cases the lower extremities were the parts involved, the operations were ordinarily done upon the lower extremities. The first operation of this kind was done in 1882, and although the operation had now been known for twenty years, the first half of this period had been a dormant one. Two years should intervene between the onset of the paralysis and the operation. The real value of these operations had not yet been determined, for many of the cases had been reported within a few months after the operation. The field of the operation in the upper extremity was limited, it being almost impossible to restore the complicated functions of this region. The standard by which to test the result of the operation was normal function, and from this standard one must conclude that the operation is palliative rather than curative, and in most instances will supplement rather than supplant mechanical treatment. Arthrodesis was introduced in 1881, originally for the purpose of enabling the patient to dispense with a support. The field of this operation was very limited. Even at the ankle, where the operation was of the greatest service, some support would usually be required. In certain cases it might prove useful at the elbow or at the wrist joint. As a rule, the operation should only be done in late childhood or early adult life.

Deformities Due to Muscular Paralysis; Method of Production; Possibilities in Tendon Transplantation; Combinations that have been made to Correct Deformity.—Dr. Wisner R. Townsend read a paper with this title. He said that the original lesion did not produce deformity, but only a loss of power, a fact which, if generally understood and appreciated, would lead to early and appropriate treatment for the prevention of deformity. Gravity was the prime cause of deformity, though the action of the non-paralyzed muscles, the arrest of development of the muscles and other adjacent tissues, and the weight of the body, applied to weakened structures, were important contributing factors. In paralysis of the tibialis anticus and extensor longus digitorum the foot assumed the position of equinus. Paralysis of the peronei produces talipes varus. Paralysis of the interossei and flexors of the toes produced the so-called "claw foot" by the unopposed action of the extensors. When the extensors of the wrist were affected the flexors shortened and produced drop wrist. Paralysis of the flexors of the hand was followed by extension of the hand, but as this action was limited, practically no deformity followed. A large muscle like the tendo Achillis might be easily deprived of part of its power, and that force utilized for the purpose of transplantation better than in the case of a weaker muscle. The transplanted muscles must be made to act in approximately normal lines. The author believed that in the operation of tendon transplantation there were great possibilities for good. In cases of drop wrist he would suggest that, instead of cutting off all of the tendons, it was better to resort to the method of lengthening the tendons in addition to the transplantation.

Technic of Operation; Results at the Hospital for Ruptured and Crippled.—Dr. Virgil P. Gibney presented this paper. He said that the first operation had been done in that hospital in 1896 on a child of ten years who had had an attack of anterior poliomyelitis when one year old. When last seen, six months after the operation of transplantation, a little valgus still remained, and although the result was fair, the muscles were quite weak. Since this time ninety-two similar operations had been done. The technic employed there differed from the ordinary one chiefly in making the incision along the vertical axis of the limb. Primary union was, of course, essential for the success of the operation. The pinching of tendons with forceps or pulling or pressing upon them should be most carefully avoided; the tendons should be handled with bits of gauze in order not to injure them. The live tendon should be transplanted into the point of attachment of the lifeless one. After the tendons had been transferred a test should be made of the position of the foot before closing the wound. His preference was for silk for suturing the tendons. On one or two occasions on which silkworm gut had been used it had been necessary to remove it through a fistula some weeks afterward. After the operation the foot should be placed in an overcorrected position and maintained there by means of plaster of Paris. In the majority of cases it was necessary to keep the limb in mechanical apparatus for many months.

Summary of Results.—Of the 92 operations, 69 had been traced. Of the latter, the results were good in 32, fair in 44 and negative in 24 per cent. The cases traced yielded the following results: Equinus, 8 cases, 1 good, 6 fair and 1 negative; 15 equino-varus cases, 4 good, 5 fair and 6 negative; 19 equinovalgus cases, 8 good, 10 fair and 1 negative; 12 calcaneovalgus cases, 7 good, 4 fair, and 1 negative; 3 valgus cases, 1 good, 1 fair and 1 negative; 1 case of calcænus with fair result; 5 cases of "dangle leg" with 5 negative results; 1 deformity of the thumb with negative result; 5 cases of drop wrist, 1 good, 2 fair and 2 negative results.

Neurological Questions Involved in Tendon Transplantation.—Dr. Joseph Collins read this paper, prefacing his remarks with the statement that the prognosis in anterior poliomyelitis should be better than it is. He said that the fact that a flexor tendon, when transplanted into an extensor, gave rise to extension, had caused much speculation as to the modus operandi, but, in reality, the explanation was quite simple. It was easily understood by an illustration of the starting of a nervous impulse from the nervous centers. A locomotive, leaving a union station, would go to either Boston or Buffalo, depending upon the track upon which it was switched, and the fact that it had been accustomed for many years to go to Boston did not interfere in any way with its going to Buffalo, provided it was shunted upon the proper track. The psychology of this subject was illustrated by two original and interesting diagrams,

Dr. Reginald H. Sayre said that in one or two of these operations that he had performed there had been more power gained than had been anticipated, but in other cases the result had been fair, or even disappointing. In some instances, the result had been better after three or four years than immediately following the operation.

Dr. T. Halsted Myers said that it was especially interesting to note that no bad results had been recorded after the operation. He would like to know whether in the operations on the arms any motions had been lost by destruction of the flexors.

Dr. B. Sachs said that the operation was a thoroughly rational one, and it seemed to him to be as fully applicable to the cerebral spastic cases as to the flaccid spinal cases. The problem in all of them was a very simple one, and consisted in diverting the force from the overacting to the underacting muscle. The operation opened up a very promising field, and was a great improvement on all previous treatment.

Dr. Henry Ling Taylor said that this evening's discussion had been a very fair and temperate presentation of the subject, which was particularly fortunate, for tendon transplantation was only now being tested. Some persons, despite this fact, had already gained an exaggerated notion of its value.

Dr. Jacob Teschner said that he had been treating many cases of anterior poliomyelitis of many years' duration on the principle that one should endeavor to build up the muscles to the highest possible point first, and then, if necessary, operate. In carrying out this method, he had found that many cases, even of fifteen or twenty years' standing, did not require operation. In an article published by him in 1895, he had stated that some of the affected muscles would act if aided by the other muscles. His experience showed him that the reaction of degeneration in a muscle proved only that some portions had undergone degeneration, and did not necessarily mean that all the fibers had been destroyed. By the treatment alluded to, the weak and helpless muscles were practically regenerated and brought under the influence of the will.

Dr. Russell A. Hibbs said that tendon transplantation had been performed in about 150 cases at the New York Orthopedic Hospital. Although the ultimate results had not been so good as the immediate ones, the operation seemed justifiable, for it made apparatus more effective, even though not supplanting it. The operation, in other words, would probably prove to be an adjunct only to mechanical treatment.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, Held March 4, 1902.

JOSEPH COLLINS, M.D., PRESIDENT.

A Case of Myotonia.—Dr. J. Ramsay Hunt presented a man twenty-eight years old, who had come to the clinic with a history of having a peculiar stiffness of the hands and of the muscles of the jaws in the morning. On awakening it was found impossible to open the eyelids to their full extent for a minute or more. This myotonia was aggravated by cold or prolonged rest. There was a consolidation at the apex of one lung in this patient. Strong, stable galvanic applications produced no wavelike contractions such as are sometimes observed in myotonia. The hands were weak; the knee jerks were difficult to elicit except on reinforcement. The muscles were small and showed no evidence of hypertrophy. The legs were not involved.

Lymphatic Angiomata.—Dr. Joseph Fraenkel presented a man who had symmetrical tumefactions in preauricular space, over the upper part of the sternum, between the upper borders of the shoulders, and also in the abdominal wall. The man gave a history of chronic alcoholism. The speaker said that according to the modern conception this disorder was a localized disease of the lymphatic glands and vessels—in other words, a lymphatic angioma. Since the admission of this patient to the Montefiore Hospital he had developed rather acute tuberculosis. According to the literature, thyroid medication in such cases caused a diminution of the body weight, although the tumors, despite their close resemblance to lipomata, remained unchanged.

Multiple Neurofibromata.—Dr. Fraenkel presented specimens from a patient who had long been in the Montefiore Hospital. The patient was a woman, who was thirty-one at the time of her death. Her family history was excellent, and she had been well up to eleven years ago. At that time she had given birth to a stillborn child, and claimed that shortly afterward she had developed a tumor on the right side of the abdominal wall. Soon after this the left lower extremity became contracted. On admission to the hospital there were contractures of both lower and upper extremities, and the diagnosis was hysterical contractures. In the later stages she presented the picture of hysterical chorea. There were very irregularly distributed atrophies and changes in the reaction of the muscles of the upper extremity, and in some of the muscles of the lower extremities. There was also total paraplegia. There were no trophic disturbances. At the autopsy a number of tumors, neurofibromata, were found, One of these almost totally compressed the cord. The brachial plexus was the seat of numerous neurofibromata.

Dr. Joseph Collins said that cases of multiple neurofibromata must be extremely rare, as he had just seen his first case of the kind. This patient was a smoker, who came to the clinic stating that he had suddenly begun to experience pain in the right arm and shoulder, and that pain and inability were increasing. Twelve years ago he had had a somewhat similar condition, but had recovered from it, and the history indicated that there had been several other similar but slighter attacks. Examination showed that the musculospiral, the circumflex and the suprascapular nerves were the ones particularly affected. They were tender on both superficial and deep pressure. Investigation showed no less than seventy tumors in different parts of the body, varying in size from one-fourth to one-half an inch. Two of these tumors could be felt in the inferior border of the axillary space where the external division of the brachial plexus was situated. It was, therefore, fair to infer that these tumors were similar to those found in the other parts of the body, and by an implication of that trunk had given rise to the pressure neuritis from which the patient was suffering.

Dr. Harlow Brooks said that at the January meeting of the New York Pathological Society a specimen of neurofibroma had been shown. Only the sciatic nerves were involved, and the enlargements were almost symmetrical. There was apparently a complete obliteration of the nerve fibers.

The Histrionic Element of Mental Disease.—Dr. Theodore H. Kellogg presented a paper on this subject, which, he said, was not only an interesting topic, but of real diagnostic importance. Shakespeare had recognized this by introducing several insane persons into his plays. The acting was involuntary in some, and intentional in other, insane persons. The maniacal patient was sometimes driven by vivid hallucinations to emotional acting. There was nothing more spectacular than a powerful man wrought up by hallucinations and delusions. The most persistent and intentional forms were seen in paranoiacs. The theatrical stage afforded nothing more striking than the lunatic leading a crowd of sane persons from their sober avocations into all sorts of vagaries of religious belief. It was the rule that whatever had been attained by laborious effort was generally abandoned in mental disease, and hence, the professional actor showed no special tendency to acting when insane. A number of cases of erotomania had come under his observation which had been characterized by most persistent acting. Jealousy was one of the most powerful passions, and when it had insane intensity it led to the most tragic performances. Mental patients were prone to mimic those around them most persistently and cleverly. In most large hospitals for the insane were to be found those acting as buffoons for the edification of themselves and others. Malingering rôles were sometimes acted for weeks and months, and sometimes the patient even burlesqued the mental disease. They sometimes dissembled their real symptoms and denied the existence of delusions in order to secure discharge from asylums. It was well understood that prolonged feigning might lead to insanity, but it was not so generally known that unless the histrionic element was repressed it would tend to interfere with the cure of the mental disease. The recognition of the histrionic element as an integral part of mental disease shed light on some obscure phases of mental pathology, and had practical bearings in the prognosis and treatment of mental maladies.

Dr. Lyon said that the author of this paper had enjoyed unusual opportunities for observing insanity in all its forms, and the instances cited were undoubtedly the exceptions rather than the rule. There were not many who act a consistent rôle for any length of time. He had known some of these patients who were trying to act the rôle of a certain personage halt for a moment when confronted with the statement that this was not the true impersonation. He agreed with the reader of the paper that it was well to discourage, without actively combating, these delusions.

Dr. Defendorf said that the paper was exceedingly interesting from a descriptive standpoint. He could not agree with the statement that the histrionic element was of great prognostic and diagnostic value. Such acting was said to be the expression of morbid impulses, and that they occurred in connection with grandiose ideas in paranoia, yet in the one class the prognosis was good, and in the other it was very unfavorable.

Dr. Ralph W. Parsons described a number of striking and amusing cases illustrating the histrionic element. He said that in these cases the imagination was the predominant element, and that there was often a reversion to the mental state found in children or in primitive races.

Dr. Noble of Middletown, Conn., said that the patients he had met with who had displayed the histrionic element had rarely been consistent; they would not carry out the entire character impersonated, as an actor on the stage would do. Whether this was because of deficient knowledge of the character impersonated or because of a deficiency in histrionic ability he could not say. He had always looked upon this element as unfavorable, probably because it was so largely seen in paranoiacs.

Conditions for Psychiatric Research.—Dr. Adolf Meyer read this paper. He spoke of the founding of the New York Pathological Institute of New York State, and of the causes which had led to the failure of this work. He said that he had hesitated long before accepting the present unenviable position and the task of reorganizing this institute and making it more generally useful. He had been told that the hospitals for the insane would not receive what they most needed if the institute began its work with research. The scientific spirit in the hospitals should be stimulated and fostered in every way possible, and hence, clinical and pathological work should be done as far as possible in these hospitals under the supervision of the institute. The central institute should offer to the hospitals advanced instruction in clinical psychiatry. The central institute should not, however, abandon original research. The safest starting point was undoubtedly actual experience. The pathologist of the hospital for the insane had found himself hedged in by narrow routine, and the hospital staff so engrossed with routine work, as to have no time or inclination for original scientific investigation. The speaker then went on to point out many of the inaccuracies of symptomatology and the shortcomings of histology as applied to psychiatry. In his opinion, the staffs of the hospitals for the insane were entirely too small to do their work well. Psychiatry knew little as yet of diseases, as that term was used in connection with other parts of the body—in other words, it knew little of pathological entities. In no other field of medicine were absolutely accurate records so useful as in psychiatry, yet where were such records to be found? The effort of the present day should be to improve the records and do away with the prevalent impressionist method. Dr. Dent, of the Manhattan Hospital, had agreed to give the necessary clinical material for a start, and a chemical laboratory and a histological laboratory for study in clinical psychiatry would be established, and, in time, a psychological department would be added. All those in charge must be physicians especially interested in psychiatry. The assistant physicians in all the hospitals should be encouraged to do good work according to the recognized modern scientific methods. The new movement must be a natural outgrowth of the present conditions.

Dr. Lyon thought the workers in the hospitals for the insane would very generally welcome such help as had been offered in outline in this paper. He had long felt that clinical and laboratory work should be practically united.

Dr. Smith Ely Jelliffe congratulated the reader of the paper and pledged his hearty co-operation. He said that he knew the stress of work laid upon the hospital interne and sympathized with him, and for this reason he thought the suggestions contained in this paper were most judicious.

Pathological Conditions Impairing the Singing Voice.—F. X. Spranger, in discussing this subject, says that variations in the thickness of the mucosa in the nasal accessory sinuses play an important part in changes of the quality of tone. By acute inflammation or hyperæmia of the membrane, the voice can be impaired and *sometimes even improved*. Instances are numerous in which singers, suffering from a severe cold, will hesitate to sing, but when fairly started they feel they never sang so well in their whole career, and they probably will never again be as pleased with their voice unless similar conditions arise; the thickening of the mucous membrane may have caused the proper nasal and sinus capacities to intensify the vibrations of the voice to their utmost.—*Detroit Medical Journal.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending March 22, 1902:

	Cases.	Deaths.
Measles	814	25
Diphtheria and croup	350	39
Scarlet fever	351	33
Smallpox	66	13
Varicella	141	..
Tuberculosis	265	170
Typhoid fever	21	6
Cerebro-spinal meningitis	..	4

The Latest Development of Finsen's Light Treatment of Lupus.—Recent experiments made in the Finsen Institute with various metals instead of carbon electrodes have led to a most surprising discovery, namely, that iron gives a spectrum which is enormously rich in chemical rays but almost devoid of heat rays. Utilizing this peculiarity of the spectrum of iron, a Finsen lamp has been constructed the electrodes of which are composed of hollow cylindrical pieces of iron, which are cooled by water circulating inside them. The light produced by the new lamp is very intense; within two minutes a bactericidal effect is produced as great as that produced by the old Finsen light within an hour. The experiments were arranged as follows: A continuous current of five ampères was employed for lighting the lamp, hollow iron electrodes with a central water-cooling arrangement being used. The electric pressure amounted to 40 volts; the distance between the object and the arc-light was 10 cm. (four inches). The light was *not* collected with a lens. The test microbes were: Bacillus tuberculosis, B. typhi abdominalis, B. choleræ asiaticæ, Streptococcus pyogenes aureus, Bacterium coli communis, and gonococcus. Gonococcus and tubercle bacilli were cultivated in 2 per cent. glycerin agar coated with sterilized blood, the other microbes in 15 per cent. nutrient gelatine. Figures are given showing the bactericidal power of the new lamp over the apparatus formerly in use.

An Important Correction.—In the March number of the *American Journal of Nursing* occurs an editorial paragraph under the above caption, referring to a difference of opinion reported to have occurred at the recent meeting of the New York State Nurses' Association. The paragraph reads as follows: "One of the many sensational newspaper reports we feel we may, without loss of dignity, correct. It relates to the discussion held on Article V of the president's by-laws, providing for 'three trustees,' which raised the question of the advisability of including physicians in the management of the association. Miss Dock drew attention to the troubles and difficulties which had arisen in other countries by giving the control of nurses' organizations into the hands of medical men, arguing that the most ethical men, whom we most esteem, would refuse to hold such positions, while they would always be willing to advise and help us, while those who would be willing to assume such positions would be the ones who could not always be trusted to work for our interests, and that they might prevent our development as individuals and as women. She finished by saying, 'As my only brother is a médical man, I think I cannot be accused of disloyalty to the medical profession.' Miss Palmer then arose and claimed the right to endorse all that Miss Dock had said, as she was the daughter of a physician. The newspaper reports of these remarks represented them as an attack upon physicians, which was wholly false."

Glandular Fever.—J. Park West reports two cases in full, and puts the question, Is glandular fever a distinct disease? If the answer is to be in the negative, it seems to him that it can only be that form of influenza accompanied by catarrhal inflammation of the upper respiratory tract, in which there is enlargement of the cervical lymphatics, and comparatively frequent suppuration in the retropharynx and ears. There are no grounds upon which to suppose it to be a modified type of any of the other known acute infections, nor an irregular form of any of the acute exanthematous diseases. The symptom-complex resembles catarrhal influenza in the sudden outset, high temperature, muscular soreness, prostration and slow convalescence. But in glandular fever there is not local inflammation of nodes, which, however, enlarge in a regular and peculiar manner. Influenza is an epidemic disease, affecting adults primarily—glandular fever is restricted to house epidemics and rarely affects adults. Influenza is generally ascribed to Pfeiffer's bacillus, which has never been found in glandular fever. On the whole, the author is convinced that it is a distinct, specific infection, and not merely an enlargement of certain groups of nodes due to some local or accidental infection, nor a form of any other disease.—*St. Louis Courier of Medicine.*

A Case of Myelitis, Exhibiting the Results of Co-ordination Exercises.—John K. Mitchell reports the case of a young man suffering from myelitis as a result of typhoid fever which he had two years previously. Lumbar puncture failed to secure fluid. Careful treatment with exercises was continued through the summer. At first he was kept entirely in bed, the legs exercised with co-ordinate and resisting movements while he lay upon his back. In three or four weeks he was allowed to get up, with crutches or sticks, and was instructed in standing exercises with his back against the wall, at first with the eyes open, then with the eyes closed, and presently moving away from the wall a little. As his legs grew stronger, all the exercises were elaborated. They were never allowed to go to the point of fatigue, and he was encouraged to do them for a short time several times a day, rather than to attempt to do too much at once. He had a relapse after leaving the hospital, from over exertion, but again improved under systematic treatment. His station is now perfect, whether eyes are open or closed. He can stand on one leg easily, walk steadily forward or backward, and shows excellent balance in various complicated movements.—*The Journal of Nervous and Mental Diseases.*

Complications of Fractures and Their Management.—Duncan Eve treats the subject practically. Injuries to soft parts as immediate complications often demand special treatment; lacerated muscles require suturing, or, if macerated, removal. Injuries of the viscera are to be dealt with; large bloodvessels are frequently lacerated. Traumatic aneurysms are sometimes associated with fractures; displaced bone against a vessel may impede the circulation and cause gangrene. Injury to nerves is not uncommon. Ulceration, sloughing and gangrene, due to tight bandages or pressure of splints, are dangers always to be guarded against. The tips of fingers and toes should be left exposed, in order to observe the circulation. Fat embolism is a condition peculiar to fractures, comes on about the fourth day, and is usually fatal. Muscular spasm often persists, and is best overcome by constant traction. Atrophy of the limb takes place in all fractures, chiefly as a result of disuse, but gradually disappears with use. Pain, or neuralgia, or paralysis may be due to the involvement of a nerve in callus, and can be relieved by freeing the nerve. The author takes up the complication of special bones, and gives directions for their treatment.—*The Southern Practitioner.*

Diet in Nephritis.—Kaufmann and Mohr have undertaken experimental investigations in order to ascertain whether or not it is advisable to exclude meat from the diet in chronic nephritis, and if not, what kinds of meat are permissible. They selected patients with chronic parenchymatous and chronic interstitial nephritis, and placed them for a given time upon a carefully specified diet. Daily estimations of the nitrogen and albumin elimination were made during this period, and the clinical appearances were also taken account of. As the result of their work, they believe that the exclusive administration of various kinds of meat or milk is without appreciable effect upon the course of this disease. The time-honored opinion that dark meat is injurious to nephritis is without foundation. Observation shows that nitrogen and albumin elimination varies within certain limits totally independent of what the diet may be. In different cases the most favorable periods of such elimination may occur with the exclusive administration of "dark" meat with that of white meat, or that of milk. These statements apply only to chronic nephritis. The acute form of the disease has not been considered by the authors.—*Zeitschrift für klinische Medicin.*

Mixed Typhoid and Malarial Infection.—F. Rho says that the possible co-existence of these two diseases is an acknowledged fact. There is no fusion of the two infective elements, but simply a coincidence or a complication, in which the two febrile cycles have a marked tendency to retain their individual independence. As a rule, the typhoid infection is superadded to the malaria, Laveran's hematozoon remaining quiescent during the active period of the typhoid, to return to activity during convalescence. In quite exceptional cases malaria is added to the typhoid. Quinine usually overcomes the malaria. The gravity of the combination of diseases depends upon the power of resistance of the individual, and the intensity and malignity of each of the infections. An exact understanding of the epidemiology of enæmic fevers in tropical countries can only be attained by a systematic plan of research directed to examination of the blood for the hæmosporidium, diazo-reaction of the urine, serum reaction with the *micrococcus melitensis*, serum reaction with the Eberth bacillus, and the application of rapid processes for the differentiation of the typhoid and the coli bacillus (Elsner's method, etc.). —*Annali di Medicina Navale.*

Snake Venom in Relation to Hæmolysis, Bacteriolysis, and Toxicity.—Simon Flexner, from the results of his experimentation, concludes that venom contains principles which are agglutinating and discoloring for white blood corpuscles. The agglutinating principles may be identical for both white and red cells. The discoloring principle for leucocytes is distinct from that for red cells. In order that solution of venomized leucocytes shall occur, a complement-containing fluid is required. The several varieties of white cells of the rabbit's blood show different susceptibilities to the action of venom. All venoms when used in suitable quantities destroy the bactericidal properties of many normal blood sera. The manner of this destruction consists in the fixation of the serum-complements by the venoms. Venoms have no action upon the intermediary bodies of serum. If the venom is incapable of uniting with the serum-complement, then the original bactericidal properties remain unaffected by the presence of the venom. Calmette's antivenene neutralizes venom, and removes both the hæmolytic and the anti-bacteriolytic actions.—*University of Pennsylvania Medical Bulletin.*

How to Make the Clove Hitch.—J. T. Woods gives the following directions: Take a roller bandage of proper width and length, dip it in water, wring mildly by squeezing, and apply a half dozen turns snugly around the part at the point where the extension hitch is to be applied. Taking a smooth, strong, pliable cord, as long as desired for purposes of extension, and ascertaining its middle, place that point on the roller bandage, allowing the tails to hang on either side. Crossing them beneath and bringing each of the tails up on the opposite side immediately below the first round applied and tie a half knot. Thus far the cord should be applied very loosely. Now, observing the tails in the half knot, one will be found at the distal side of the first encircling cord, and the other on the proximate side that is next to the first cord circle. If, now, the first or upper cord be loosened sufficiently to pass this tail under it, and all is then drawn quite taut, the clove hitch is formed. The bandage must be quite damp and lapped snugly, and the cord drawn tight, before traction is commenced.—*Toledo Medical and Surgical Reporter.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended March 22, 1902:

		CASES	DEATHS
	SMALLPOX—UNITED STATES.		
Alabama, Birmingham	Feb. 1–28	12	
California, Los Angeles	Mar. 1– 8	1	
Sacramento	Mar. 1– 8	1	
San Francisco	Mar. 2– 9	6	
Colorado Denver	Mar. 1– 8	5	
Florida, Jacksonville	Mar. 8–15	9	
Illinois, Belleville	Mar. 8–15	2	
Chicago	Mar. 12–19	7	
Indiana, Elkhart	Mar. 8–15	1	
Evansville	Mar. 8–15	4	
Indianapolis	Mar. 8–15	13	
Michigan City	Mar. 10–17	1	
Terre Haute	Mar. 8–15	2	
Iowa, Clinton	Mar. 1– 8	3	
Kansas, Wichita	Mar. 8–15	2	
Kentucky, Covington	Mar. 8–16	11	
Lexington	Mar. 8–15	1	
Louisiana, New Orleans	Mar. 8–15	3 cases imported.	
Maine, Portland	Mar. 8–15	2	2
Maryland, Baltimore	Mar. 8–15	1	
Massachusetts, Boston	Mar. 8–15	21	4
Cambridge	Mar. 8–15	5	
Chicopee	Mar. 8–15	1	
Haverhill	Mar. 8–15	1	
Holyoke	Feb. 22–Mar. 15	25	
Malden	Mar. 8–15	2	
Newburyport	Mar. 1–15	2	1
Somerville	Mar. 8–15	1	
Michigan, Detroit	Mar. 8–15	6	
Ludington	Mar. 8–15	13	
Minnesota, Minneapolis	Mar. 1–15	29	
Montana, Butte	Mar. 2– 9	1	
Nebraska, Omaha	Mar. 8–15	45	
South Omaha	Mar. 8–15	80	1
New Jersey, Camden	Mar. 8–15	3	
Newark	Mar. 8–15	32	6
New York, Binghamton	Mar. 8–15	1	
New York	Mar. 8–15	65	11
Yonkers	Mar. 7–14		1
Ohio, Chillicothe	Mar. 8–15	2	
Cincinnati	Mar. 7–14	25	
Cleveland	Mar. 7–14	3	
Pennsylvania, Allegheny City	Mar. 8–15	6	
Lebanon	Mar. 8–15	2	
Norristown	Mar. 8–15	1	
Philadelphia	Mar. 8–15	53	6
Pittsburg	Mar. 1–15	9	
Rhode Island, Providence	Mar. 8–15	1	
Warwick	Mar. 7–14	2	
Tennessee, Memphis	Mar. 8–15	14	
Texas, San Antonio	Feb. 1–28	9	
Utah, Salt Lake City	Mar. 8–15	1	
Washington, Tacoma	Mar. 2– 9	9	1
Wisconsin, Green Bay	Mar. 9–16	5	
Milwaukee	Mar. 8–15	2	
	SMALLPOX—INSULAR.		
Porto Rico, Ponce	Mar. 3	Several cases reported.	
	SMALLPOX—FOREIGN.		
Austria, Prague	Feb. 15–Mar. 1	11	
Belgium, Antwerp	Feb. 15–Mar. 1	34	6
Brazil, Pernambuco	Jan. 15–31		65
Canada, Halifax	Mar. 8–15		1
Quebec	Mar. 8–15	20	1
Colombia, Panama	Feb. 24–Mar. 10		15
France, Paris	Feb. 22–Mar. 1		2
Rheims	Dec. 1– 8	1	
Roubaix	Feb. 1–28		1
Great Britain—			
England, Liverpool	Feb. 22–Mar. 8	33	
London	Feb. 15–Mar. 1	881	139
Sheffield	Feb. 22–Mar. 1	1	
Scotland, Dundee	Feb. 22–Mar. 1	7	
Edinburgh	Feb. 15–22	1	
Glasgow	Feb. 28–Mar. 7	22	10
India, Bombay	Feb. 11–18		8
Calcutta	Feb. 8–15		2
Karachi	Feb. 9–16	2	1
Italy, Rome	Jan. 11–18		1
Mexico, Mexico	Mar. 2– 9	3	1
Russia, Moscow	Feb. 8–22	18	12
Odessa	Feb. 15–Mar. 1	1	
St. Petersburg	Feb. 8–15	7	1
Uruguay, Montevideo	Feb. 5	32	
	YELLOW FEVER.		
Dutch Guiana, Paramaribo	Jan. 1–31	5	3
Mexico, Vera Cruz	Mar. 1– 8	8	4
	CHOLERA.		
India, Bombay	Feb. 11–18		6
Calcutta	Feb. 8–15		61
	PLAGUE.		
India, Bombay	Feb. 11–18		663
Calcutta	Feb. 8–15		120
Karachi	Feb. 9–16	60	47
Japan, Nagasaki	Mar. 13	Present.	

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Original Articles.

PATHOLOGICAL, THERAPEUTIC, AND CLINICAL NOTES ON A FEW CASES OF MALARIAL INFECTION.

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SINCE the malarial parasites are no more protean in their morphology than in their clinical manifestations, the few cases here discussed can neither be regarded as unusual nor as anomalous. Among this class those to be first considered were characterized by an accentuation, in some particular organ or organs, of those morbid processes which occur therein in all cases of infection, but usually without sufficient intensity to cause conspicuous local symptoms. The cases here mentioned, illustrating this, are a few extreme ones, in which these local symptoms had been so pronounced that, prior to admission to hospital, they alone had received attention.

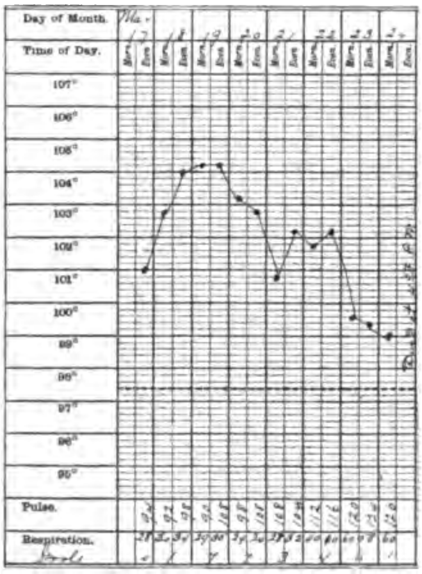
Local manifestations of malaria, unattended by general symptoms, usually take the form of trigeminal neuralgia, cephalalgia, or pseudorheumatic pains in various muscles. Cases of neuralgia are, in my experience, rare; only three having come under observation in a series of about eleven hundred cases of malaria. In two of these the first and second branches of the right trigeminus were affected; in the third, in addition to these, the supra-orbital branch of the left trigeminus. In all the pain was severe, paroxysmal, obstinate, of the usual neuralgia type, but unattended by atrophic changes in the seat of its occurrence. In no case was there observed any tendency to that regular periodicity in the recurrence of the paroxysms which the literature on the subject would lead one to expect. All the patients appeared to be otherwise in good health; slight enlargement of the spleen was demonstrable, and the æstivo-autumnal parasite, in all stages of its development and involution, was found in large numbers in the blood. The character of the parasite found may account for the irregularity of the paroxysms.

Cephalalgias of the same class as the neuralgias just mentioned are quite frequent, but offer nothing distinctive. Usually they are general in character, not at first severe, but progressive until other manifestations of malaria appear. When no facilities for blood examination are at hand these cases may at first be mistaken for old cases of heat exhaustion, in which very persistent or recurrent cephalalgia frequently occurs. But in the latter there are neurotic symptoms (sometimes very slight). If heat exhaustion is complicated by malarial infection, a diagnosis in the field is frequently impossible until enlargement of the spleen can be detected. This fact is somewhat important, since in this class the administration of quinine seems to do more harm than good, and reliance must be placed upon cinchonidia, eucalyptus, arsenic, and what is more potential, a change of climate.

The pseudorheumatic type, so-called for want of a better term, is characterized by pains in the larger muscles, especially those of the abdomen and the front of the thighs. As a rule, the pain is dull and persistent, at first aggravated by motion, then relieved thereby, but later, after a rest, quite as intense as at first. It is not usually severe, and occurs most frequently in those cases in which malaria has complicated chronic intestinal disease. In all probability impaired metabolism is a more immediate cause than are the toxic products attending the development of the hæmacytozoa.

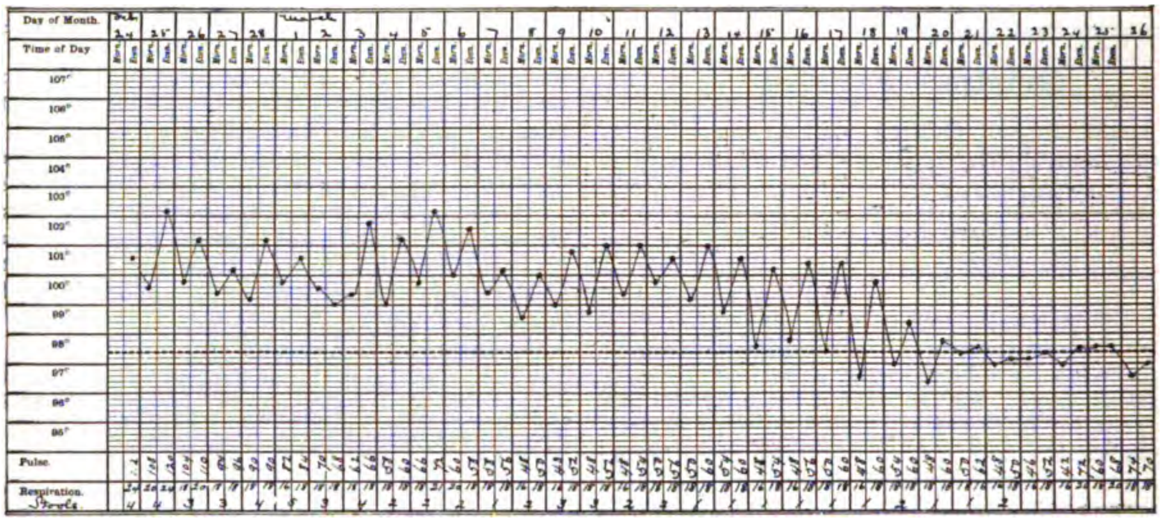
When the pain is confined to the abdominal muscles it may simulate that of appendicitis, though it is usually more diffuse. The following cases bearing upon this case may be cited:

CASE I.—Private "R," twenty-three years old, well built, muscular, no history of appendicitis, typhoid fever, dysentery, or recent diarrhœa. Had a mild attack of "malarial fever" one month prior to admission. Health otherwise had been excellent. States that on March 23, 1900, he was seized with pain in the right iliac fossa, which gradually increased in severity until after two hours he was compelled to go to his quarters. His condition underwent slight temporary improvement, but on the 26th it suddenly became worse, and the patient was at once transferred to the hospital with a diagnosis of "acute catarrhal appendicitis." At this time his temperature was 97°; there was no nausea, vomiting, constipation, or any of the classical symptoms of appendicitis, except the pain and slight flexure of the right thigh. Slight enlargement of the spleen could be detected. Medical treatment proved unavailing, and as the patient's suffering was rapidly becoming greater and the temperature was rising, I operated for appendicitis. The appendix, five and one-quarter inches long, with a mesentery extending to within half an inch of the tip, was found lying

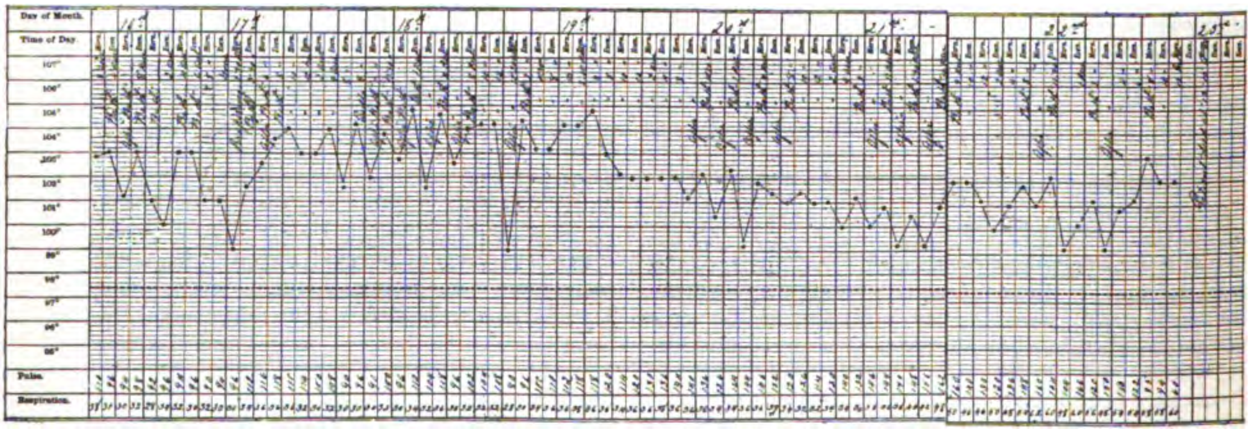


CASE I.—W. C., civilian, æt. twenty. Pneumonia, Pleurisy, Malarial and Æstivo-autumnal Fever. Second Reserve Hospital, Manila.

quite free, with no evidence whatever of old or recent inflammation or any other pathological condition, either in the organ itself or in its vicinity. Examination of the appendix after removal gave no evidence of a catarrhal condition, either on general or histological examination. Two small fecal masses about the size of grape-seed were found in its lumen, but readily dissolved in a few drops of normal salt solution. No inflammation of the mucosa could be found at the points where these masses had rested, nor at any other points in the culdesac. Next day the patient felt easier, but on the second day he complained that at the site of the wound the pain was of the same heavy boring character, and quite as severe as that before the operation. The temperature had now risen to 101°; the examination of the blood made at this time revealed the æstivo-autumnal parasite present in the hyaline stage in large numbers, a few ovoids, crescents, and various intermediary forms. The use of quinine and arsenic caused a gradual amelioration of the symptoms, but it was not until the fourth day, when the patient was thoroughly cinchonized, that the pain disappeared. The wound healed by first intention, and recovery was uneventful. Five weeks later the patient was readmitted with all his original symptoms, even to the subnormal temperature. Quinine was again administered, but no local treatment was employed. In three days the patient claimed that he was well, and rejoined his company.



Case II.—P. H., private, Company C, Forty-second Infantry. Malarial Fever, tertian; and Typhoid Fever. Second Reserve Hospital, Manila.

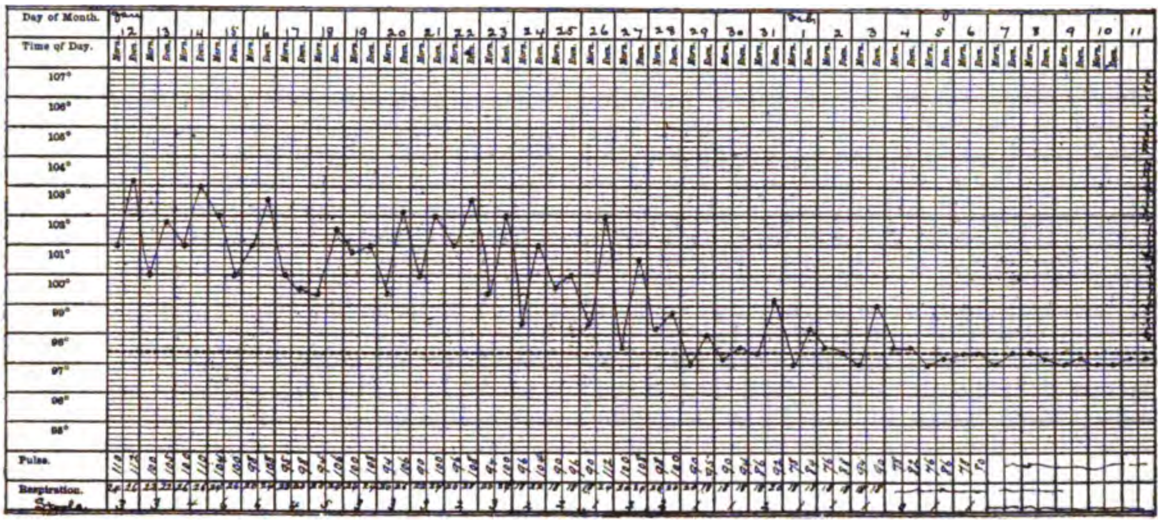


Case III.—G. W., private, Company H, Twenty-first Infantry, æt. 21. Typhoid, Malarial, and Æstivo-autumnal Fever. Second Reserve Hospital, Manila.

In this case it might be suggested that the fecal masses found might have caused appendicular colic —a condition which I have never seen described, but which, it is quite conceivable, may exist. But as there was no evidence of inflammation of the mucosa, and the pain was not of a colicy nature, and as masses of much greater size and hardness, whose presence has given rise to no symptoms, are frequently found in the appendix after death, I am not inclined to ascribe the pain occurring in this patient to disease of the appendix. A diagnosis of hysteria can, I think, be excluded because of the general considerations and the trend of the case.

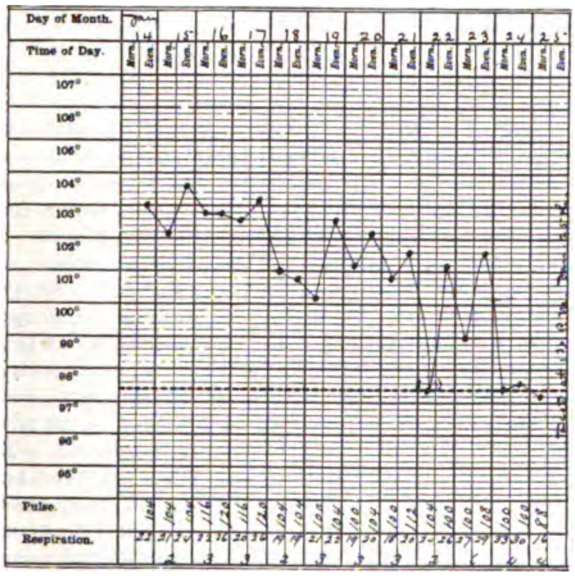
Reference may be made here to the post-operative rise of temperature which all surgeons in Manila encounter; usually it is less than two and one-half degrees, and becomes evident within twenty-four hours, lasts from two to eight days, and is correlative with neither the severity nor the length of the operation. Popularly, it is ascribed to latent malarial infection, and during the nine months that I did the surgical work at the Second Reserve Hospital I certainly saw it much more frequently during the first part of that service, when malaria was most prevalent, than I did when this disease was on the wane. But there is a large number of cases in which there is no history of malaria, in which the blood examinations are negative, and in which this fever disappears spontaneously. While it is probable that in some cases malaria may be a cause or a causative factor in its production, I believe that, in general, it is merely due to a disturbance of the nervous centers, whose unstability in the tropics is well known.

CASE II.—This patient, when first seen, was suffering from malarial cachexia, which had developed in Cuba about three months before. The only symptoms of appendicitis in this case were the pain in the right iliac fossa and irregular pyrexia oscillating between 99°F. and 102°F. Neither the general condition, treated by quinine and arsenic in moderate doses, nor the local one, treated by rest, salines and ice bag, improved patient in the slightest degree. Operative interference was suggested, but it was decided that heavier dosage of quinine and arsenic should first be employed. To this end one and one-fourth grams of the former and fifteen drops of Fowler's solution of the latter were given three times daily. Both the local and the general condition improved at once.



CASE IV.—R. L., civilian, æt. thirty. Mixed Infection, Typhoid, Malarial, and Æstivo-autumnal. Second Reserve Hospital, Manila.

CASES III., IV., and V. were in all respects similar to case I., but in these no treatment of the local condition was employed, and with a view to confirming my suspicions, bromides were given for two days and other medication withheld. Cases III. and IV. remained in *statu quo*, and case V. became slightly worse. The administration of antiperiodics in large doses dissipated all local symptoms in cases III. and IV. in three days; in case V. in four days.

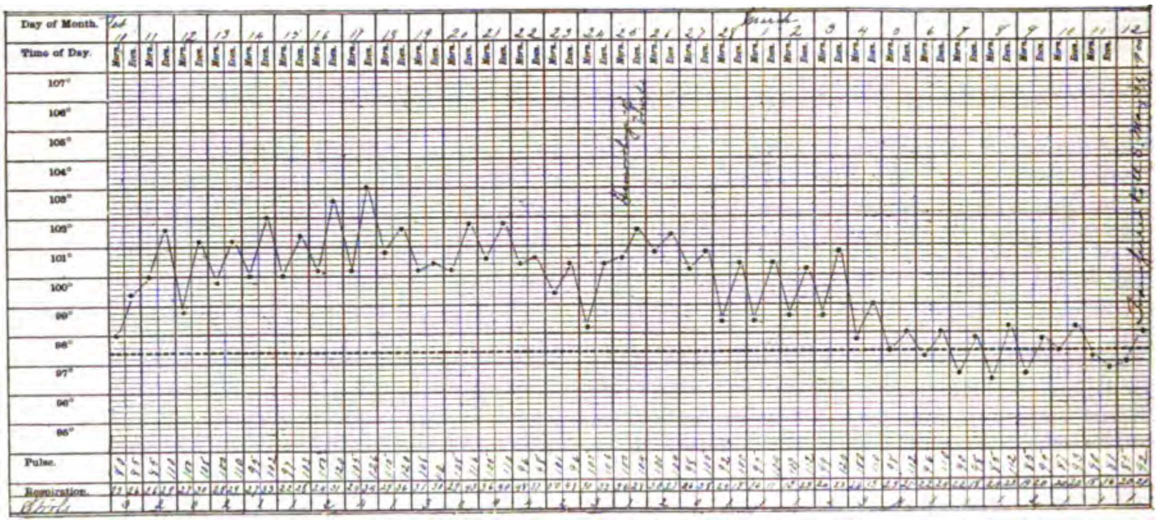


CASE V.—C. G., private, Twelfth Infantry, æt. twenty-one. Typhoid Fever, Malarial, and Æstivo-autumnal. Second Reserve Hospital, Manila.

In these five cases there was either a history of malarial fever about one month prior to admission, or a well-marked malarial cachexia; in all, the spleen was enlarged; in all, the æstivo-autumnal parasite was found in the blood in all stages of its development and involution; in all, the condition was progressive, and in none did it ameliorate until antiperiodics were employed. I have carefully excluded several other cases, similar to those mentioned, but in which a possible history of appendicitis could not be obtained. It may be suggested that all these cases are merely illustrations of two separate coexistent conditions, the one general, the other local, but the negative discoveries in case I., and the clinical course in cases III., IV., and V., which I ventured to use as control observations, have not led me to that conclusion. Although the classical symptoms in appendicitis are often much distorted or entirely prevented, yet, I believe, they have never proven curable by antiperiodics. The cases are of interest in illustrating the localized pains which often occur in malarial conditions, and they offer a fairly distinct symptomatology, and there are few difficulties in diagnosis. In this connection it is interesting to note recent publications on malaria causing symptoms simulating those of salpingitis.

Cases of bronchial and pulmonic inflammation, in which malaria played at first an unrecognized part, have occurred in my experience in only three especially severe cases. The first of these, case VI., seen in the General Hospital at Fort McPherson, was a patient recently returned from Cuba, with persistent bronchitis and, later, capillary pneumonia. He was very asthenic with beginning cachexia. Pyrexia was irregular, ranging from 99° to 103°. The blood was not examined until the patient had been in hospital eleven days; it then showed great numbers of the æstivo-autumnal parasites in all stages of development. The patient's condition, both general and local, had meanwhile become worse, as the catarrhal process had extended to the smaller tubes. Quinine, in doses of 1 gm. t.i.d., and other medication, aimed at the local condition, having proved quite useless, I adopted a suggestion of Major Blair D. Taylor, Surgeon U. S. A., and gave quinine in doses in 1¼ gms. t.i.d., and Fowler's solution, beginning with five drops t.i.d. and increasing as rapidly as possible until twenty-five drops t.i.d. were being taken. No other medication was employed. The patient began to improve promptly, but convalescence was protracted.

CASE VII.—This patient, like the preceding one, had recently come from Cuba. No history was obtainable, except that he had been ill for about two weeks prior to admission. The patient was well nourished. The pulmonary symptoms were those of diffuse severe catarrhal pneumonia, with hypostatic consolidation at the bases. The respirations on admission averaged thirty-two per minute, but gradually increased, till thirty-seven per minute were counted. Expectoration was scanty, frothy, not particularly viscous, and sometimes blood-stained. Examination for the diplococcus lanceolatus was negative. The pulse was full, fairly strong, ranging from 110, at first, to 136. The spleen was enlarged. The temperature was extremely irregular, sometimes normal, but more frequently ranging from 100° to 101.5° F., seldom reaching 102°, and never rising above 102.5°. The mental condition was variable, usually there was not only mental dulness and headache, but at one time, just prior to the blood examination, there was muttering delirium with retraction of the head; the delirium and retraction being, indeed, at one time so marked that cerebrospinal meningitis was suggested. Cephalalgia was very noticeable. The patient had reached me with a diagnosis of "influenza," and for some time, as this is quite a protean disease, I followed a palliative line of treatment, and gave quinine in average doses. At length I examined the blood and found it swarming with æstivo-autumnal parasites. Frequently three crescents were found in the field. The Widal test was negative. The same line of treatment was followed as in the preceding case, with the result that the downward course of the disease was promptly checked and recovery eventually ensued.



CASE VI.—H. C., private, Fourth Cavalry, æt. twenty-two. Typhoid Fever, Malarial Fever, and Æstivo-autumnal.

Cases VI. and VII. gave me my first experience with tropical malaria, and from them I learned the inefficiency of quinine and arsenic when given in doses which I had heretofore considered maximum. It is probable that the season during which these patients were admitted (January) and the fact that they had just come from a much warmer climate, had much to do with the character of the disease.

Case VIII. is the only one which I have seen in which pulmonary consolidation occurred in the course of malarial infection, though a similar case is mentioned in the syllabus of the committee sent by the Johns Hopkins University to study malaria in the Philippines. Both of these patients were negroes. In my case there was a history of recent malarial fever, but the primary cause of admission was the pulmonary condition. This offered nothing distinctive (see Chart I.); indeed, the clinical picture was merely that of croupous pneumonia involving the entire right lung. The examination of the blood on March 17 showed the æstivo-autumnal parasite in various stages of its development and involution; on March 23 the same forms, somewhat less numerous, were seen with macrocytes and pigmented leucocytes. After death the parasites were found in the fluid expressed from the solidified lung, but it could not be determined that they existed here in greater frequency than in the general circulation. There had been no expectoration by means of which an attempt at diagnosis could be made, but the examination of bronchial mucus after death, for the diplococcus lanceolatus, was negative. There was no evidence of enteric disease before death, and the intestine appeared normal post-mortem. The spleen was deeply pigmented, somewhat enlarged, and cirrhotic.

Croupous pneumonia can be caused by too many agents, and generalizations from a single case are obviously too dangerous to permit me to state that the pulmonic condition here was caused by malaria alone. Statements to that effect have often been made, but generally, I believe, without adequate ground, and this case can do no more than suggest a possibility, as the real causative agent may have been overlooked.

There is a growing tendency among physicians in the Philippines to ascribe to malarial infection an etiological influence in many of the cases of chronic diarrhœa and dysentery. As a rule, these cases present nothing distinctive, but sometimes the wasting is more rapid than might be expected, and the cachexia which develops is attended with pigmentation of the skin. The spleen is also enlarged, but to a very variable degree, the enlargement being apparently more correlative with duration than with the intensity of the disease. The temperature is generally normal, or at least under 99.5°, even when numerous parasites are found in the blood. The severity of the infection that may exist without much attending fever is, indeed, the most noteworthy feature of the disease. So persistent, and yet so obscure, is the malaria, that Manson has suggested that in all cases of chronic diarrhœa which do not respond to treatment an examination of the blood be made. Recovery is generally impossible unless the malarial element be removed. The converse, unfortunately, does not hold, for many patients from whose peripheral circulation the parasite has long since disappeared, though they may improve, do not recover without protracted treatment and a change of climate. It is possible that the absence of general manifestations of malaria may be due to the lodgement of the parasites in large numbers in intestinal capillaries, and to partial elimination of the toxines by osmosis, while the chronicity of the diarrhœa is due to the irritation dependent thereupon.

There is a type of malaria quite prevalent in Cuba, but, in my experience at least, quite rare in the Philippines, in which the clinical picture may strongly simulate yellow fever. But two cases of this kind have come to my notice, and as these developed in the field in the Philippines, no satisfactory notes or temperature records could be taken. The fact is mentioned, however, since both patients gave a history of this type of malaria experienced about one year previously in Cuba, and an illustration is thus offered of how the disease may not only persist for some time after the subsidence of all symptoms, but that when it recurs it may resume its former quite specialized manifestations.

Closely associated with this is acute malarial nephritis, which has occurred in about 1½ per cent. of the cases of malaria admitted to the Second Reserve Hospital, in Manila. With very few exceptions it has not been severe, and has generally responded to treatment. The condition is one of obvious interest, but has recently received such voluminous consideration that its discussion here is unnecessary. In passing, however, I must allude to the statement recently made by Dr. Smith, A.A., Surgeon U. S. A., to the effect that quinine is not only a useless, but even a dangerous, drug when given in this disease, and that calomel is the best remedy available—indeed, almost a specific. I have seen only one case of malarial nephritis contracted in Cuba, and it is quite possible that although this case was severe, my success in treating it with quinine was exceptional. But my success in treating with quinine the malarial nephritis found in Georgia and the Philippines, no matter of how great severity, is not only unexceptional, but is the common experience of many of the medical officers with whom I have discussed the subject. The patient with Cuban malaria I saw at the U. S. A. General Hospital at Fort McPherson, Georgia, whither he had been brought with a history of ever-increasing severity of his symptoms. When admitted he was cachetic, at times delirious, and in his lucid intervals complained of severe pains in the back and loins. The spleen was enlarged and the blood swarmed with æstivo-autumnal parasites. The urine contained blood, albumin, and hæmoglobin, and gave the other usual evidences of acute nephritis. The diazo reaction was not obtained. As the patient could not retain quinine taken by the mouth, it was given him hypodermically, in doses of 1½ gms. three times a day, while the symptoms were treated as they arose. The patient responded well to treatment, and the improvement of the local condition was satisfactory, but it was two months before the cachexia had disappeared. In the Philippines, when it is possible that the type of malaria differs from that seen in Cuba—though some cases are, undoubtedly, recidives of Cuban malaria—I have used quinine in the treatment of malarial nephritis in doses which may appear dangerous, but which were necessary, and from which apparently no bad results ensued. Thus in two cases where the condition was especially severe, after I had used moderate doses of quinine for forty-eight hours without any apparent effect, I gave it in doses of 4½ gms. hypodermically, daily, for eleven days, in one case, and for two weeks in another. Recovery ensued. In justification of such enormous doses I can only state that before they were used the course of the disease was progressively and rapidly downward, and that they proved sufficient to check its progress. Both cases came in, without any former illness, from Calamba, a point on Laguna de Bay, where malaria was then exceptionally prevalent and severe. Now, however, malarial infections appear less severe than they were during the first year of the American occupation. They are certainly much milder in the Philippines than they are in Cuba. Half a gram of quinine, in solution, given per rectum daily, in divided doses, is now fully adequate to control Philippine malaria in the majority of cases.

While emphasizing the value of quinine in the treatment of malarial nephritis, I do not wish to deny that calomel is a valuable adjuvant. Its physiological action implies this fact, but unless it has an empirical value, such as that of ipecac in dysentery (a value which my experience has not led me to suspect), there is no apparent reason for assuming it that specific influence which Dr. Smith has described.

A mixed infection of the hæmocytozoa malariæ and the bacillus typhosus is now generally recognized to be possible, though extremely rare. In the course of upwards of two years' service in the Garfield Hospital in Washington, D. C., I never saw such a case, and the few cases which I here describe are all that have fallen under my observation after twenty months' experience with tropical and subtropical malaria.

CASE VIII. (See Chart 2.)—Patient never had typhoid or malarial fever. For about ten days prior to admission had been listless, suffering from vague pains in the back and limbs, with occasional slight headache, and four days ago had had slight epistaxia. There was no history of a chill. The clinical picture at this time was that of a mild, uncomplicated case of typhoid fever. The expectant treatment of typhoid was followed, and the case ran an uneventful course as one of typhoid fever, except that toward the end the oscillation in temperature became rather greater than usually occurs. The pathological report was as follows:

February 24.—Widal negative. No malarial parasites.

March 10.—Widal positive. No malarial parasites.

March 15.—Widal positive. Tertian malarial parasites few.

March 18.—Widal positive. No malarial parasites. Pigmented leucocytes.

CASE IX (See Chart 3).—This patient gave a history of chill, epistaxis and onset of fever about two weeks prior to admission. When first seen he was in an extremely weak and emaciated condition, temperature 103.8°. The clinical picture was like that seen in second week of typhoid fever, of very severe type, and probably aggravated by exercise. The mental condition was clouded, and no very definite history could be obtained. Hypostatic consolidation was already present in both lungs, and the prognosis offered was unfavorable.

A clinical diagnosis of typhoid fever was made. The course of the disease was not satisfactory, for the stupor deepened, carphologia developed, and the weakness progressively increased. Death occurred February 22. The pathological report of the blood examination is as follows:

February 16.—Widal positive. Hyaline actively amœboid æstivo-autumnal parasites. Macrocytes. Pigmented leucocytes.

The autopsy revealed the following facts:

Body.—That of a young man. Emaciated. Skin clear. Pupils slightly dilated, the right larger than the left. Mucous membranes and nails cyanosed. Teeth normal. Rigor mortis marked. Post-mortem discoloration of neck and back. Abdomen slightly distended.

Left pleural cavity.—Free from adhesions.

Left lung.—Most of lower lobe hypostatic. No evidence of tuberculosis.

Right pleural cavity.—Few old adhesions on external wall.

Right lung.—Hypostatic pneumonia of lower and most of middle lobe. It is beginning to invade the upper lobe. No evidence of tuberculosis.

Heart appears normal.

Left Kidney.—Five and one-half inches long. Capsule slightly adherent. Cortex eight mm. thick. Organ congested. Pyramids deeply congested.

Right kidney.—Five and one-half inches long. Capsule slightly adherent. Cortex four mm. thick in one place. Pyramids deeply congested.

Spleen.—Eight inches long by five and one-half inches wide. Rolls out at point of section. Very dark red.

Intestines.—Colon, for ten inches below cæcum, somewhat reddened. Immediately above valve, Peyer's patches are swollen, but no ulceration exists at that point. Small patches are ulcerated eight inches above valve. Floor formed by muscular coat. Higher up, for a distance of four feet above the valve, large patches are inflamed but not ulcerated.

Anatomical Diagnosis.—Chief and determined cause of death: Typhoid fever. Colitis acute, mild. Acute splenic tumor. Nephritis subacute. Æstivo-autumnal malaria.

Microscopical and Chemical Findings.—Ante-mortem blood—February 15. Widal positive. Hyaline æstivo-autumnal malarial parasites. Macrocytes.

Post-mortem blood—February 25. Widal positive. The post-mortem examination of the blood gave the Widal reaction. No examination was then made for the malarial parasite.

Case IX (See chart 4).—Previous history, negative. Present illness, of about ten days' duration prior to admission, was of insidious onset, not marked at any time by chill or epistaxis. On admission the patient was in fair general condition. The clinical picture was typical of that seen in the second week of typhoid fever, except that there was great congestion of the right lung with persistent cough and the occasional expectoration of blood-stained sputum. The course of the illness was uneventful. The pathological report:

January 28.—Amœboid and circular hyaline æstivo-autumnal parasites. Widal reaction positive. Immediate slowing and complete clumping in thirty minutes.

February 3.—Widal positive numerous circular hyaline form. Pigmented leucocytes.

Case X.—This patient was admitted in a state of semi-coma, and no notes of his previous history could be obtained. When I first saw him he was much emaciated but fairly strong, and there was nothing to suggest an early fatal event. The only unfavorable symptoms were the delirium and persistent tympanic disturbance of the abdomen. Progress was fairly satisfactory. Toward the end the pulse became weak and hypostatic, congestion in both lungs at once became evident. Perforation occurred at 1.40 P. M. on the 24th, and on the following day the patient died in collapse. The pathologist reported as follows:

January 14.—Hyaline actively amœboid, crescent and ovoid forms of the malarial parasite. Macrocytes. Poikilocytosis. Widal reaction positive prompt.

January 24.—Few crescents and ovoids, few hyaline forms. No pigmented forms. Macrocytes. Leucocytes contain much pigment. Proportion of red corpuscles to plasma much reduced. Widal reaction prompt.

The post-mortem examination revealed the following condition:

Body.—Emaciated; skin, brown; mucous membrane, pale; finger nails, cyanosed; pseudamina about axilla over abdomen and thighs. Chest well developed. Abdomen somewhat distended.

Abdominal cavity.—Peritoneal cavity filled with gas and purulent yellow fluid, one quart in amount. Intestinal peritoneum shows petechial hemorrhages. One hemorrhage area is of five mm. in diameter. Gall bladder moderately distended. Bladder contains a small amount of urine. Mesenteric glands very much enlarged. Appendix, six c.m. long, has mesentery which contains a considerable amount of fat.

Spleen.—Seven inches by five inches. Capsule smooth, light in color. The tissue does not roll out at point of section. It is blackish brown in color and soft.

Right kidney.—Five inches by two and one-half inches. Capsule smooth, light in color, slightly adherent. Tissue rolls out at point of section. Cortex six to eight mm. thick. Pyramidal markings distinct. Margins of pyramids slightly congested.

Left kidney.—About same size, considerably congested. Cortex darkly congested. Malpighian bodies markedly congested.

Liver.—About sixteen inches long. Surface yellowish, light mottled color. Capsule smooth. Upon section the organ is light, pasty, distinctly fatty.

Intestines.—Contain numerous dark areas, one to two and one-half cm. in diameter, some black and gangrenous. One shows peritoneal coat only. Fœcal matter oozes from a perforation five mm. in diameter, eight inches above ileo cæcal valve. Ulcer in whose floor the perforation is found is two cm. in diameter. Sigmoid flexure and ascending colon show numerous old ulcerations, most of which are nearly healed. From the vicinity of some can be squeezed gelatinous, thick, creamy, yellow pus, which appears to dissect up the mucous membrane. Some ulcers show centers five mm. in diameter not yet healed. Upper side of ileo-cæcal valve ulcerated, and most of the mucous membrane denuded for a distance of four inches from that point up to the small intestine. Above this point for six inches are numerous small ulcers in a stage of healing. About eleven inches above the valve is an ulcer two and one-half cm. in diameter, with abrupt edges, with base formed by muscular and peritoneal coats. Near its border is a perforation one-half cm. in diameter. For four feet above the valve an ulcer is found every four inches; for the next three feet every three inches, the upper ones in a state of healing.

Right lung.—Collapsed. Bound to parietal wall by old firm adhesions, outer side, posteriorly, and about apex congested and crepitant.

Left lung.—Collapsed. Lower lobe congested and crepitant. No evidence of tuberculosis.

Pericardium.—Is distended with 100 c.c. of clear straw fluid.

Heart.—Size corresponds to size of individual. Right heart contains a small red clot. Valves normal. No evidence of sclerosis in aorta above bifurcation.

Brain.—Cortical vessels congested. Durameter over vertex and parietal areas bulging with clear fluid.

Case XI. (See Chart 6).—This patient's previous history was negative. Had had a chill and slight epistaxis the second day prior to admission, and when he first came under my care presented the usual symptoms of typhoid fever when seen at its earliest stage. The course was quite uneventful, except that a hemorrhage occurred February 25, and that lysis seemed to be protracted. The pathologist reported as follows:

February 11.—Few hyaline and pigmented æstivo-autumnal parasites. Widal negative.

February 21.—Few hyaline parasites, æstivo-autumnal. Widal reaction, partial, considerable activity of the free bacilli continuing after three hours.

February 23.—Macrocytes. A few hyaline æstivo-autumnal parasites. Widal positive. Large clumping, considerable activity of free bacilli.

All of these cases were treated on the expectant plan, until it was found by the blood examination that they were of a dual character, and then quinine was used in doses of ½ gm. daily. It will be noted that this was not sufficient to destroy the parasite or drive it from the peripheral circulation, and it was invariably found necessary to increase this dosage before lysis was complete. In no cases were there any clinical evidences of the malarial infection. The lysis was irregular in the case of tertian infection, and in one case of æstivo-autumnal infection (Chart 5), but in all others here cited the temperature course offered nothing that might lead to a suspicion of a mixed infection. This protracted lysis is, I believe, generally observed in cases of typhoid fever complicated by tertian malaria. At Fort McPherson, in January, 1899, I saw two cases—one in the service of Dr. Watkins, A.A.S., U. S. A., and the other in the service of Dr. Rind, A.A.S., U. S. A., both of which ran a typical course until the fever began to decline. Then wide variations in temperature occurred, and an examination of the blood revealed a previously unsuspected tertian infection. I was told that several cases had been noticed in that hospital during the preceding autumn.

In this connection it is, perhaps, supererogatory for me to call attention to the frequent mistakes in diagnosis that occur from a lack of our recognition of the unclassified fevers of the tropics, but the subject is an important one, and I shall refer to it in closing. On various occasions I have seen patients with high fever (103 to 104.5°), who had not recently taken quinine, in whose blood no hæmocytozoa could be found, and who recovered without the use of antiperiodics, classed indiscriminately as malarial-fever patients. Thus in one series of about 7,000 patients, suffering with various ailments, malarial fever was stated to exist as the cause of admission or as a complication thereof in from 54 to 55 per cent. of all cases, the maximum being in January and February of each year, the minimum in July and August. Upon the arrival of a competent pathologist the average fell to about 10 per cent. and remained in that vicinity until the pathologist departed, when it immediately rose again. The diagnosis reached during the time of the pathologist's stay had been by means of the microscope only, due allowance being made for the recent use of antiperiodics, spontaneous convalescence, etc. The diagnosis reached at other times was clinical.

Similar errors occur in cases of other diseases, but attention should be directed to this field particularly, for here lie the greatest mass of errors and the greatest opportunity for investigation. Several types of unclassified fevers have prevailed in the Philippines since the American occupation, but lack of systematic study, and the observation of but few cases at any one time, have deterred many from pushing their investigations who would otherwise be interested. With the decline of hostilities, however, the exigencies of the service require less frequent changes of station on the part of medical officers, and thus greater opportunity will be given for the study required.

THE INFLUENCE OF SUPRARENALS IN PNEUMONIA.

By ETHAN ALLEN GRAY, M.D.,
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The rather large mass of reports and other writings on the subject of suprarenals have given us a great deal of fact regarding the therapeutic action of the dried gland and of its active principles. Concerning the physiological action of the remedy, on the circulatory apparatus particularly, the scientists are not one.

According to E. von Cyon[*], the effect of the remedy on the vasomotor system is central and *not* peripheral. With him on this point are Cybulski and Szymonowicz. Oliver and Schaefer, however, declare that the effect is peripheral. A writer in "International Clinics" for 1900 briefly sums up thus: "hypodermatically it causes a distinct but temporary rise in blood pressure;" while O. F. Grünbaum,[†] in recommending the internal administration of the gland in hæmatemesis, says that there is "no sensible rise in blood pressure noted." This matter will, of course, have to be settled by careful scientific observation, due attention being given to the procuring of a uniform drug or of a definite active principle, as, for example, epinephrin, described by Abel.

In the meantime the value of the suprarenals as a therapeutic agent will occupy the attention of clinical observers.

As is well known, the rhinologists have already made use of the property possessed by the aqueous extract of suprarenal powder, of causing contraction of the arterioles of the mucous membranes when applied locally.

It has already achieved a place as a hemostatic, albeit a tendency to secondary hemorrhage exists. Nevertheless, the respite obtained by the exhibition of the gland enables the operator to secure his patient against further loss of blood.

In pulmonary hemorrhage the value of the remedy has been pointed out by Kenworthy,[‡] and since corroborated by other observers.

After having observed the rapid work of suprarenals in a case of severe pulmonary hemorrhage, I was encouraged to treat two cases of senile pneumonia with the same remedy. In the one case (Case II) the bloody sputum, almost fluid, was rapidly checked within a few hours, and a rapid recovery ensued. Case I was complicated by a coincident acute nephritis following diabetes mellitus.

In these, as in other, cases the heart reacted quickly, and steadied itself with reduced pulsation. The same results have been attained in cases other than pneumonia. For instance, in a case of asthma with co-existing albuminuria in a patient seventy-eight years of age, a pulse of 100, thready and hard, dropped in a few hours to 82, accompanied by the disappearance from the sputum of the blood which had been present for hours. In this case the albuminuria also disappeared after the second day.

I conclude from my observations of the remedy that we have a most valuable heart stimulant, which we are at liberty to use in the presence of impending heart failure, impeded pulmonary circulation, as in pneumonia, and with coexisting renal inflammation.

I have noted peripheral increase of blood pressure in a few instances, but the sign was not permanent.

I append a few cases which will illustrate the action of the drug:

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[*] Pflüger's Archiv., 1899.

[†] *Journal of Physiology*, Vol. XXIV.

[‡] Medical Record March 16, 1901.

CASE I.—Mrs. B., aged sixty-five years, a large woman, corpulent, who had suffered from diabetes for ten years, developed a sharp nephritis in April, 1901. With the appearance of the nephritis there was a disappearance of the sugar in the urine. This condition lasted until early in June, when pneumonia developed.

Symptoms.—Pulse 86, temperature 101°, respiration 30; pain in chest, loose cough, rusty expectoration. Examination of the lungs showed the lower third of the left lung to be consolidated. Patient was torpid and indifferent. Strychnia sulph. gr. 1-30 was given with suprarenals every three hours. In thirty-six hours the temperature was normal, pulse lower, patient brighter. No râles were heard over the lungs, and the consolidation steadily retrogressed. The patient died in uremic coma six weeks later.

Case II.—Mrs. A., aged seventy-two years, well nourished and usually healthy, was seized with a chill in May, 1901, which heralded an attack of pneumonia. When I saw her I found her very dull, skin sallow and dry, temperature 103°, pulse 126. Mucus expectorated was thin and mostly lost in blood. Lower half of left lung was found congested, crepitant râles being present, while percussion elicited marked dulness.

℞. Suprarenals gr. iij every three hours. Next day the temperature was 99.5°F.; pulse 100. Mind clear and sputum whitish. The treatment was continued for several days. After the third day there was an absence of all symptoms of pneumonia, while the only physical signs were subcrepitant râles and dulness. No crisis was evident.

CASE III.—Mr. C. H., aged thirty years, was taken ill on January 12, 1902, with grippe. Temperature 104, pulse 128. The patient had a dilated heart, and had suffered, from distress, on exertion, for four or five years. After three weeks from the onset of the grippe the temperature became normal with a pulse of 84. February 2d he was taken worse, with a temperature rise, without chill, to 102°; puls 124-130; respiration 38. Examination gave marked dulness over lower half of right lung, crepitant râles over lower third of same. Expiratory sounds high pitched; patient's face slightly cyanotic. He was very restless and delirious. In addition to the carbonate of guaiacol, suprarenals grs. iij were administered every two hours (chewed). February 3d, pulse had dropped to 90°; temperature, 98°; character of râles changed to subcrepitant and moist over the involved area. February 4th, temperature 97.5°, pulse varied from 80 to 100 on slight causation. Suprarenals continued. Temperature remained normal for a week or more, when it began to go up slowly. Areas of bronchopneumonia developed, disappeared, and occurred in both lungs. Cough at times very severe. The heart showed signs of increasing dilatation, and suprarenals, strychnia, and glonoin were freely administered. In spite of the rapid heart action and occasional fever, the appetite remained good, and the patient gained flesh and strength. However, on the first of February, after slight exertion, he suddenly died; no post mortem.

CASE IV.—D. P., girl, aged seven years, began on February 3, 1902, with grippe; some bronchitis present. Night temperature 101°. Sputum contained large numbers of influenza bacilli. Temperature dropped on second day to normal. Sibilant râles still persisted until February 8. On this date the pulse suddenly went to 140, with temperature of 103°. Child became very dull and apathetic. Crepitant râles were discovered in lower half of right lung, dulness corresponding. Suprarenals gr. iss were given every two hours (chewed), antiphlogistin to chest. After twelve hours the symptoms began to improve, the temperature dropping to 98° and going above 100° for about two hours after midday. Pulse slackened *paripassu*, with thermal improvement. Patient was practically well after second day. Dulness persisted for five days. Bronchial râles were gone on the sixth day.

CASE V.—Mrs. F., aged seventy-five years. February 13, 1902, was suddenly attacked, in the night, with severe pains in the chest, right side. Temperature at 10 A. M. 97.5°, pulse 108, respiration 30. Auscultation revealed crepitant râles over lower fourth of left lung; respiratory murmurs sharply accentuated. Over the right lung the respiratory sounds were much subdued.

℞. Suprarenal capsule, gr. iij, every two hours, to be chewed. P.M., pulse 100, respiration 97; less pain. February 14, no pain, pulse 100, respiration 28; fewer râles; breathing easy. February 15, pulse 78, temperature 98°. Dulness over lower thirds of both lungs. No râles audible. Patient pursued a steady course to recovery.

CASE VI.—C. P., male, aged fifty-four years, German. I first saw the patient on February 24, the sixth day of his illness, when the following phenomena were noted: Patient extremely jaundiced, indifferent to surroundings, and delirious. Temperature 100°, pulse 100 soft, respiration 24. Bowels closed; urine very scanty and of a deep red; mouth and skin very dry. Some cough, painful, which brought up a very tenacious, prune-juice colored expectoration. Physical examination showed the right lung to be involved as follows: In front crepitant râles up to level of one inch below nipple. Behind, a few crepitant râles at base of lung. Dull percussion noted everywhere, save at apex, where it was very hyperresonant.

℞. Salines to relieve the constipation; free water drinking; suprarenals; ichthyol to seat of pain. February 25, pulse 108, temperature 101°, respiration 24; P.M., pulse 120, temperature 102°, respiration 30. February 26, A.M., pulse 96, temperature 98°, respiration 28. On the 25th the sputum became highly bile colored and bitter, pulse became stronger, but intermitted every tenth beat. Bowels became loose and kidneys acted well. Cerebral symptoms disappeared, and jaundice began to disappear. Evening of the 26th, pulse 108, temperature 101°, respiration 32. Evening of the 27th, pulse 92, temperature 98°, respiration 22. A history of cough lasting for a year past was only elicited after this patient's recovery, while, with resolution, apical signs show an old tubercular focus. It may be held that we had here a crisis, but, if so, I feel that the critical period was influenced by the great heart stimulation afforded by the suprarenals.

I have given here but a few of what I might call representative cases, illustrating various types of pneumonia; but, although few in number, I trust that they may suffice to point the way to others who may study the remedy.

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Mastitis in Typhoid Fever.—Thomas McCrae, from his study of this subject, concludes that (1) Mastitis is a rare complication of typhoid fever, and usually occurs late in the attack; (2) It occurs in both sexes, and is apparently not associated with a functioning gland; (3) Both breasts are involved in about half of the cases; (4) Suppuration occurs in about half of the cases, and may be associated with the typhoid bacillus or staphylococcus; (5) It is of no special moment in the prognosis.—*Bulletin of the Johns Hopkins Hospital.*

PLASTIC OPERATION FOR RESTORATION OF THE SPHINCTER ANI, WITH REPORT OF A CASE.

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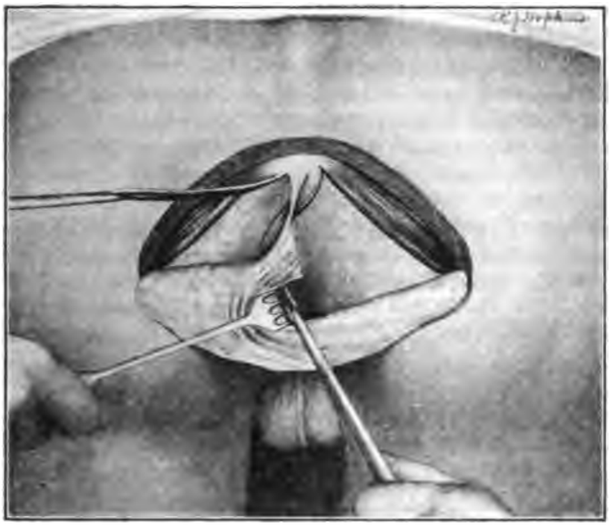
THE successful result which followed the operation here described, and the novelty of the method should, I think, justify its further trial at the hands of other surgeons.

The patient, who had been suffering from incontinence of fæces of many years' duration, entered Bellevue Hospital, February, 1901. He had been gored in the rectum by a steer, and, in his occupation as cattle-dealer, was injured in the same region on several occasions. He had been operated upon eight or nine times, in an endeavor to restore the continuity of the sphincter muscle, without success. The last operation previous to the one performed by the writer was done according to the Gersunny technic.

The condition of the patient at the time the writer first saw him consisted in absolute inability to retain the fæces, and necessitated the wearing of a mechanical plug about one and one-half inches in diameter. Surface examination revealed little evidence of the existence of an external sphincter. The patient's general condition was good. The writer's operation was performed about one year ago.



The patient being placed in the knee-chest position, a large semi-circular incision, with its convexity in the direction of the coccyx and extending just beyond it, was made from a point about one inch in front of the anterior limit of the anus and on a line, externally, with the tuberosity of the ischium on one side to a similar point on the opposite side. The flap thus made was turned down. The fatty tissue was dissected away, so as to expose the lower end of the rectum and the edges of the glutei muscles. A ribbon-shaped piece of muscular tissue, about one-fourth of an inch in breadth and one-sixteenth of an inch in thickness, was now dissected on each side from the glutei muscles, leaving an attachment above. These two muscular ribbons were transposed, so that the fibers would decussate from one side to the other; in other words, the right-hand muscle was crossed over to the left, the left to the right, underneath the ligamentous connection between the anus and coccyx. These two muscular strips were made to encircle the gut and to meet anteriorly, and were fastened by chromicized catgut. There existed a very small remnant of sphincter muscle on each side of the rectum, and to that the new muscular strips were attached by additional sutures. The finger in the rectum now recognized the constriction formed by this purse-string arrangement, and the flap dissected away was sutured back again in place.

On account of the number of operations already performed in the same region, the superficial tissues were in bad condition, and there was some sloughing of the integument, but distant from the anus.

The operation proved to be a success, as the patient, upon leaving the hospital a few weeks later, was able to satisfactorily retain the fæces, unless the accumulation was liquid, when some leakage occurred; but later on, the newly-made sphincter exercised sufficient control on the bowel to retain its contents under all conditions.

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UNNECESSARY ANTISEPTIC TREATMENT IN MIDWIFERY.

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PREVIOUS to the introduction of the antiseptic treatment of wounds by the immortal Lister, antiseptic methods were unknown and consequently unemployed in the lying-in room, nor yet was there any suspicion of the actual presence of those crawling microbes there.

It seems the master minds of such men as Marshale, Hall, Churchill, Meigs, Madam, Lachapele, Velpean, Burns, Cazeaux, Campbell, Depaul, Smith, and others, never suspected the existence of those prolific and deadly parasites in the cavity of the uterus. From the birth of the first-born of our mother Eve, up to the discovery of the invisible microbes, those destructive enemies of the human race were permitted to freely inflict irreparable injury on our predecessors. If the presence of those invisible parasites had been discovered by Æsculapius, or his immediate followers in the divine art of healing, the actual population of this planet would be so numerous as to almost defy enumeration; even now the human family is pretty large. That the advent and intelligent employment of antiseptic medicine in the practice of surgery has had, and is having, a salutary effect in saving human life there is no doubt, but that the adoption and application of these antiseptic rules in the lying-in chamber has had corresponding beneficial result, I am very much inclined to doubt. In my perhaps limited experience during the past tweny-six years I have personally attended twenty-two hundred and four cases of childbirth. Being somewhat conservative in my notions, I did not adopt the new treatment in my obstetric practice until several years after the introduction of antiseptic medicine, partly for the reason that I had been almost invariably successful in my midwifery practice, and partly because I did not consider the new method had been proved to my satisfaction, and consequently I preferred to follow the rules recommended by the best writers on the subject up to 1876. The glowing accounts, however, that were spread broadcast in nearly every medical publication on the subject of the almost certainty of not only curing all cases of puerperal fever, but also of preventing it, induced me at last, in 1888, to adopt the antiseptic treatment.

Accordingly, when my next case of septic fever occurred I directed the nurse to inject a one-to-sixty solution of carbolic acid into the vagina, with instructions to repeat every two hours until the temperature dropped to 100°F. At my visit the next morning I found my patient suffering from a moderate hemorrhage, temperature 103°F., pulse 120. I then made a careful examination of the vagina and adjacent parts and located the hemorrhage in the cavity of the uterus. Fearing that minute particles of the placenta might be retained in the womb, I injected, by means of a fountain syringe, a 1-to-5,000 solution of bichloride of mercury into the uterus, which had the effect of checking the flow, but the fever continued to advance notwithstanding the fact that a douche of the before-named solution was administered every second hour, and the best known antipyretics employed. In consultation with the late Dr. N. C. Husted it was decided to discontinue the douche, as the condition of the patient was considered hopeless. She died on the fifth day of the fever and the seventh after parturition.

My second case was that of Mrs. C. with her first child; there was a face presentation; instruments were employed; there was ruptured perineum, and fever commenced on the second day after delivery. Morning temperature, 102°F.; evening temperature, 105°F.; pulse, 140; bichloride douche every second hour; alcohol baths every two hours; patient grew worse and died on the sixth day of the fever.

Case III.—Mrs. E., aged twenty-eight years, developed septic fever on the third day after labor; brisk postpartum hemorrhage occurred, due to retained particles of placenta. Antiseptic treatment, and patient grew worse. Dr. Moffatt was called in consultation, when it was decided to curette the uterus, and a carbolic douche was ordered four times daily. The patient made a very slow recovery.

In the treatment of these three cases I strictly followed the antiseptic methods recommended by the new school, such, for example, as washing my hands in a 1-to-5,000 solution of bichloride of mercury before making an examination, sprayed my clothing and hair with a still stronger solution of the bichloride, had the vulva carefully washed, and, on account of the labor being prolonged, I had napkins wrung out of the said solution placed over the vulva every hour, and had the instruments placed in a 1-to-20 solution of carbolic acid. After the delivery the vagina was washed out with the bichloride solution, and, in short, I observed and applied every one of what I now consider the absurd and unnecesarry antiseptic remedies advocated by the new school of midwifery, with the unsatisfactory results above stated. So much for the vaunted antiseptic treatment in my hands.

I will endeavor to make a brief analysis of the antiseptic treatment now in vogue and perhaps prove the utter impracticability of enforcing its provisions. In the first place, it must be admitted that very many of the writers of medical books and articles published in medical journals are eminently theoretical and lamentably deficient in the matter of practical experience. For example, they say that the physician should visit the parturient woman once in each week during the last three months of pregnancy, procure a sample of her urine for chemical and microscopical examination, etc. Every pyhsician having much practical knowledge in obstetrics in a mixed community must admit that it is utterly impossible to fulfill this condition. Is it not a fact that in many cases the physician is not called until within a few days of the event, and often not until within a few hours of labor? Again, the average fee paid for confinement in the homes of the toiling class does not exceed $10.00. How, then, in the name of Æsculapius, can the busy doctor make a chemical and microscopical examination of the urine every week and attend his general practice. Is it also not a fact that the physician reaches the bedside just at or about the moment the child is being born and consequently when his attention is urgently demanded; must he wait to make an antiseptic solution to wash his hands before attending the patient?

The vagina, say our up-to-date friends, should be thoroughly washed out with the antiseptic solution after the child is born and after an abortion, forgetting the fact that childbearing and the discharge usually following the birth of the child is a perfectly natural or physiological phenomenon and should not be tampered with except in case of the presence of some abnormal condition demanding artificial aid. If it is necessary to flush out the cavity of the vagina after parturition, why not extend the same treatment to the rectum after each stool, and to women generally after each menstruation.

Not long since, I attended a woman in confinement, and after her rapid and complete recovery she remarked that I did not employ the douche, and that she was very glad to be spared the annoyance. I told her that I never resorted to the douche except in case of some abnormal condition, which did not occur in her case. "Well," she replied, "you physicians differ in your treatment; the doctor who attended me at my last confinement directed the nurse to douche me every hour day and night for four days, until at last I became so exhausted that my husband refused to allow any more." "I presume you had septic fever," I remarked: "No, no," she replied "I did not, but the doctor said that I was threatened with fever and this douche would prevent it and hasten my recovery; yet I was three weeks in bed, and even then I felt weak and very much provoked at the treatment I received and determined to change doctors." This is only one of many such cases brought to my notice during the past ten years.

The furniture in the lying-in room, say our antiseptic friends, should be regulated so as to prohibit the lodgment of disease-producing germs, and the patient should be thoroughly washed from head to foot with a solution of the before-mentioned bichloride before parturition. Now picture to yourself the apartment of a mechanic or a laboring man—and these are the sources whence the vast majority of confinements come—occupying premises embracing the necessary requisites for complying with these conditions.

Again, is it not a fact that this class of patients cannot afford the luxury of a trained nurse, and that they are forced by circumstances to depend on the kindness of neighbors for such nursing as these kind-hearted persons may render them during their confinement? Yet, strange to say, the percentage of recovery is much greater in this same class of patients than in those treated in accordance with the antiseptic method and trained nursing, etc., outside of lying-in hospitals. While it is possible to observe and practise those antiseptic rules in the homes of the opulent and in hospitals, nearly every practical physician will admit the utter impossibility of enforcing those antiseptic regulations in the vast majority of cases in general practice.

Reports from some of the lying-in hospitals, it is true, tell us that the introduction of and application of antiseptic medication had been the means of reducing the mortality from septic or puerperal fever from, in some hospitals, 50 per cent. to one-half of 1 per cent. If those rose-colored reports are reliable and the results claimed correct, the antiseptic treatment has, indeed, been almost miraculous in the hands of its advocates. I for one beg to question the veracity of those reports, believing as I do that very much of the reduced mortality from septic fever was and is due to other causes than antiseptics, namely, asepsis and hygiene. The old germ-incubators called hospitals have been replaced by new, well ventilated, better located and lighted ones. The disease-breeding cesspool and improper drainage are replaced by an almost perfect drainage system. The filthy condition of the wards and other surroundings have been replaced by cleanliness and a more intelligent application of the rules of hygiene. To these and similar sanitary measures, rather than to the use of bichloride of mercury and carbolic acid, we owe the reduction of mortality in lying-in hospitals.

The advocates of bichloride of mercury in midwifery seem to lose sight of the fact that this salt in even one part to five thousand may act as a poison in the following manner: "After labor the capacity of the vagina is much increased, and when the perineum is *not* ruptured and the patient is lying upon her back when the douche is administered, a portion may for a time be retained in the cavity, the bichloride passing by osmosis into the general circulation." An equally dangerous condition may result from a long-continued use of carbolic acid.

In thus advocating more conservative methods in the treatment of parturition and less meddling with the natural functions of the lying-in patient, I am speaking from practical experience and not from mere theoretical knowledge. I am also aware of the fact that the experience of any one physician, unsupported by the evidence of many others, cannot be admitted as proving the case under consideration.

Previous to and subsequent to the three cases before described, I had in my midwifery practice only three other patients with septic or lying-in fever, one of whom died and two recovered. It will thus be observed that in an experience extending over a period of twenty-six years, during which I personally attended 2,200 cases of childbirth, I had six cases of puerperal fever—three of them were treated in strict conformity with the antiseptic fad, two died and one recovered; three were treated without antiseptics, one died and two recovered.

In other words, I had a mortality of one-half of one per cent. with antiseptic treatment, while the mortality without antiseptic medication was only one-sixteenth of one per cent. Now, if the most ardent advocate of antiseptic treatment in midwifery can show better results, I would like to make his acquaintance. I do not wish to be understood as being anxious to claim any special or unusual knowledge in the treatment of this class of patients. My custom has been and is now to exercise what common sense I can command, and by insisting on absolute cleanliness, a plentiful supply of fresh atmospheric air night and day, and the free use of sterilized water, never resorting to the douche except in cases where the discharge from the vagina becomes fetid—then sterilized water was used. Instruments, when I had occasion to use them, which occurred sixty-four times, were washed in boiled water before and after using, and a portion of boiled water, with the addition of one teaspoonful of table salt to each quart was used in cleansing ruptured perinei.

From these facts I have naturally concluded that antiseptic treatment as recommended in midwifery by many of the modern text-books is not only unnecessary, but also is not wholly free from danger to the patient.

In looking over one of our medical journals the other day, I observed the following verses, which I consider very amusing and appropriate here:

We have boiled the hydrant water;
 We have sterilized the milk;
We have strained the crawling microbes
 Through the finest kind of silk.
We have bought, and we have borrowed,
 Every patent health device,
And at last the doctors tell us
 That we've got to boil the ice.

Now, to sum up, as our legal friends say, I have attended the number of confinements before stated, had six cases of septic fever and three deaths; five cases of puerperal convulsion and one death; three cases of face presentation, and one death of child; six cases of placenta prævia, and no death; ten cases of abortion, all mothers recovering; sixty-four cases of instrumental delivery, and no deaths; five cases of shoulder presentation, and no deaths; fifteen breach presentations, no deaths. There were many other abnormal presentations, a description of which would perhaps be tedious. Permit me to add, however, that I had twenty-six cases of ruptured perineum, all of which, with only one exception, rapidly healed. Only once in my experience did I find it necessary to perform craniotomy, and then only when Dr. Benedict and I decided that the child was positively dead. One of my cases of puerperal convulsion was caused by a very short cord (five inches) and *no* placenta—a fact which an examination of the womb disclosed, a living child being removed from its dead mother by Cæsarian operation. I might also state that I had one dead-born child in every 400 births.

In conclusion, permit me to mention briefly the use of ergot in the hands of the accoucheur. This medicine has long been credited with the power of stimulating uterine contractions during labor, and a potent remedy in inertia of the uterus. Of late years, however, the use of ergot is by most recent writers considered dangerous to the life of the child and of causing continued and unnecessary pain to the mother. My experience with the drug does not confirm this theory. I have employed ergot in every case of inertia of the uterus, and always with complete success. I would say, however, that I never administered this potent remedy except in the following conditions: When from any cause the labor pains become very feeble and the os uteri was completely dilated, or when it was soft and petulant and the membranes were ruptured, and when the pelvic outlet was normal and the patient had previously borne children. When these conditions were present it has been my treatment to administer drachm doses of a reliable fluid extract of ergot, and if labor should not terminate in half an hour, I repeat the dose, and always with the most gratifying result.

On the Anæmias Called "Splenic Anæmia."—S. Vere Pearson holds that there are no such definite pathological changes discoverable as a foundation to earn for these anæmias their recognition as a distinct disease. Nor are these changes even sufficiently definite to justify their being grouped together under one name. As long as the physician is content to make the diagnosis of "splenic anæmia," so long will the full investigation and sorting out of these cases remain at a standstill. A more definite and scientific basis for classification must be sought for than that founded upon a mere association of symptoms. Finally, as far as our present knowledge on these matters enables us to come to a conclusion, it seems best to consider the anæmias, at present grouped under the name "splenic anæmia," as varieties of secondary anæmia associated, by causes as yet undetermined, with enlargement of the spleen.—*The Medical Chronicle.*

WHAT CAN WE DIAGNOSTICATE IN ACUTE APPENDICITIS?*

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ADJUNCT ATTENDING SURGEON TO THE MOUNT SINAI HOSPITAL, NEW YORK.

Whenever the subject of acute appendicitis comes up for discussion in any of our medical societies, most attention is generally given to the consideration of the indications for operation, and the time when operative interference is advisable. The question usually discussed is, "When shall we operate in acute appendicitis?"—in other words, what symptoms call for immediate surgical interference in this disease? In the present state of our knowledge it is recognized that we cannot make the diagnosis of the pathological condition of the appendix and therefrom deduce principles of surgical treatment. In this country most surgeons are agreed that the early operation is, in many cases, the safest, and that an appendix which has once been the seat of disease had best be removed. The extreme conservatism of the French and German surgeons is slowly yielding to the radical ideas of operators in our own country—such well-known surgeons as Rehn, Tuffier, and Czerny being recent converts to the doctrine of early operation.

Unfortunately, we have not, and may never have, at our disposal pathognomonic signs which will enable us to say in each case whether the appendix vermiformis is the seat of mild or of severe lesions. Hence, it is safer to remove the organ in most acute conditions, and we have to content ourselves with finding the indications for the time when such operation is to be done in the character and frequency of the pulse, the temperature, the degree and extent of the pain, and the conditions found on physical examination. The character and frequency of the pulse are of foremost importance as indications of the degree to which the general system is affected by the disease, and, therefore, in a limited sense, of the severity of the inflammatory process; the height of the temperature has its value, as it often shows to us the reactive powers of the organism; the severity and area of distribution of the pain have their value; as have a number of other signs and symptoms. Experience has shown, however, that none of these signs are characteristic of one or other lesion of the appendix. The mildest symptoms may go hand in hand with the gravest lesions, and the severest symptoms are often caused by relatively slight pathological changes in the appendix.

The physician, and more especially the surgeon, should not, however, be deterred from the attempt to formulate in his own mind the condition of the organ which he is to remove at an operation. I do not believe that any confusion will result from asking ourselves the two questions: When shall we operate, and what can we diagnosticate in acute appendicitis? Further advances in our clinical knowledge of this affection can only be made along these lines of investigation.

In this paper I shall attempt to answer, to some extent, the second of these questions: In the present state of our knowledge of acute appendicitis, what pathological conditions can we recognize from the signs and symptoms presented? I shall consider the subject under the following headings:

1. Can we diagnosticate the position of the appendix?
2. To what extent can we diagnosticate the changes that have occurred in and around the organ?
3. What can we determine regarding the general peritoneal cavity?
4. Conclusions.

1. *Can we diagnosticate the position of the appendix? Does it lie behind, in front of, external to, internal to or below the cæcum?*

In many ways this is a point of importance. In the first place, a knowledge of the exact position of the appendix is of great value to the operator. If he knows the exact location of the organ he can approach and expose it in the best and quickest manner, and in many cases he will be able to make his incision smaller than otherwise. Every surgeon knows how difficult it may be to find the organ. If he feels fairly certain where to look for the appendix before he begins the operation—no matter whether it lies in a mass of adhesions or somewhere in an abscess cavity—his operative work may be rendered much more easy. In the second place, a knowledge of the position of the diseased organ may influence our prognosis, and, therefore, make the indications for operation more or less urgent. In adults, when the inflamed appendix lies behind the cæcum, firm adhesions are formed early, and the cases are more apt to run a favorable course than in children. This is, perhaps, due to the close proximity in children of the liver and the great absorbing lymphatics of the right side of the diaphragm (Recklinghausen). The inflamed appendix situated below the cæcum is more apt to be complicated by an abscess in the pouch of Douglas; the appendix internal to the colon by early invasion of the general peritoneal cavity.

Medical literature contains few references to this subject. The situation of a tumor, if present, in the right iliac fossa or in the pouch of Douglas, the location of the greatest tenderness to pressure, and a number of other physical signs, may, in a general way, indicate where the appendix is to be found. Excluding those cases, however, where the diseased organ can be made out on palpation, we have seldom been able to determine the exact position of the appendix before operation. Some writers have claimed that the diseased organ generally lies beneath the point where there is the greatest tenderness. I have examined a considerable number of patients for this point of great tenderness to pressure, and in many cases the diseased organ was found at some distance from this point. I have endeavored in seventy cases of acute appendicitis to localize the organ by the following simple method, and at operation I found that the appendix had been correctly localized in sixty of the patients:*

The appendix is considered to lie between two points, one the apex of the cæcum, the other the diseased portion of the organ. The apex of the cæcum corresponds in general to what is known as McBurney's point. In children this point, which is taken only as the anatomical base of the appendix, lies one to two c.m. above where it would lie in the adult. The second point on the abdominal wall is the one at which the patient localizes the greatest subjective pain, and it is to be found in the following manner: Ask the patient to point with one finger to the spot where he has the most pain, without looking at his abdomen, and as quickly as possible. Make him repeat this procedure a number of times until you are certain that the correct point has been obtained. Then the general course of the appendix will lie between the base of the organ and this point. The appendix may be bent upon itself, and then run in some other direction; it may run beyond the second point, but a considerable portion of the organ will be found between these two points. Very early in the disease this method cannot be made use of, because the first pain complained of is generally around the umbilicus. The organ will be wrongly located in cases where there is a congenital absence of the ascending colon, but these are only exceptional. Where there is already well-marked general peritonitis, the patients are generally unable to say where they have the most pain. Among the seventy cases that I have examined there were ten in which the organ could not be, or was wrongly, located. Two were cases of short or absent ascending colon; three were in patients who were unable to say where they had the most pain; in the five remaining cases there was diffuse peritonitis, so that the patients complained of much pain in all parts of the abdomen.

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*Read at the meeting of the Metropolitan Medical Society, January 28, 1902.

*The greater number of these cases occurred on the surgical service of Dr. Howard Lilienthal at Mt. Sinai Hospital.

2. *To what extent can we diagnosticate the changes that have taken place in the appendix and its immediate surroundings?*

These cases may be divided into (*a*) Those in which no mass is to be felt; (*b*) Those in which a mass is to be felt.

(*a*) *No mass to be felt.*—Most authorities are agreed that we can seldom feel the normal appendix, and that an appendix that has once been the seat of an inflammatory process and can be felt must not be called a normal appendix. If the symptoms of appendicitis are mild—the temperature not high, the pulse below 100 beats to the minute (except in children and in nervous individuals), the abdomen soft, with little or no rigidity of the right rectus muscle, no mass to be felt, the tenderness only very slight and of only one or two days' standing—the appendix is probably the seat of slight changes. In these cases, however, especially if there is a history of one or more previous attacks, the wall of the organ may be so much diseased that a localized ulceration, perforation, or gangrene can occur at any moment, and a rapid absorption of toxic material or acute infection of the peritoneal cavity follow. Therefore, even the mildest attacks require careful watching. Any moment the clinical picture may change, the pulse and temperature rise, the pain become more severe and spread, and immediate operation become indicated.

It is generally impossible to diagnosticate correctly a perforation or gangrene of the appendix in a case where no mass is to be felt. A sudden collapse or the sudden onset of very severe symptoms during the course of a mild attack often indicates a perforation as the cause. Physical examination may reveal nothing but the sudden appearance of extreme rigidity of the right rectus muscle, perhaps accompanied by a chill or a sudden increase of the pulse rate. A localized gangrene may sometimes be suspected where the general symptoms are of short duration, but are altogether out of proportion to the local signs.

(*b*) *A mass is to be felt.*—The diseased appendix can sometimes be recognized on palpation when it is much thickened or distended with fluid, and when there is little or no rigidity of the right rectus muscle. A mass in the right iliac region in appendicitis generally means that the inflammatory process has extended beyond the appendix; *i. e.* there is a localized peritonitis in the right iliac fossa. Either there is an abscess or a mass of adhesions around the diseased organ. If the mass is of soft consistency, with tympanitic resonance over it, it is probably a mass of adherent intestine, perhaps with a small abscess in its center. Large abscesses, and often small ones, may be recognized by the characteristic feel and their immobility. Aside from the height of the temperature and the pulse, etc., one can often say from the characteristic feel of the mass that there is an abscess. In a certain number of cases there is a small mass which is freely movable from side to side. Such a freely movable mass is generally the inflamed appendix with some omentum wrapped around it. A thrombosed mesentery of the appendix may sometimes be suspected where the attack of appendicitis is only of one or two days' duration, but where the patient has had frequent severe chills during the course of the disease, and where malarial poisoning can be excluded.

An exudate which persists longer than two to three days without diminishing in size, or is increasing in size, always contains pus as its nucleus. It may be that the pus is small in amount, or that it is well encapsulated and not under great tension. In such a case the symptoms may be mild, and may remain so for days, weeks, or months. I recently operated upon a patient whom I had seen about two months before with a large, tender mass in the right iliac region without a single symptom excepting localized pain. Although warned of the danger, he walked around for two months withholding his assent to the operation. He finally concluded to be operated upon, again consulted me, and was prepared for immediate operation, at which I opened a large abscess, which contained much foul pus. During the two months the size of the tumor had remained unchanged, and the pain had remained the same. If the pus is under great tension and not well walled off from the general peritoneal cavity, the symptoms will become progressively more severe. Sudden disappearance of the mass means rupture into the general peritoneal cavity or into a hollow viscus, and is accompanied by an evanescent or permanent amelioration of the symptoms, perhaps with a discharge of pus by rectum or urethra.

When, in appendicitis, a mass is to be felt by rectal examination it means an inflamed appendix partially in the pelvis, or a secondary abscess or adhesions in the pouch of Douglas, or a gravitation of fluid from the general peritoneal cavity into the pelvis. The tip of the inflamed organ can sometimes be felt by rectum, and is then an aid in the diagnosis of the location of the diseased organ.

Periappendicular abscesses are most often caused by perforation or gangrene of part or of the entire organ, but in a certain number of cases an abscess is found around an appendix which is only slightly diseased. In the patients, therefore, who give a history of acute appendicitis, and who have a mass in the right iliac fossa, we can only diagnosticate "acute appendicitis-abscess;" we can never say beforehand what pathological changes have occurred in the appendix.

3. *What can we diagnosticate regarding the general peritoneal cavity?*

If all the classical signs and symptoms of general peritonitis are present—and I need not enumerate them—the diagnosis can always be made with ease. Can we, however, make a diagnosis that the peritoneal cavity is in immediate danger, or that infection or inflammation has already begun? Slight general tenderness and tympanites have little more than confirmatory value; they are often present, especially in children or nervous individuals, where the general peritoneal cavity is found normal at the operation. Spreading pain and tenderness in the abdomen have their value, especially in advanced cases, as have tympanites, obliteration of the liver, dulness, dulness on percussion in both lumbar regions, repeated vomiting, constipation, and the general symptoms relative to the pulse, temperature, and the general appearance of the patient. Rigidity of the abdominal muscles, and especially of the left rectus muscle, in addition to that of the right side, is often of the greatest value. It is a rigidity that does not disappear when the patient is under the influence of narcotics, and not until he is under deep anæsthesia. This rigidity is often present before the pulse has begun to rise. I have operated upon four cases during the past year (two in adults and two in children) where the symptoms were mild, the pulse slow, the temperature not high, where the main indication for immediate operation lay in the extreme rigidity of the abdominal muscles. In all four cases the general peritoneal contained turbid fluid; in two the gangrenous appendix was found free in the general peritoneal cavity; in the other two cases it was only partially walled off by adhesions.

In the attempt to arrive at a conclusion regarding the condition of the general peritoneal cavity, every fact of the case must be carefully weighed. Even in the absence of a rise in the pulse rate, or a sudden extension of the pain or tenderness, I have learned to rely more and more upon marked abdominal rigidity as an indication of impending trouble in the peritoneal cavity.

The differential diagnosis between acute appendicitis and other affections is generally easy. Occasionally an affection of the gall-bladder, a torsion of the omentum, a new growth in the intestine, an intestinal obstruction, an affection of the female adnexa, or a reflected pain from thoracic disease, may make differentiation difficult.

The frequency of appendicitis must be kept in mind. It is more frequent in the late spring and the summer months, and more severe cases occur in large cities, probably from hygienic and dietetic causes. On the service of Dr. Lilienthal, at the Mt. Sinai Hospital during 1900, 77 per cent. of the cases of right-sided abdominal disease, and 68 per cent. of all abdominal affections, exclusive of hernia and affections of the kidney, were due to inflammation of the appendix vermiformis.

In the foregoing remarks but a few points have been considered, and these from a standpoint that might be called narrow. It would be just criticism to declare that for a disease of such a protean character as is acute appendicitis one cannot lay down any fixed rules; one cannot make any fine pathological distinctions between the various forms of the disease. As has already been said, in some cases the severity of the disease is in inverse proportion to the acuteness of the symptoms. In other cases the changes in the appendix remain slight, but the symptoms of general poisoning are very severe. Most operators must have seen deaths from general septicæmia in cases where the appendix was only moderately diseased. Up to the present time, therefore, we are able to recognize few of the pathological changes that have occurred in the appendix. We must still depend upon the pulse, the pain, the temperature and the other symptoms as indications of the severity of the disease and of the treatment to be followed. It would be a manifest error to attempt to diagnosticate the pathological condition of the appendix, and to find in the pathological diagnosis the indications for or against operation. Such a course would most certainly be followed by the direst results. We must find our indications for operation in the condition of the pulse, the pain, the temperature, the general symptoms, and the results of the physical examination. We may, however, learn more of this disease by attempting to have a better pathological knowledge underlie our principles of operative treatment. It is with this object in view that the subject has been approached in this paper from, what I venture to call, a somewhat novel standpoint.

Clinical Department.

CARBOLIC-ACID GANGRENE, WITH REPORT OF A SEVERE CASE.

By JOHN GLENDON SHELDON, M.D.,
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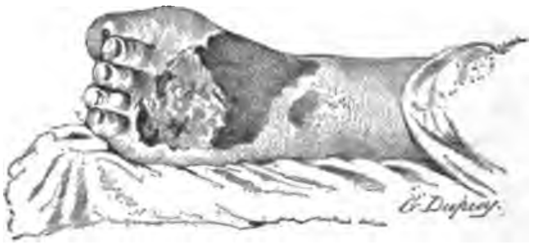
Mary F., age twenty-six, servant, unmarried, applied a few drops of a 50-per-cent. solution of carbolic acid to a corn situated on the outer side of the second toe of the left foot. The carbolic acid was dropped on some absorbent cotton which was held on the corn about one-half a minute. The cotton was then removed, the site of application dried with a towel, and the foot washed in water. The tissue brought in contact with the acid appeared white and felt numb, but was not painful. Twelve hours later a burning sensation was felt over the entire foot; the affected toe was reddened and slightly swollen, except the area where the acid had been applied, which was black and felt "dead." The process steadily progressed for five or six days, at which time the foot presented the appearance shown in the illustration. The skin on the outer side of the second toe, on the inner side of the third toe, at the base of the toes—on the dorsal and plantar surfaces—and on the dorsum of the foot was gangrenous. Sloughing, with ulcer formation, had occurred at the base of the toes and on a part of the dorsum of the foot. The remainder of the skin below the ankle was reddened and swollen. No œdema was present. During the progress of the destruction of tissue the patient complained of intense pain, burning, and itching in the parts involved. The general symptoms were slight. The temperature did not rise above 99.4° F., and the highest pulse count was 85 per minute. At the end of the first week the symptoms gradually abated, the dead skin sloughed, the redness of the foot disappeared, and evidences of resolution could be noted. The healing of the ulcerated areas was slow and resulted in the formation of a considerable amount of scar tissue.



The treatment consisted in keeping the foot clean. During the progressive stage of the process a dilute solution of cocaine was occasionally applied to the foot to relieve the pain. Two hypodermic injections of morphine were given for the same purpose. When resolution began, zinc-oxide ointment and Lassar's paste were used locally.

The physical examination, uranalysis, personal history, and family history of the patient were entirely negative, excepting the following facts: Two years ago the patient and her sister accidentally got some carbolic-acid solution—strength not known—on their fingers. A condition similar to the one described above that occurred in the patient's foot affected two fingers of the patient and a finger and thumb of her sister. The affection of the fingers resembled that of the foot, being characterized by pain, burning, itching, and redness with gangrene of the skin, followed by sloughing and resolution.

The case herewith reported illustrates two points concerning carbolic-acid gangrene that are worthy of separate consideration. I refer to (1) The importance of the idiosyncrasy of the patient regarding etiology; and (2) The extension of the gangrene beyond the borders of the area brought in contact with the acid.

In the Medical Record of November 16, 1901 ("Gangrene Following the Use of Carbolic Acid"), I made the following statement: "The explanation of the occurrence of carbolic-acid gangrene cannot at present be satisfactorily given. It is not known why gangrene should occur in one case, and no injury to tissue take place in another individual treated in an identical manner. It is probable that the idiosyncrasy of the patient and the surrounding conditions play an important part in each case." The case herewith reported illustrates personal and family idiosyncrasy; the patient does not know that she has ever been exposed to the action of carbolic acid excepting twice (mentioned in the foregoing report), and in each instance gangrene resulted. The patient's sister's experience with carbolic acid has already been mentioned. Fischer (*Münchener medicinische Wochenschrift*, August 6, 1901) reports two cases of gangrene following the local application of carbolic acid to slight injuries. The patients were brothers, and Fischer assumes a family idiosyncrasy for the drug. Fischer's cases and those that I have reported indicate that idiosyncrasy plays a more important part in the etiology of carbolic-acid gangrene than has heretofore been assigned to it in discussions of this subject.

It has generally been believed that gangrene resulting from the local use of carbolic acid limits itself to the area brought in contact with the drug. I have been unable to find any positive statement on this subject, except that made by Levi, who says that the gangrene is limited to the area to which the carbolic acid is applied. In the Medical Record, November 16, 1901, I reported a case of gangrene—supposed to have been caused by the local use of carbolic acid—that began in the foot and rapidly extended to the middle of the thigh. This case and the one herewith reported are the only cases of spreading carbolic-acid gangrene that I have seen recorded.

TETANUS; RECOVERY AFTER THIRTY-SIX DAYS.

By J. BURTON NOWLIN, M.D.,
BUCKINGHAM, VA.

On November 27 Thomas G——, a saw-mill hand, fell on an axe, cutting his right hand on the ulnar side. The cut was an inch long on the palmar and an inch and a half on the posterior surface, extending to the bone. When he came to have it sewed up the same afternoon he had done nothing except pour spirits of turpentine into it, and tie up tightly to stop the hemorrhage. I dressed and sewed it up. Ten days later he came to have the stitches removed. The wound had healed by first intention. There was a minute stitch abscess on the back. The following Wednesday he sent me a message to come, his jaws being clinched and he could not open them. On reaching there I found him as he had said. On being questioned, he managed to tell me that on the Sunday before, ten days after the accident, he had felt some stiffness in his jaws, and thought it due to cold, but it had grown steadily worse. His teeth were firmly clinched, his head drawn back, the sternomastoids rigid; there was the risus sardonicus; great beads of sweat stood on his forehead. His pulse was 120, and full; temperature 101° in the axilla. The tonic spasms came on every fifteen minutes, affecting at this time only the body, arm, and neck muscles. The abdomen was rigid. There was very little difficulty in swallowing. Perspiration was slightly quickened. The clonic spasm was complete as far as the arm, neck, and belly muscles were concerned. He talked in a sharp, explosive manner. His mind was clear, and continued so throughout the disease. He was not sensitive to noise or light at first, but gradually became so after a few days, and complained of the light giving him pain, but neither light nor noise seemed to have influence on the spasm. He was constipated from the first.

Having no chloral with me, I left some morphine and atropine tablets, to be given often enough to keep him quiet. Retention of urine followed this, so I stopped it and put the patient on chloral. The dose at the beginning was 15 grs. every four hours, gradually increased until he was taking 20 grs every three hours. This did not keep him from having the spasms entirely, but nearly so. About the tenth day his legs became involved. He complained of the pain at this time being altogether from his waist down, and it seemed to be excruciating. The tonic spasms were more pronounced, his body being arched, resting on his head and heels. Every muscle stood out prominently. At this time I began the use of carbolic acid. One grain of the crystalline dissolved in four syringefuls of tepid water was inserted in four injections. The injections were made deep into the muscular tissue. This dose was afterwards increased to a grain and a half in the same quantity of water. He complained of a slight burning afterwards, but not enough to bother him. The muscles injected became almost immediately softer and more pliant. The effect lasted for about an hour and a half. I was able to give him but one injection daily. These injections were kept up for fifteen days, when the clonic spasms had nearly relaxed, and the insertion of the needle caused a great deal of pain and made the tonic spasms more severe. At this time he would have only five or six jerks in twenty-four hours. He had an insatiable appetite, and kept some one constantly fixing something he could eat. He could now open his jaws about an inch and a half. The longitudinal fibers of his tongue were in a spasmodic state, so that he could only get it to his teeth. The constipation was relieved by large doses of Epsom salts at first, and by saline enemata later on. The chloral was reduced slightly from time to time, and six weeks from the beginning of the disease he was discharged. From a strong, robust laborer he was reduced to a mere skeleton, as weak as a baby, and complained of great aching and soreness through his muscles, particularly his legs.

REPORT OF A CASE OF FOREIGN BODY IN THE TRACHEA.

By WALTER W. STEBBINS, M.D.,
MOUNT VERNON, WIS.

About the middle of January, I was hurriedly summoned to see a boy, one year old, who had eight successive attacks of violent paroxysms of coughing, with marked asphyxia, ending in unconsciousness. The first attack came on suddenly while the child was playing upon the floor with an ear of corn, from which he had detached a great number of the kernels. The succeeding paroxysms occurred at intervals of from fifteen to thirty minutes.

A hasty examination with the stethescope confirmed the suspicion of foreign body in the trachea. The sound heard when the stethescope was placed over the trachea in the neck was very peculiar and distinctive. The kernel of corn could be heard rattling up and down in the trachea with each respiration, and with each expiration it would impinge against the vocal cords with a sharp click, producing a crowing sound, such as is often heard in cases of croup.

I immediately inverted the little fellow and gave him several sharp slaps on the back between the shoulders. The immediate result was alarming, for respiration ceased at once and unconsciousness supervened. I placed him upon the floor, and after five minutes of artificial respiration, consciousness was restored. I then tried the effect of emetics. The result was disappointing, for, although I gave them in good-sized doses, the vomiting produced was of a passive type, and not of the violent expulsive nature I had hoped to excite; moreover, following each paroxysm of vomiting, respiration would cease and unconsciousness supervene, necessitating artificial respiration.

As the little fellow was growing rapidly weaker and the paroxysms more severe and of longer duration, I deemed it unwise to longer delay tracheotomy. This I, accordingly, performed, ninety minutes after first seeing the patient, during one of the periods of unconsciousness, with the patient lying upon the floor in the midst of the many kernels of corn he had removed from the ear. Wearing apparel and the contents of my emergency bag were scattered about in the greatest imaginable confusion. Asepsis was out of the question, and the only assistant available was the mother of the patient, she being the only other person in the house besides myself, except the three-year-old daughter, who added to the general confusion by continually crying. It was necessary to suspend the operation three times to perform artificial respiration. On opening the trachea and separating the edges of the wound, the kernel of corn popped out during an attempt at expiration.

Not having the proper sutures at hand, I left the wound open, and during the next few days the little fellow coughed much mucus through it, he having had a bronchial catarrh for several weeks. By the eighth day the mucous had ceased to appear through the opening, and by the fourteenth day granulation was complete, and the wound healed, recovery being prompt and uneventful.

Such of my professional brethren who read this report and who have similar cases, I trust will profit by two mistakes which, I am convinced, I made in the conduct of this case, namely, attempts to recover the foreign body by either of the two methods which naturally suggest themselves to one first—inversion and the administration of emetics. These measures cause the foreign body to impinge upon the vocal cords, producing spasm of those organs and the glottis. The resulting symptoms are alarming. I should advocate immediate operation in these cases, before the strength of the patient is exhausted.

ARE SEEDS POTENT FACTORS IN THE PRODUCTION OF DISEASE OF THE VERMIFORM APPENDIX?

By JAMES C. KENNEDY, M.D.,
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A SHORT time since I removed watermelon seed from the vermiform appendix.

Little interest would attach to this were it not that it is a common belief among the laity and a few medical men that should a seed of any kind be swallowed it would immediately find its way to the vermiform appendix and there set up a serious, if not fatal, inflammation.

The reported experience of surgeons throughout the country in reference to this matter is such as to lead one to believe that a seed seldom, if ever, enters the appendix. While all writers admit the possibility of such occurrence, comparatively few have proved it.

From a careful perusal of works on operative appendicitis by competent men, I find that all make the positive statement that, up to the time of writing, not one had discovered a seed in the vermiform appendix. Hospital and private practice for some years back have given me considerable experience in this disease, and while I am not prepared to state the exact number of cases I have operated upon, this is the first seed I have found in the appendix.

Fixing the number of cases operated on by the three authors above mentioned, up to the time they wrote their book, at an extremely low figure, say two hundred and fifty cases, and my own at the same number, together with a more or less careful search of medical literature in order that I might be able to estimate approximately, besides a personal inquiry of a number of surgeons of large experience, I venture to place the presence of seeds or foreign bodies in the vermiform appendix at one in a thousand cases.

Chronic Progressive Deafness.—Mayo Collier discusses the form of deafness which occurs insidiously, without pain or discomfort in the ears, and only becomes apparent to the individual when a marked impairment of hearing has taken place. He believes that in the associated conditions of a chronic cold in the head with partial obstruction to nasal respiration there is every factor necessary to produce the condition known as sclerosis of the middle ear. Detailed reasons are given for this belief. Cases taken early can be improved; even cases considered incurable can often be greatly helped. The nose may be quite free, but the septum may have a depression corresponding to the convexity of the lower turbinal body, and on the pharynx there may be patches of atrophy with dilated veins and islets of enlarged gland substance. On trial of the Politzer bag one will probably fail to get air in, but after an antiseptic and astringent wash, perhaps in a week's time, air will enter. The galvanocautery will put a stop to this latent obstruction and relieve the congestion of the nasal and postnasal space by letting in air, and give tone to the vessels. The nose being ventilated and the potency of the Eustachian tube restored, the drum head should be daily exercised by gentle movements imparted by Politzer's bag and Seigle's aspirator. In a large percentage of cases this results in marked and permanent improvement of hearing.—*Medical Press and Circular.*

Albuminuria Considered from the View of Life Insurance.—B. J. Stokvis says that, according to Zeehinson and Noosden, the percentage of cases of extra-renal albuminuria is from 60 to 68 per cent. As a mark to distinguish renal from extra-renal albuminuria, the author says that the predominance of nucleo-albumin in the urine is a good proof of extra-renal albuminuria, but the microscope is to be preferred to chemical methods. As to renal albuminuria, there are many cases which are functional, and result from curable diseases of the kidneys. The only absolute signs of an incurable disease of the kidneys are: Kidneys—alteration of diuresis, oftener polyuria and pollakiuria (presence of renal cylinders, etc.); Heart—hypertrophy, dilatation; Arteries—endarteritis (arteriocslerosis); Eyes—hemorrhagic retinitis; Nervous System—uræmic symptoms; Skin—œdema, exanthema. When a rigorous examination fails to disclose one of these symptoms, the existence of an incurable disease of the kidneys is very improbable, notwithstanding the presence of albumin in the urine, and the candidate for insurance should be accepted. When one of the above symptoms is found, when diuresis is increasing, and the specific gravity of the urine is below 1,013-1,010, nephritis undoubtedly exists, notwithstanding the absence of albumin in the urine, and the candidate should be refused.—*The Medical Examiner and Practitioner.*

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THE CAUSE OF CARCINOMA.

THE subject of carcinoma is just now attracting an extraordinary amount of attention, but no more than the importance of the subject warrants. We know our limitations in the radical surgery of carcinomatous disease, and we recognize the fact that our best efforts do not cure, but only, in a small proportion of cases, annihilate the neoplasm; but it is the causation and not the removal of cancer which is being studied so energetically at present. In last year's *Transactions of the American Surgical Association*, Park of Buffalo published an important paper bearing upon this subject; and coming from a laboratory whose workers are among the strongest supporters of the theory of the parasitic origin of the disease, the conclusions cannot fail to engage attention. Before commenting specially upon this paper, we may note that practically all pathologists are agreed that carcinoma is the result of perverted epithelial growth, though there is no such agreement as to the cause of such perverse activity. It is hardly necessary to say that many theories have been advanced to explain this, none of which can be called satisfactory from all points of view.

In the Buffalo laboratory a large number of inoculation experiments have been made, and by these and others it is pretty well established that certain elements of the cancerous neoplasm can cause a perversion of the normal activity of the epithelium of the part to which they have been transplanted. The supporters of the parasitic theory believe that they have been able to demonstrate the presence of an organism, the irritating influence of which is responsible for the cellular changes which constitute carcinoma. In judging the results of inoculation experiments, it must be remembered that cellular proliferation will be set up almost invariably by the introduction into the living organism of materials like those used in the experiments, and that this proliferation is not necessarily carcinoma. Carcinoma is proliferation in a particular way.

Because carcinoma is inoculable, it does not follow that there is present a specific organism which is responsible for the tissue change which we call carcinoma. Numbers of experiments like those referred to have been made, which show that carcinoma may be transmitted by transplantation of portions of the growth, or by inoculation with fluids extracted from it, but this does not prove that a living organism is the active agent in the transmission. One point made by Park is that we need not necessarily expect rapid progress in the course of pathological process, due to an infecting organism; since we are familiar with several slow infective processes, and that, therefore, the comparative slowness of the carcinomatous process is not against its being caused by a microorganism. We may admit the force of this without admitting that any support is thereby afforded to the hypothesis that cancer has its causation in a microorganism. So far there has not been enough evidence presented to warrant much faith in the Buffalo idea. Practically, all the evidence offered is that given by certain fairly constant, but somewhat irregular microscopic appearances, which the majority of observers believe to be due to cellular changes and degenerations, but which are said by the supporters of the parasitic idea to be caused by the life processes of a specific microorganism, probably a protozoon. Absolute proof is wanting on both sides, but the weight of evidence is against the parasitic theory, and the *onus probandi* rests with its supporters.

An interesting aspect of this question is opened by considering the possibility of an antitoxine treatment of malignant disease. If the advocates of the parasitic theory were able to bring convincing proof of the correctness of their ideas, it would be entirely reasonable to suppose that there may be developments towards an antitoxin treatment of the disease, and if the disease is definitely shown not to be due to any microorganism, it is still within the bounds of possibility that the same line of treatment would prove successful. We know that the cancer cells, like all cells, require room in which to grow, and suitable nutritional material, and that when they are crowded together there is a tendency towards degeneration in a number of them. This degeneration may be due to an accumulation of the products of the metabolism of the cells, which act like antitoxins in a way analogous to what we see in the case of a true microorganism, when culture material becomes too thickly filled with the growth, and it is possible that a more intimate knowledge of the life history of the normal and the abnormal epithelial cell may lead to important developments along this line. The conquest of cancer must apparently rest with the pathologist, but until the latter is ready, the surgeon must remain our chief dependence.

WORD-BLINDNESS.

THE faculty of speech is a complex function, and comprises not only the mechanism of articulation, but also a revival of various sense-memories, representing the great number of impressions received from without. Paralysis of the motor apparatus of articulation, while it prevents speech mechanically, does not necessarily interfere with those processes that underlie the psychic activity whose expression we know as intelligent speech. On the other hand, we may have, without interference with the mere act of articulation, such derangement of receptive or emissive cerebral function as to impair or even to abolish the power of speech. To the latter condition the designation aphasia is applied, and three principal varieties have been distinguished, namely, motor, sensory and amnesic. It is difficult, however, to maintain any such classification, and not rarely the speech-disturbance is complex, although one form may predominate, and all sorts of combinations may take place. Thus, the power of speaking, spontaneously (with or without confusion) or by repetition, or of reading, to oneself or aloud (with or without comprehension), or of writing, spontaneously (with or without confusion) or on dictation or by transcription, or of comprehending the spoken, written or printed word or figure or other symbol, may be lost, one or more, in varying degree.

A condition closely related to aphasia is that known as mind-blindness, or object-blindness, or as visual or optic aphasia, in which, although the object is seen, the patient is unable to recognize or to designate it. Of this a special variety is known as word-blindness; there may also be a letter-blindness. Four striking examples of word-blindness have been recently reported by Dr. Jas. Hinshelwood (*Lancet*, February 8, 1902, p. 358), who has already made several contributions to this interesting subject. In one of the present cases a man familiar with four languages was found almost totally word-blind to one, less word-blind to two, and not at all word-blind to the fourth. The explanation of this strange phenomenon is thought to reside in the fact that only a portion of the center in the cerebral cortex—probably situated in the supramarginal and angular gyri of the left hemisphere in right-handed persons—in which are lodged the word-visual images of language is destroyed, the cells subserving the function for each language forming separate groups. It has already been observed that a patient familiar with two languages may be word-deaf to one and not to the other, and an analogous explanation is probably applicable also here. In the second and third cases of word-blindness the patient could read printed letters quite well, but written letters with difficulty if at all. There was little interference with the reading of figures in these two cases, as well as in the fourth, in which there was complete word-blindness and also letter-blindness and an inability to designate by name objects seen, although these were apparently recognized. The first patient retained the power of reading musical notes.

In the second and fourth cases there was right lateral homonymous hemianopsia. The frequency with which this association has been noted suggests that the centers for visual memory and for the right halves of both visual fields, or the paths to them, must lie close together, and this inference is confirmed by pathological evidence. The question as to recovery from word-blindness depends upon the nature and the situation of the causative lesion. If this be destructive, recovery is quite out of the question, except in so far as the opposite hemisphere can be educated to take up the lost function. Whenever syphilitic infection is even suspected a vigorous course of mercury and iodid should be instituted.

VICARIOUS ELIMINATION FOLLOWING REMOVAL OF THE KIDNEYS.

The effects of any toxic substance introduced into the body must depend upon the rate with which it is absorbed and eliminated. In the case of strychnine it is believed that such elimination takes place almost wholly through the kidneys, and it has been thought that removal of these organs, or ligation of their vessels, would be attended with an accumulation of the drug and the development of toxic effects. In order to test the accuracy of this view Drs. S. J. Meltzer and W. Salant (*Journal of Experimental Medicine*, Vol. VI., No. 5, p. 107) undertook a series of experimental investigations, in the course of which they subjected rabbits, which are very sensitive to the effects of strychnine, to repeated injections beneath the skin of subminimum toxic doses at greater or lesser intervals. Following a preliminary series of control experiments, in which the limits of toxic and lethal dosage were determined, it was found that in animals from which the kidneys had been removed not only was the minimum toxic and fatal dosage not diminished, but also the repeated injection of subminimum doses, at not too short intervals, in amounts equal to fatal doses, was unattended with any reaction. Further, a single toxic dose caused but one attack, or at most a few attacks, of tetanus. The explanation of these apparently paradoxial results must reside in vicarious elimination on the part of other organs than the kidneys, or in the destruction of the strychnine in the blood, or in the development of substances that neutralize the effects of strychnine upon the nervous system, or finally in impaired absorption from the subcutaneous tissues by reason of increased blood-pressure. Which of these, one or more, is the responsible factor is a matter for future investigation. The practical value of the observations here briefly outlined resides in the demonstration that the removal, and probably also the destruction or the disease, of an organ does not necessarily result in the retention of the substances that it is known it is the function of that organ to eliminate.

ALCOHOLISM AND SUICIDE.

The Hospital, March 15, gives excerpts from an article on the above subject by Dr. W. C. Sullivan of Pentonville Prison, which appeared in the *Journal of Mental Science* (April, 1900).

The relation of alcoholism to suicide is a matter which has exercised the minds of alienists for many years, and especially of late, when the tendency to self-destruction seems to have become more pronounced than ever.

Dr. Sullivan states that in his article an attempt is made "to determine the rôle which alcohol may have played in the late increase of suicide in England and at establishing the distinctive characters which constitute the type of alcoholic suicide.

Authorities differ widely as to whether or not alcohol is a prominent factor in causing suicide. Dr. Magnus Huss states "that the suicidal impulse is a more frequent accompaniment of the melancholia of drunkards than of melancholia from other causes; and, further, that among the uneducated suicide frequently follows on the disordered emotional tone which, sooner or later, results from the abuse of alcoholic liquors."

The majority of observers are in accordance with these views, but there are some very distinguished investigators who hold that alcoholism has little or no influence upon suicide causation.

Dr. Sullivan himself believes that alcoholism is but one of the several causes of suicide, and that its relative importance as a suicidal factor differs in different places and at different epochs. In thirty years the increase of alcoholism in Great Britain is estimated at more than 100 per cent. During the same period there has been a steady increase in the suicide rate. As regards attempts to commit suicide, there has been a similar and even more decided increase. Voluminous and convincing statistical evidence proves these two points. It is likewise shown by Dr. Tatham's tables of occupational groups, with a high rate of alcoholism that these groups furnish a relatively high rate of suicide. Dr. Sullivan, therefore, draws the following conclusions: Firstly, that the recent increase of suicide has coincided with a considerable development of abortive suicidal attempts. These attempts, in such of their characters as are ascertainable, have approximated to the type of alcoholic suicide, thereby confirming the clinical evidence, which attributes to alcoholism the chief rôle in the genesis of abortive suicidal impulses. Second, that this increase of suicide has been, in a large degree, related to the influence of alcoholism, an influence which in the same period—as mortality statistics attest—has tended to augment. Third, that there is a type of alcoholic suicide, with characteristics distinguishing it from suicide of other causation, and that as compared with cases of deliberate and co-ordinate suicide due to other causes, alcoholic suicide is found to be more impulsive, more directly and immediately related to organic conditions in the individual. Fourth, the chronic intoxication by alcohol, as we observe it, clinically produces generalized disorders of visceral function throughout the economy, whence there results an alteration and disturbance of those organic stimuli which form the groundwork of our personality; those stimuli whose activity, as Maudsley puts it, is "even of more consequence in determining the tone of our feeling or of our disposition and the character of our impulses than that activity which follows impressions received from the external world." The depressed emotional tone thereby induced prepares the suicidal impulse, which issues into action when a supervening increase of intoxication has still further lowered the level of function in the brain.

RESTORATION OF DR. EDWARD KERSHNER TO HIS RANK IN THE NAVY.

We are much gratified to be able to announce to our readers that the President of the United States has signed the bill restoring Dr. Edward Kershner to his rank in the Navy, that of Medical Inspector. Dr. Kershner was dismissed from the service in 1896, after a court-martial, in which he was found guilty of violation of regulations, and scandalous conduct. The former statement meant that he wrote to his family and friends concerning charges of a serious nature, which afterwards were proven to be utterly unfounded, that were made against him by a high official of the line, who seems to have been very much incensed that Dr. Kershner had different opinion from himself as to the methods of spreading contagious or infectious disease. The second charge was in reference to his answers at the court inquiry, in regard to these communications. The proceedings of this court of inquiry, which, of course, preceded the court martial, were taken down in long-hand, a fact which caused considerable discrepancy of statement by one or more of the witnesses against Dr. Kershner at the court-martial, and more serious results, as regards Dr. Kershner. The Senate twice recommended the restoration of Dr. Kershner, and finally the House of Representatives also unanimously made the same recommendation, and about March 20th, a few days after the passage of the bill, the President signed it, although, as we happen to know, some very high officials in the Navy were opposed to the last to Dr. Kershner's restoration.

This is, indeed, a triumph of right and justice. Dr. Kershner was never guilty of anything that ought to have subjected him to a court-martial. If every officer of the Navy who gets into trouble with his superior officer, and is made the subject of a court of inquiry on that account, should be punished because he writes to the Surgeon-General of the Navy and other friends in regard to the matter in question, the whole Navy would be under trial about half the time. This was all there was of Dr. Kershner's offense, for which he was dismissed from the Navy, although the evidence, according to many competent authorities, would never have passed in any ordinary court of justice.

As a matter of fact, a court-martial in the army or navy is a relic of feudalism, which could well be replaced by modern methods of learning the truth. The punishment inflicted on Dr. Kershner for an offense that was, at the most, merely technical—an offence committed at some time or other by every officer—was out of all proportion, even to the gravity of the matter—as determined by line officers. We are free to say that, under the same circumstances, an officer not connected with the medical staff and in the line would probably have been, at the most, reprimanded in general orders.

The charge of "scandalous conduct" was completely disproved by committees of Congress—a fact which is attested by the endorsement of President Roosevelt, who never would have restored Dr. Kershner to the Navy unless he knew that it was an act of justice to do so. We congratulate the profession that one of its honored members has been finally relieved from unjust and false accusations.

But six years is a long time to wait for such a result. It is proper to add that none of Dr. Kershner's colleagues in the profession ever seemed to have, for one moment, doubted Dr. Kershner's integrity. He is an honored Fellow of the Academy of Medicine, and Professor Emeritus in the Post-Graduate Medical School.

NUTRITION AND THE NUTRITIVE VALUE OF FOOD.

The U. S. Department of Agriculture has recently published a bulletin by Professor W. O. Atwater on the principles of nutrition and the nutritive value of food.

The pamphlet is a compendium of useful knowledge, and fairly bristles with facts with regard to nutrition and food. The professor sums up, in part, as follows:

Food has been briefly defined as "that which taken into the body either builds tissue or yields energy." After explaining the functions of protein and of the fats and carbohydrates, it is shown that the carbohydrates, as a general rule, are more fully available for use in the body than protein and fats, and protein of animal foods, as meat, fish, milk, and eggs is more digestible than that of vegetable foods. The need of proper cooking and of providing appetizing food is strongly insisted upon, and the beneficial results of a varied diet is clearly demonstrated.

Professor Atwater points out that as the habits and conditions of individuals differ, so, too, their needs for nourishment differ, and their food should be adapted to their particular requirements. It has been estimated that an average man at moderately active labor, like a carpenter or mason, should have about 115 grams or 0.25 pound of available protein and sufficient fuel ingredients in addition to make the value of the whole diet 3,400 calorics, while a man at sedentary employment would be well nourished with 92 grams or 0.20 pound of available protein and enough fats and carbohydrates in addition to yield 2,700 calorics of energy. The demands, however, are variable, increasing or decreasing with increase or decrease of muscular work, or as other needs of the person change. Each person, too, should learn by experience what kinds of food yield him nourishment with the least discomfort, and should avoid those which do not agree with him.

A SOUTHERN PHYSICIAN'S VIEW OF THE FUTURE OF THE NEGRO.

The negro question cannot fail to interest an earnest American, whether regarded from a political, social, moral, or physical standpoint. With the three first of these a medical journal has no direct concern, although there is a more or less intimate connection between each.

The health of the negro is, however, a matter of professional regard to medical men, and one which has, within recent years, been the cause of much discussion.

Opinions vary as to whether the negro has improved or retrograded physically since his freedom. The larger number of those competent to judge declare that the colored race in the United States is decidedly less hardy and less prolific than before the civil war.

Dr. Seale Harris, Union Springs, Ala., read before the Tri-State Medical Society of Georgia, Alabama, and Tennessee, at Nashville, on October 9, 1901, a paper on the subject, and commenced by saying that the negro race was the "white man's burden." He stated that after six years' experience as health officer and practising physician in a county where the blacks outnumbered the whites by four to one, he was saddened by watching the ravages of tuberculosis, typhoid fever, syphilis, and other diseases upon this generally kind-hearted and inoffensive people.

He called attention to the fact that before the war the negro death-rate in the South was less than that for the whites, while recent statistics of most cities of the South showed a negro death-rate of two to three times that of the whites, and in no Southern city did the negro birth-rate equal their death-rate.

Dr. Harris is of the opinion that "the three D's, dirt, disease and the devil, will be the principal agents in settling the question which faces the South. The writer does not credit the mortality statistics of the 1900 census, at the same time agreeing that there has been a considerable increase in the negro population, more than counterbalanced, however, in his opinion, by the moral and physical retrogression of the race.

Tuberculosis, syphilis, and malarial fevers are the chief causes of the negro excessive death-rate and physical deterioration, but this Southern physician asserts that all diseases are on the increase with them, and further makes this important statement that while he has no statistics to show the mortality of carcinoma among the blacks, he believes it to be increasing among them at the same rate at least as among the whites.

As to remedies for such an appalling condition of affairs, none, thinks the writer, can save the negro from racial extinction. Nevertheless, according to his views, whatever is done should be effected in the way of sanitary reforms, and provision of free hospitals, sanatorias, and dispensaries for the treatment of their sick, rather than in spending thousands in training their minds.

THE PREVENTION OF CONSUMPTION.

The Pennsylvania Society for the Prevention of Tuberculosis has recently published its annual report, and, it being the tenth year of its existence, gives a review of the work done during that period.

"La Ligue Contra la Tuberculose en France," founded in Bordeaux in 1891, was the first society of its kind. The Pennsylvania Society, founded in 1892, was the second and the pioneer in America. The National Society for the Prevention of Consumption and other forms of Tuberculosis was founded in London in 1898.

Among the most useful efforts of the Pennsylvania Society has been the publication of a series of tracts for gratuitous distribution, intended to educate the general public as to the best means to be taken to avoid the contraction of tuberculosis and to prevent its spread. During the past year the Society has reprinted over 30,000 copies of its tracts, and has printed a new one.

In connection with another society, the Free Hospital for Poor Consumptives, a site for a sanitarium has been acquired and contracts for three buildings, having a capacity of forty-eight patients, have been awarded. With the present accommodations the institution will be able to care for seventy-five patients.

During the past year the Society has renewed its efforts to have pulmonary tuberculosis included among the diseases returnable to the Bureau of Health, but although endorsed by the Philadelphia County Medical Society, by the Bureau of Health, and by the Director of Public Safety, the measure was not adopted, owing to the adverse action of the Mayor.

A proposal by the Society to abate the spitting nuisance in Philadelphia by proceeding by law against offenders was also disapproved by the Mayor, and consequently came to naught.

The Society during its ten years of existence, by the energetic attempts to check the spread of tuberculosis, has thoroughly justified its foundation, and set an excellent example to philanthropists and sanitarians of other large American cities.

CANCER AMONG THE JEWS.

When, some few weeks ago, Dr. Brathwaite of Leeds, England, advanced the theory that salt was a potent cause of cancer, and gave as one of the reasons for his belief in this supposition that the Jews, who consumed but little salt, were, as a race, remarkably free from cancer, the veracity of his statement was questioned by a large number of medical men who had had experience in Jewish practice.

In the *British Medical Journal*, March 15, the assertion is once more traversed, in an able, although somewhat lengthy, article.

The writer, who is undoubtedly himself a Jew, says that in a practice, largely among Jews, extending over a period of more than twenty-five years, he has found ample evidence to show that individuals of the Jewish race are by no means free from carcinomatous disease. Mammary scirrhus has been very often met with, and while examples of nearly every form of cancer have been seen, there seemed to be a special tendency to the development of intestinal malignant growths.

The writer goes on to say: "Of patients dying between forty and sixty-five years of age a very large percentage have been sufferers from cancer, while it is sad to remember how many Jewish friends and relatives have succumbed to the same fell malady. There is undoubtedly an impression in the minds of members of the Jewish community that, far from being exempt, the Jews are especially prone to suffer from malignant growths."

Numerous statistics with regard to cancer among Jews in London are given, and from these the writer draws the following deductions:

It appears, then, on careful consideration, that the statistics of mortality from cancer among the Jews are not so much in opposition to the results of private observation as at first appeared, and the conclusion to be drawn from all facts at present obtainable seems to be that, while cancer is considerably less prevalent among Jews than among the general population, nevertheless, the probability that a Jew of cancer age will suffer from that disease is not materially less than in the case of a person of another race.

Moreover, the idea that the consumption of pork may be a cause of cancer can certainly be dismissed. At the present time a considerable number of Jews are by no means strict adherents to the dietary laws, and it will be within the experience of every one who has practised among them that cancer attacks the orthodox as often as it attacks the most heterodox of the race. That food has an important bearing on the causation of cancer would appear to be a belief that is steadily gaining ground among students of the subject. Behla is of the opinion that uncooked vegetables carry the infection; others variously surmise that pork, salt, or tomatoes are responsible for the conveyance of the disease. If, then, it can be proved that any one article or articles of diet are the infective agents, a very important step will have been taken toward the final solution of the cancer problem.

MOSQUITOS AND MALARIA.

Press despatches from Japan state that remarkable results have been obtained relative to the mode of infection in malarial disease by experiments conducted by the Japanese military authorities in Formosa. A battalion of soldiers, completely protected from mosquitos for 161 days during the malarial season, escaped the disease entirely, whereas there were 259 cases of malaria in an unprotected battalion in the same place and during the same length of time. These results, if correctly quoted, confirm in a most conclusive way the fact that malaria can be transmitted only by means of the mosquito, and call for the establishment of organized effort for the extermination of these annoying and pestiferous insects in malarial localities. That such a comprehensive test, so valuable in its results, should be carried out by the Japanese is evidence of acquaintance with and interest in the latest advances of medical science.

IS INFLUENZA PREVENTIBLE?

Dr. Robert Bell, an English physician, has advanced the opinion that influenza is a preventible disease, and his views are commented on favorably in a well-written article which appeared in the *Sanitary Record*, March 15.

Dr. Bell says that the principal factors which predispose to influenza are constipation, defective ventilation, overfatigue, prolonged strain of mind and body, insufficient food and clothing, and prolonged exposure to cold and wet.

The fact that influenza is more prevalent in winter than in summer is due, as Dr. Bell points out, not to the fact that the germs are more in evidence during one season than another, but simply because they have better facilities for developing their potency. These opportunities are the natural outcome of defective ventilation. The public are, unfortunately, prejudiced against fresh air, preferring a stuffy atmosphere; but if a perfect system of ventilation were made compulsory in all public buildings, the immunity from diseases such as influenza would soon convince them of the error of their ways, and speedily lead to a more intelligent conception of what ventilation means.

Dr. Bell also takes a tilt against the bad ventilation of railway carriages, and if he lived in this country, there is little doubt but that he would declaim quite as loudly, and with as much justice, against the street cars as propagators and disseminators of influenza and other kindred maladies.

As to whether influenza could be entirely prevented is, however, a question very difficult to answer. Being of microbic origin, and possibly air-borne, the malady travels from place to place and from country to country with incredible and disconcerting swiftness, and attacks those whose systems are run down and whose condition is low.

That its ravages might be greatly checked if people would live a healthy life, is patent to everyone. So far as defective ventilation is concerned, the remarks of Dr. Bell are perfectly correct, and apply, perhaps, with more emphasis to this country than to England.

The MEDICAL RECORD has always insisted that the ill-ventilated and overheated public offices and rooms are responsible for many complaints of the respiratory organs, and are in particular eminently favorable to the incubation and spread of the germ of grip.

If influenza be not absolutely preventible, at any rate a careful observance of the ordinary rules of health will keep the insidious foe at a distance.

THE RANK OF HOSPITAL STEWARDS OF MARINE HOSPITAL SERVICE.

A combined effort is being made by the former hospital stewards of the Marine Hospital Service, who were quite recently given the title of "pharmacists," to have this latter designation changed to "lieutenant," and to be given the rank and pay of lieutenants in the army. The movement is being supported by pharmaceutical associations in all parts of the country, and a number of petitions favoring this change have been received by Congress. Inasmuch as the Marine Hospital Service is not a military organization, and as the able physicians who constitute its commissioned personnel themselves have no military rank or title, it is scarcely to be expected that the latter would be granted to their subordinates, who have practically the same duties and status as the hospital stewards of the army and the pharmacists of the navy, neither of whom have the rank and pay of lieutenants.

The Philippines Constabulary and Army Medical Staff.—An order has recently been issued that sick officers and men of the Philippines constabulary receive medical attention at army hospitals, thus materially increasing the duties of army medical officers. Reimbursement for the cost of care, subsistence and medicines is to be made to the Medical Department from the constabulary appropriation of the insular funds, at the rate of $1 per day for each officer and 40 cents a day, United States currency, for enlisted men. This action is rendered necessary from the almost total lack of proper civil hospitals in the Philippines, and the great difficulty in securing competent medical attendance from the native physicians.

News of the Week.

Change in the Lunacy Bill.—A supplemental lunacy bill was passed by the Legislature just before its adjournment, by which the provision of the former bill, to which we objected, was reconsidered and reversed, so that matters remain, in so far as the continuance of the two superintendents on Ward's Island is concerned, as before.

Fire Precautions at Bellevue.—The New York *Evening Post* says that plans are being prepared which, in accordance with the demands of the Department of Buildings, will tend greatly to reduce the chances of fire disaster in Bellevue Hospital. A thorough inspection of the Bellevue buildings was made by the Department of Buildings, and the reports which followed recommended a large amount of work on the hospital structures.

Among others, these orders were issued by the Department after receipt of the report of the inspectors: The fireproofing of the elevator shaft; the removal of a wooden duct in the linen room; the removal of lath and plaster partitions near the amphitheatre of the main building, and the construction of an extra line of stairs from the balcony of the east wing to the main building. The erection of self-closing fireproof doors was ordered in all stories of the east wing, and in the hallway leading from the women's ward to the children's ward. Bellevue is already fitted with fireproof doors, but many of these were found to close imperfectly. Springs have been ordered for these. Fire escapes were ordered to be built on the front of the hospital ward at the second story; the platform to be four feet six inches wide, taking in three windows, with iron stairs to the ground, and on the east side of the annex.

Surgeons' Fees in France.—Dr. Albarran, one of the most prominent surgeons in France, recently sought to recover from a grocer the sum of $1,200 as a fee for performing laparotomy on the latter's wife. The Seine Civil Tribunal decided that the charge was exorbitant and reduced the fee to $500, at the same time recording the opinion that it is a medical man's duty to regulate his fee according to the means of the patient.

London Census Returns.—Details of the London census now issued give some interesting facts. The number of families in the metropolis is 1,019,546, and the average in a family is slightly over 4.4 persons. These families share the services of 234,398 female and 15,425 male servants.

In London females exceed the males by 252,371. Widowers are returned as numbering 72,128, while widows are nearly thrice that number. The youngest couple, husband and wife, are both sixteen, and the youngest wife in London is fifteen. The pauper inmates of work-houses are given as 46,646.

The percentage of the total population of the age of ten and upward engaged in trade or occupations is 83.6 per cent. of men, and 37.4 per cent. of women. The number engaged in electrical work has increased 16.6 per cent., and the actors, who total 2,234, show an increase of 78 per cent. compared with 1891. Women occupied in commercial business and as clerks have increased 18.1 per cent., and make a total of 19,097, compared with 84,315 males similarly employed. Foreigners who have not been naturalized total 135,377, and of these Russians are the most numerous, numbering 38,117. These are followed by Germans, Russian Poles and citizens of France and Italy.

Of the Americans who have not been naturalized, actors figure most conspicuously, numbering 211, three-fifths of the total profession being unkindly ranked by the census as of "minor occupations."—*New York Sun.*

Army Medical Officers Retired.—First Lieutenant Marchall M. Cloud, assistant surgeon, has been retired with the rank of captain, having been found physically disqualified for promotion. He has been in the army since 1896.

Colonel James P. Kimball of the Medical Department, who has been in the regular service since 1867, has also been retired. He was graduated from the Army Medical College, and was promoted to be colonel January 1, 1902.

Cholera in Manila.—To prevent the spread of the cholera epidemic which prevails in Manila to the officers and men of the naval station at Cavite, authority has been given the ranking naval officer to take such steps as may be necessary. As far as can be learned, the epidemic is confined to the natives and Chinese in Manila, and the disease does not prevail among the whites.

The Medical Society of the State of West Virginia will hold its thirty-fifth annual meeting at Parkersburg, W. Va., on Wednesday, Thursday, and Friday, May 21, 22, and 23, 1902. Members are requested to send the titles of their papers to the Secretary not later than April 25, so that the program can be completed in time. The committee on arrangements, and other officers of the society, are sparing no effort to make the coming meeting one of great profit and pleasure to all. A very large attendance is, therefore, confidently expected. The usual reduced hotel and railroad rates will be granted.

Program and further details will be sent two weeks before the meeting.

The Association of Medical Officers of the Army and Navy of the Confederacy will meet in the Judicial Room of the City Hall in Dallas, Tex., corner of Akard and Commerce streets, on Tuesday, April 22, 1902, at 12 M. A grand reunion is expected, and extensive preparations are being made for a profitable and enjoyable interchange of past experiences.

Canadian Medical Association.—The annual meeting of the Canadian Medical Association will be heldin Montreal on the 16th, 17th, and 18th of September, 1902. The President is Dr. Francis J. Shepherd, 152 Mansfield Street, Montreal; the Local Secretary, Dr. C. F. Martin, 33 Durocher Street, Montreal, and the General Secretary, Dr. George Elliott, 129 John Street, Toronto. Dr. William Osler, Professor of Medicine in Johns Hopkins University, will deliver the address in medicine, and Dr. John Stewart, Halifax, N. S., the address in surgery. Arrangements are already well in hand for a very large meeting.

Philadelphia County Medical Society.—At a stated meeting, held March 26, Dr. L. Napoleon Boston read a paper entitled "Amœbic Dysentery with Hepatic Abscess; Rupture into the Lung; Amœbæ Coli Found in the Sputum," and he exhibited the patient. Dr. Wm. Osler of Baltimore, by invitation, read a paper entitled "Amœbic Dysentery." Dr. Simon Flexner read a paper entitled "Bacillary Dysentery," and Dr. Hobart A. Hare one on "The Treatment of Dysentery."

Passengers Vaccinated Nolens Volens.—Twenty-five passengers on a south-bound Fordham trolley car had an unpleasant experience on Thursday, March 28, owing to the ill-advised zeal of a physician traveller. One of the passengers had a rash on his face, which was diagnosed as smallpox by a passenger, who said he was a physician and who ordered the motorman to proceed at full speed to the nearest police station. The car was forthwith sent to a police station, the man with the rash placed under guard, and the Health Department telephoned to for a vaccinator. A vaccinator was despatched and commenced to vaccinate the passengers without delay. Some objected, but their scruples were overcome and all submitted to the operation. The health physician then inspected the smallpox case, and immediately saw that the man had been wrongly suspected. It is said that the too-zealous physician received many back-handed compliments from the irate vaccinated ones, some of whom expressed their wish that he would go to a place where rashes are common and fools plenty. The doctor very wisely refused to give his name, and demurely disappeared to avoid a one-sided argument.

New York School of Clinical Medicine.—Dr. Robert Coleman Kemp of this city has been elected an Associate Professor in the Department of Internal Medicine, with Dr. A. W. Gardner as assistant.

Funds for Hospitals.—The Distributing Committee of the Hospital Saturday and Sunday Fund has decided to apportion this year's collections as follows:

Montefiore Home and Hospital for Chronic invalids	$6,600 00
St. Luke's Hospital	6,038 05
Mt. Sinai Hospital	5,351 55
Roosevelt Hospital	4,346 31
German Hospital	3,823 91
Hospital for Ruptured and Crippled	3,504 91
Mother's Home of the Sisters of Misercordia	2,569 31
St. Mary's Free Hospital for Children	2,261 76
Isabella Heimath	2,231 57
Nursery and Child's Hospital	2,188 19
Post-Graduate Hospital	2,143 41
Home for Incurables	1,877 75
Sloane Maternity Hospital	1,793 83
Lebanon Hospital	1,777 73
French Hospital	1,681 15
Colored Home and Hospital	1,610 11
Orthopædic Dispensary and Hospital	1,467 56
Homœopathic College and Hospital	1,464 23
New York Infant Asylum	1,323 57
House of the Holy Comforter	1,152 09
New York Eye and Ear Infirmary	1,097 86
N. Y. Infirmary for Women and Children	1,082 26
Woman's Hospital	998 57
Skin and Cancer Hospital	880 61
J. Hood Wright Memorial Hospital	875 54
New York Ophthalmic Hospital	790 09
Hahnemann Hospital	685 51
New York Polyclinic Hospital	643 94
Manhattan Eye and Ear Hospital	634 69
St. Mark's Hospital	608 40
Beth Israel Hospital	547 26
Loomis Sanitarium, city branch	501 95
General Memorial Hospital	446 30
Babies' Hospital	250 00
Convalescent Home	250 00
N. Y. College and Hospital for Women	250 00
N. Y. Ophthalmic and Aural Institute	250 00
Total	$66,000 00

X-Rays and Cancer.—It is reported that Dr. F. T. Addyman of St. George's Hospital, London, has announced that he has completely cured a bad case of cancer by the use of *x*-rays.

Deaths from Cholera in Manila.—The New York *Sun*, March 28, contains a despatch from Manila, dated March 27, stating that the cholera returns show that there have been sixty-three cases and forty-nine deaths since the outbreak. Two thousand persons are comfortably housed at the detention camp.

Played Piano for Twenty-seven Hours.—A despatch from Marseilles, March 25, states that a Mr. Garnier undertook to play continuously for twenty-seven hours, at intervals not exceeding in the aggregate an hour and a half, for a wager of 1,000 francs.

He succeeded in accomplishing his self-imposed task, but at the cost of considerable nervous energy, and with much severe physical suffering. When he stopped, having won his wager with fourteen minutes to spare, he collapsed from nervous prostration. The condition of his hearers has not been given.

Expectorators in Public Places Fined.—About a week ago fifty spitters were tried at Special Sessions. Eighteen were discharged because at the time of the arrest they had been locked up for six hours or longer. The remainder were fined $5 each.

New York City Health Board Oppose New Tenement Clause.—The Health Board has opposed the amendment to the Tenement House Bill adopted by the Rules Committee of the Assembly, modifying a section of the bill calling for larger airshafts and better ventilation in tenement houses, on the grounds that such an amendment would be antagonistic to the best interests of the public health.

The Birthplace of Christian Science Bought.—The old house in Lynn, Mass., where Mrs. Eddy wrote her work, "Science and Health," the genesis of the cult, has been purchased by her followers, and will be used to provide a church home for the faithful, and will be maintained as a memorial to the prophet of the doctrine.

Yellow Fever in the British Garrison at Jamaica.—The American Consul at Kingston, Jamaica, has informed the State Department that yellow fever has broken out there, three British soldiers having been attacked with the disease. The remainder of the garrison has been removed to the mountains.

Smallpox in Antwerp and Brussels.—It is reported that smallpox has broken out severely in Antwerp and Brussels, and the report goes on to say that the disease was imported from London.

Professor Virchow Much Improved in Health.—Professor Virchow's health is now said to be quite satisfactory. The fracture of the femur has united, and he gets up every day, but, considering his age, the probability of a resumption of his lectures is not great.

New Feature of the Edinburgh Medical Journal.—In the March number of the *Edinburgh Medical Journal* a new departure is made. The original articles are preceded by a number of short and pithy editorial notes, which much enhance the interest of an already excellent journal.

Cholera Increasing in Canton, China.—A telegram received by the Department of State for the information of the Marine Hospital Service from the U. S. Consul at Canton, dated March 6, reported that cholera in that city was increasing. Customs Club closed and employees were ordered to live on boats on the river.

Enteric Fever in South Africa.—According to the official statement, during the month of December last the admissions for enteric fever among the British forces in South Africa were 1,507, and the deaths were 224. The figures for January are not yet complete.

Pathological Society of Philadelphia.—At a stated meeting, held March 27, Dr. A. C. Croftan presented a communication entitled "Calcium and Tuberculosis," in the course of which he suggested that an antagonism exists between the chemical substance and the disease named. Dr. Alfred Stengel reported two cases of malignant endocarditis with isolation of the streptococcus pyogenes and the bacillus aerogenes capsulatus from the blood and the tissues. In one of the cases the symptoms were suggestive of exophthalmic goiter, but the fever and the leukocytosis pointed to the existence of an inflammatory process. In the second case articular symptoms, suggestive of rheumatism, were present. Dr. E. K. Moore made the report of a case of meningitis due to the typhoid bacillus. The diagnosis was confirmed by the anatomic and bacteriological findings after death. Dr. N. B. Gwyn exhibited a microscopical specimen of carcinoma removed during paracentesis abdominis. Dr. J. F. Schamberg made a preliminary report on micro-bacilli in the sebaceous follicles of the nose, with demonstration of the alleged germ of seborrhea and baldness. Dr. Augustus A. Eshner exhibited a specimen of carcinoma of the stomach causing pyloric obstruction and followed by diffuse extension to the peritoneum.

Obituary Notes.—Dr. Gerald O'Farrell died suddenly, on March 27, in Philadelphia, at the age of seventy years. He was graduated from the medical department of the University of Pennsylvania in 1862. He enlisted in the army and served throughout the Civil War as Surgeon to the 63d and 215th Regiments, Pennsylvania Volunteers.

Dr. Moses T. Babcock, who had practised medicine in Hammondsport, N. Y., for fifty years, died suddenly on March 31. He was seventy-seven years old, and during the civil war was an assistant surgeon.

Thomas Dunn English, physician, poet, and author of "Ben Bolt," died in Newark, N. J., April 1, aged eighty-three years. He was born in Philadelphia on June 29, 1819, and was graduated in medicine from the University of Pennsylvania at the age of twenty. He took up the study of law, and three years later was admitted to the bar in Philadelphia. He had been fond of literature from the time he was sixteen, and desired to become a writer. In 1843, when he was twenty-four, he wrote the poem by which he is most widely and popularly known, but he did not name it. N. P. Willis and George P. Morris were then running the *New Mirror* in New York, and Willis, who knew English, asked him to write a poem for the publication. English wrote a sea song which he didn't like and tore it up. He set to work again and wrote the poem now known as "Ben Bolt," to which he appended the last four lines of the first poem, the only lines in it which he had liked. This second product so little pleased him that he sent it to Willis with a letter telling him that if he didn't like it he could tear it up. Strange to say, in his late years he was greatly annoyed by his fame as the author of one of the sweetest poems in literature.

Dr. Gerhard Lobling died of heart disease, on March 23, in Philadelphia, at the age of seventy-one years. He was the son of an eminent Prussian surgeon and was a graduate of German universities. He came to the United States in 1864, and was graduated from Jefferson Medical College.

Dr. Thomas S. Butcher, formerly of Philadelphia, died at Monterey, Mex., on March 17, at the age of fifty-five years. He was a graduate of Jefferson Medical College, and had resided in Mexico for about fifteen years.

Dr. Uriah Gilman, the oldest practising physician of Woodstown, N. J., died suddenly, from heart-failure, on March 24, while engaged in extinguishing a fire on his farm.

Dr. William Elliott Hugher, Jr., who was formerly an assistant on the surgical staff at the Johns Hopkins Hospital, and later practised in partnership with Dr. Young at Baltimore, died, on March 29, of typhoid fever, at Johns Hopkins Hospital. He graduated from the University of Virginia, and studied medicine in the Johns Hopkins Medical School.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

PARLIAMENT—COMMITTEE ON MIDWIVES—DEFECTIVE EXAMINATION OF YEOMANRY EXPLAINED—"CONSCIENTIOUS OBJECTOR" CLAUSE—EDUCATION BOARD AND REVACCINATION—PERITONITIS FROM RUPTURED OVARIAN ABSCESS — INTUSSUSCEPTION — SMALLPOX — FELLOWSHIP ROYAL SOCIETY—THE LATE DR. PROPERT.

London, March 15, 1902.

The Standing Committee on Law has made progress with the Midwives' Bill. Its advocates, deaf to all remonstrances, are forcing it through the committee without substantial change. The Obstetrical Society's certificate is to be recognized as a qualification—its illegal action thus being legalized. And yet the Rotunda Hospital, which has a charter and is second to no school in the world, is to be left out. It is thus obvious that the Obstetrical Society is the center of the fight. All the advocates of the bill are defenders of the society and all its works, and yet every medical reformer denounces the society's corrupt diploma trafficking, and regrets that the Medical Council climbed down when it threatened the traffickers. Unless the profession throws off its apathy without delay and makes its voice heard, the worst bill ever proposed on this subject has a chance of passing.

The Secretary of War, in reply to a question, has had to confess that he was not able to learn whether the late director-general of the medical department sanctioned the instructions issued to civil practitioners not to reject candidates for the yeomanry on account of minor defects, as he had been informed by the press that the director never saw them, and was never consulted on the subject. It is only another instance of the contempt of the military department towards other departments, and only comes to the surface in consequence of the war. The question of consulting the medical officers on sanitary matters will soon become a burning one. Think of sending armies into South Africa, a country where typhoid is endemic, without the precautions devised after the Crimean War!

Yesterday Mr. Long told the House that the Government did not intend to take any action respecting the "conscientious objector." He also replied to a question that officers of the education department had been invited to submit to revaccination. Those who did not, were to give their names to the heads of their sections. A minute was then issued inviting objectors to reconsider the matter before the board decided what further steps to take. This is taken as a threat, and notice is given of a question as to the powers of the board to compel their officials to be revaccinated. So we are threatened with another shriek for personal liberty to risk smallpox.

Dr. Comyns Berkeley showed to the Obstetrical Society the uterus and appendages of a patient who died from acute peritonitis, set up by rupture of an ovarian abscess, twelve hours after labor had ended. The woman had had five children, and this pregnancy was uneventful. She had never complained of abdominal pain, and her history was one of good health. At the early part of the labor there was some vomiting of a yellow fluid, with pulse 100, but respiration and temperature normal. Three hours later, pulse 136, respiration 30, vomiting continuing. Labor was soon completed; pulse fell to 80, respiration 30, temperature normal. Six hours later, collapse, continuous vomiting, pulse 136, respiration 60, no pain. Dr. Berkeley was then asked to see the case, and found the stomach very much dilated, reaching within two inches of the pubes, partly obliterating the liver dulness and compressing the left lung. Dr. Campbell Thompson, who lately read a paper on the subjeet, was asked to see the case, and agreed in the diagnosis of acute primary dilatation of the stomach. There was nothing to point to peritonitis, but the patient died six hours later, and the post mortem revealed a large amount of semi-purulent matter in the abdomen. The left ovary had an opening at its lower border, through which pus was escaping, and which led to an abscess cavity. The abscess had also burst into the broad ligament from an opening, in which there was a further escape of pus. The ovary was bound down by old adhesions to the posterior surface of the uterus. Dr. C. Thomson, who made the post mortem, thinks it confirms his opinion that acute primary dilatation of the stomach is allied to that of stomach and intestines sometimes met with in peritonitis. Dr. Berkeley suggested that the abscess had been burst by the contractures of the uterus.

Dr. Horrocks (president) remarked that, as a student, he learned from Dr. Fagge that there were three cases in which a woman in ordinary health might suddenly become very ill, viz., rupture of a gastric ulcer, of a latent typhoid ulcer, or of an ovarian abscess.

Dr. R. Boxall mentioned a case of a woman doing her washing on the tenth day after labor, but who died the next day. She had had no pain, but suppurative peritonitis was found at the post mortem.

Dr Handfield-Jones mentioned a case of sudden death, in which he found at the post mortem purulent peritonitis from a ruptured ovarian abscess.

Dr. Griffith alluded to the difficulty of distinguishing abscess of the ovary or tube antecedent to labor, and such an abscess forming part of a general infection at the time.

Dr. Eden suggested the possibility of an ovarian abscess resulting from bowel infection, and Dr. Targett from some traumatism of the cervix.

At the same meeting, Dr. V. Bouney showed a very rare specimen, viz., primary intussusception of the large intestine spontaneously passed by the patient, aged fifty-six years who had a large ovarian tumor, also shown, removed at the post mortem five months after the expulsion of the portion of bowel.

Smallpox has continued. There were fifty fresh cases March 14, bringing the number in the hospitals up to over 1,600, the highest number yet recorded during the epidemic.

A new woman's grievance—she is not eligible for Fellowship of the Royal Society. She is, therefore, preparing to storm this ancient citadel of science. A plan of campaign is being arranged compelling a change in the rules. But should we not first be told who are the candidates for whom we should fight?

The death of Dr. J Lumsden Propert, in his sixty-seventh year, recalls to mind the great work accomplished by his father, John Propert, the founder of the Royal Medical Benevolent College. Never was a nobler scheme more nobly carried out for the benefit of the profession than that of John Propert. Of course, the son also was deeply interested in the prosperity of the institution. He was a London graduate, a man of fine taste, a connoisseur in art, and a very good etcher. He wrote a "History of Miniature Art." He had a large and select clientele. The funeral service was attended by many leaders in the profession.

OUR LETTER FROM SYRIA.

(From Our Special Correspondent.)

THE "SCHLOOK" AN ILL WIND—A MODEST DISCOVERER OF A CANCER MICROBE—SMALLPOX AND THE PLAGUE—"KIBBY," THE NATIVE FOOD—A VISIT TO THE HOSPITAL SHIP "MAINE."

BEYROUT, SYRIA, February 27, 1902.

As you know well, this town suffers from a characteristic monotone of insipid inertness, and will be pleased to hear that we, who are strangers and pilgrims in a very pleasant land, from a desire of living and burying ourselves, are being refreshed, and are likely to live a little longer.

Not to put too fine a point upon it, we are being entertained by what might be called a two-act undulating drama of Rain and "Schlook"—a kind of "Box and Cox" performance—when the one isn't with us the other is. The former, being a casual visitor, not making himself too common (to continue the metaphor), appearing for a few nights (and days) only, is always welcome, and his worth is appreciated by the Schloheen (the farmers), especially. With the latter (the "Schlook" — not the farmers) we shall have to deal more fully and, leaving metaphor, come to solid facts. Our style being too florid for descriptive purposes, we adopt that of a little friend of ours by the name of Little Johnny, who has been trained in literature on the familiar bases of Shakespeare and the family Bible. "Schlook," he says, "is a compound of all wickednesses, from the rising up of the sun to the going down thereof—from our getting up too early in the morning to our not being able to sit up too late at night. It is a wind that bloweth where it listeth, and nobody knows whence it cometh and whither it goeth. It is an incarnation of every evil wind that blows upon the face of the earth. It gives us a chance of catching every disease from the crown of our head to the sole of our feet, and if we don't catch diseases with it (*sic*), it makes us feel deadly sick of everthing and everybody. They say it's the famous 'Sirocco' wind that comes to visit us from the African desert. If it is 'famous,' it should retire before it gets stale; and if it is from Africa, Mr. Carnegie should give it a prize to stay at home. We don't want any 'Schlook' here. It's nearly as bad as the rats that 'fought the dogs, and killed the cats, and bored holes in meat vats' that Mr. Browning wrote about. If he were alive now, he would say something worse about 'Schlook.' His language is comparatively mild in comparison to that which I could use if I were permitted." So says Little Johnny, and we presume to agree with him. "Schlook" and all, and the infrequent visits of the rain, we have a pleasant enough climate, and, as we said before in a former letter, not by any means an unhealthy one.

By way of a change, we have occasional and intermittent outbreaks of the plague scare, which, more or less, disarranges our nervous systems and inclines us to go beyond the limits of our vocabulary; but it does not do us much harm.

A Christian sometimes kills a Moslem in the open market and in open daylight, and the compliment is returned after the manner of a *vendetta*, which gets so monotonous that the strong arm of the law sometimes gets tired of it, and, by way of a change, intervenes.

One of our physicians here, we are informed, told a patient of his that he had discovered the microbe of cancer in a tumor of her breast. As he has not shown it (the microbe), we presume he has kept it to himself, and are sorry we are not able to describe it. We are also sorry to say we are not in a position to report on the latest cancer cure—*essence of violets*, we believe it is called—as we have not yet been induced to use it. As there are plenty of cases of cancer in the town, we should be afraid, if this essence should come into vogue, that violets would go up so much in the market that we would be unable to purchase our customary buttonhole of our favorite flower.

Of all "the dread diseases that carry mortals home"—and, having mixed in the society of most of them, we ought to know—we think the dreadest of all is that just mentioned—not omitting his friend and companion, that runs him hard in the list of evils to be avoided: we refer to smallpox—surnamed "Jidra" here. We are almost beginning to forget the latter's familiar face, as neither the authorities (who are high and mighty in this place) nor the people, who are under them, appear to like the disease, and work together for its extermination, and, for some reason that Jenner knew—and may be now knows all about—gives us a wide berth. London, we are sorry to see by reports that come to us occasionally, has given it a friendly lead, and, for having shaken hands with it is now getting its deserts with a vengeance. London—we don't say all London, but those who are "mostly fools" in it—will (to use an old pantomime gag) "be sorry for it, if they are not already so." We refer more particularly to those in the big city who are suffering from a complaint nearly as bad as smallpox, to wit, stupidity—a malady, as the ancient poet tells us, that the gods themselves "fought against in vain."

We don't pretend to be prophets, but are assured if stupidity is allowed to run rampant in London it will indeed be that "bitterness in the latter end"—if not to us who know, to our children, and to those who may come after us.

We are now sitting in a pleasant little room in this pleasant month of February, compounded by a rain and hot wind. The thermometer (February ought to know better) stands at 70° F. in the shade, and overhead there is a sound of banging doors and windows and of whistling winds, which is almost disconcerting, and over and above all there is a pounding of something the people eat here that goes by the name of "Kibby" (a name that, by the way, in Egypt means the plague), which certainly deserves its name, and should be manufactured in some mill outside the camp. This "kibby"—or "kibeyel," as the Egyptians call it—is a well-beloved but very filling production made by pounding dry wheat and raw meat in a mortar, and the more noise they make the better flavor it must give, it seems. As an article of diet it has splendid staying powers, and requires a stomach in the acme of training to tackle it. However, it is well liked by the people, and, if they would only not make so much noise about it, we would not have a word to say against it.

Influenza may be upon us again later on; at present we only hear the beating of its wings. Plague, as an excitable quantity, is, for the time being, defunct, and cholera is as far off as the yellow haze that portends its coming. To wind up, they have mended two roads that were suffering from a chronic complaint of a complication of dust and mud, pitfalls, and obstacles left in the way, which were almost as irritating, if not as obnoxious, on dark nights as the whole gang—from the gentleman who preaches his doctrines from a barrel to the antivaccinationists.

We were almost closing without telling you that the hospital ship *Maine* came in here the other day, and we paid her a visit. The captain and officers (we were informed) were ashore, and the Staff Surgeon, Craig, was, at the time, engaged in entertaining a party of friends, so we were unable to see him. His henchman (of the rank of sergeant, we assume from the three stripes on his arm) took us around and showed us everything that was to be seen, it appears. There were twenty-three sick aboard—one convalescing after an extirpation of the eye, which was the only case brought to our notice. The ship was as clean as a "new pin;" the lavatories were absolutely odorless—both officers' and men's—the latter, however, seem to have to "sit in a row," as there is no partition between the urinals—the officers being provided with separate little mahogany cabinets. The washing arrangements are interesting and handy, but the centrifugal was wobbling so that it could not attain its 1,400 revolutions a minute, and could not be got into working order.

ELECTRICAL NERVE FORCE—PRIORITY OF CONCEPT.

To the Editor of the Medical Record:

Sir:—In a paper, read to the Pennsylvania State Medical Society in September, 1900, and published, with drawings, in the *Pennsylvania Medical Journal* for November, 1900, I affirmed the identity of nerve force and electricity. The paper was entitled "Analogies between Nervous and Electric Mechanisms. What Is Nerve Force?" The same evidence and conclusion had been previously given by me to the Lackawanna County Medical Society, May 22, 1900, with the addition of the following statement: "The fact is, I believe, that every unit of muscle is surrounded by a field of force, the disturbance of which causes it to contract, and the same is probably true of every protoplasmic unit"—thus extending the electrical concept to muscle and living protoplasm generally. This extension I omitted from my paper to the State Society because I hoped that the first announcement of the concept would be more favorably received if limited to the nerves. Dr. L. Wehlan, then President of the County Society; Dr. Reed Burns, Dr. Gunster, and other members can attest the fact that it was included in the original paper of May 22, 1900.

In both papers, after citing all the evidence available and illustrating, by many drawings, analogies between nervous and electrical mechanisms, I summarized the subject as follows:

"Nerves are constructed like electric cables. They are insulated, distributed and arranged like fine electric conductors. Their purpose and use are the same as the purpose and use of electric conductors; namely, communication from point to point. They convey some form of force. It is probably electricity, because electricity is always present when they act. Because it is the form of force that would do the work required. Because it is the form of force that would work with such construction. Because the terminal and central mechanisms connected with the nerves correspond to the terminal and central mechanisms connected with electric systems of communication and do similar work in sending, receiving, relaying, switching, transforming, accumulating, retarding, discharging, concentrating, distributing and translating impressions. Finally, because electricity, with such construction of conductors and of terminal mechanisms, is the only form of force that we know of that would do all the work required.

"I therefore conclude that nerve force is electricity; that it is produced in the nervous system by chemical processes analogous to those which produce heat in the general tissues; *i. e.* oxidation; and that it would advance knowledge of the nervous system and its functions to acknowledge this proposition, at least as a working hypothesis."

With high appreciation of Professors Loeb and Mathews' work as most valuable additional evidence that nerve force is electrical (see "The Nature of the Nerve Impulse," by Prof. Mathews, in *The Century*," for March, 1902), and as supporting the extension of the electric concept to muscle and protoplasm generally, I ask any credit that may be due for priority in announcing positively the same conclusions, at which I had arrived before them by other but, I think, as certain paths.

These conclusions may have been guessed at before (though I have been unable to find that they have ever been logically affirmed), but I think my paper brought more and weightier evidence together than could have been done before, and clearly stated the logical necessity of the electrical concept. All physiologists were either committed against it, or ignored it.

Now, with new chemistry getting largely on an electric basis, I fully expect these lines of physiology to follow in spite of the dull inertia of conservatism which has been repeating in almost every book and lecture for years that "Nerve force is not electricity" without giving or being able to give one logical reason for the negation.

J. Emmet O'Brien, M. D.

Scranton, Pa., March 27, 1902.

Book Reviews.

A Practical Guide to the Administration of Anæsthetics. By R. J. Probyn Williams, M.D., Senior Anæsthetist and Instructor in Anæsthetics at the London Hospital, etc. London, New York, and Bombay: Longmans, Green & Co., 1901.

In England more attention is perhaps paid to the subject of anæsthetics than in this country, where we have for some time been accustomed to regard ether as undoubtedly the safest substance of all which have been employed to obtain anæsthesia. This little volume is one of the most satisfactory and practical which we have met, and is concise and comprehensive. Much space is given to nitrous oxide alone, and in combination with ether according to the methods so much in vogue at present, and what the author considers the best forms of apparatus are thoroughly described. A chapter is devoted to the choice of the anæsthetic which is best for any given condition, and here, as elsewhere, the directions are clear and reasonable.

Parasitologie Animale. Par le Dr. Maurice Neveu-Lemaire, Preparateur au Laboratoire de Parasitologie de la Faculté de Médecine de Paris; 301 Figures dans le Texte, et une Preface, par le Professeur R. Blanchard. Paris: Société d'Éditions Scientifiques, 1902.

This little brochure contains a systematic description in a condensed form of the different parasites which prey upon humanity and the lower animals. All the common and most of the rarer parasitic organisms are well illustrated, and, as far as is known, their life histories are given, making the work useful for the identification of any parasite with which we may be confronted. Such organisms as that of malaria, trichinosis, the various species of tapeworm, and other intestinal worms, mosquitos, and some of the less common dipterous insects, are among those to which most space is devoted. The present volume fills satisfactorily a place in a somewhat narrow field, and makes a satisfactory work of reference.

An Experimental and Clinical Research into Certain Problems Relating to Surgical Operations. Alvarenga Prize Essay, 1901. By Geo. W. Crile, A.M., M.D., Ph.D., Professor of Clinical Surgery, Medical Department, Western Reserve University, etc. Philadelphia: J. B. Lippincott Company, 1901.

The author of this essay has done a large amount of animal experimentation, and the present is his third publication in this field. A large number of experiments are detailed, mostly upon dogs, and many data of blood pressure, respiration, secretion, and drug action are collated. A number of observations upon human beings are also recorded and discussed, in which physiological experiments have been accidentally reproduced in the course of surgical work. Such accidents as division of the pneumogastric nerve are mentioned. It is interesting to note that the clinically beneficial action of saline infusion in conditions of shock and hemorrhage is also noted in experiments upon animals in whom vaso-motor tone is found to be decidedly increased by infusion, when it is not overwhelmingly diminished, to begin with. Many interesting observations upon animals under the action of cocaine and eucaine are also recorded, and a satisfactory summary of the deducible evidence is given. The volume contains a number of interesting pieces of information, but much of the laboratory detail may be passed over without perusal.

The Mental Functions of the Brain; an Investigation into Their Localization and Their Manifestation in Health and Disease. By Bernard Hollander, M.D. Illustrated. With clinical records of eight hundred cases of localized brain derangements, and with several plates. New York: G. P. Putnam's Sons, 1901.

Dr. Hollander puts at the top of his title page the words, "A Revival of Phrenology," and his book, as may be inferred, is apologetical and resuscitatory of that nearly extinct cult. Dr. Hollander is of the opinion that Dr. Gall was one of the greatest and most original of savants, that his merits have not been properly appreciated, nor the value of his discoveries and doctrines recognized. In pursuit of his purpose, the author has gone over a large amount of medical literature, collecting cases for the purpose of localizing topographically the different mental functions of the brain. He reports, for example, 150 cases of melancholia, and concludes that there is a certain relation between the inferior area of the parietal lobe—that is, the angular and supramarginal gyri—and the melancholic state. He then cites 350 cases of irascible insanity and furious mania, and concludes that irascibility and violent, destructive manias are in relation with the middle part of the tempero-sphenoidal lobe. He cites forty-five cases of what he calls "mania of suspicion and persecution," but which would be perhaps classed as cases of systematized delusion or paranoia, and he thinks that lesions of the posterior temporal area of the brain give rise to such types of delusions.

Gall concluded, from his observations, that men who had an uncontrollable tendency to theft had the anterior part of the temporal region very prominent, and Hollander cites a number of cases of injury to the anterior part of the temporal lobe in persons suffering from kleptomania. The centers for voracious hunger and thirst are put down as being probably near the same region. The author thus throws the awful burden of theft, madness, and bad temper upon the temporal lobes.

Going on to the localization of speech and memory, Hollander claims that Gall first localized the speech center in the third frontal convolution at its basal extremity, and, as a matter of fact, this is not far from true, though Gall spoke of it under the vague term of "verbal memory." He cited a case of motoraphasia, also due to injury in this region. Gall placed the brain center for music very nearly over Broca's convolution; this is not far from the center for amusia in the temporal lobe. As regards the center for the memory of numbers, Hollander cites the observations of Möbius of Leipsic, who, in 1899, stated that he was convinced that Gall was completely right in his localization of the mathematical centers in the frontal lobes.

The author goes on to point the way for further investigations into the localization of functions. He suggests the centers for movements of the face and eyes as being in relation with the centers for exaltation, and that the center for firmness is in connection with that of the leg. He seems in some sympathy with Gall's idea that the cerebellum is the seat of sexual instinct, and calls in evidence the fact that excessive application to gymnastic exercises diminishes for a time the sexual desire.

Chapters are devoted to the subject of the relation between the brain and the skull, the significance of cranial contours and the doctrine of free will.

The book is illustrated with some colored plates indicating the localizations suggested by the author, which are really very much less radical than the text would lead one to infer.

We have given, perhaps, more space to this work than its scientific value deserves, for it practically has none; but it contains a good many clinical records, and the discussions have the interest and suggestiveness which always surround the history of a really great and original man, who founded a school that lived more than a generation.

A Manual of Medicine. Edited by W. H. Allchin, M.D., London. Vol. III., "Diseases of the Nervous System." The Macmillan Co., 1901.

This small volume contains a brief resumé of diseases of the nervous system by nine British contributors, as follows: Bertram Abrahams, M.D., Walter Stacy Coleman, M.D., James S. Collier, M.D., Joseph A. Ormerod, M.D., Charles S. Sherrington, Purves Stewart, M.D., James Taylor, M.D., William Aldren Turner, M.D., and William H. Allchin, M.D. The "Physiological Introduction" by Sherrington is exceptionally clear and concise, and the various clinical types of nervous diseases are accurately but briefly described. A novel feature, not usually found in other similar works, is the special chapter on "Medical Ophthalmology" by Taylor, in which conditions of the pupil and ocular fundus are described in their special neurological aspect. The authors have successfully accomplished a task, by no means easy, in placing before their readers an acceptable treatise on nervous diseases which seems to cover the entire subject, although in a very condensed manner. The book will satisfactorily serve its purpose as a manual for ready reference, and is a welcome addition to the various larger volumes on neurology published within the last few years.

Studies in Physiological Chemistry: Sheffield Scientific School of Yale University. Edited by R. H. Chittenden, Ph.D. New York: Chas. Scribner's Sons.

The volume before us is one of a series of publications celebrating Yale University's 200th anniversary, and is appropriately dedicated to the graduates of the university. The volume is composed of "reprints of the more important studies issued from the Laboratory of Physiological Chemistry," comprising work done during the years 1897 to 1900. An interesting bibliography of the Sheffield Laboratory, from its founding in 1875 to 1900, is prefixed to the volume. It will be impossible within the limits of this review to do more than touch upon what seems to us, from the medical viewpoint, the more important of the monographs. Of these, A Further Study of the Influence of Alcohol and Alcoholic Drinks Upon Digestion, with Especial Reference to Secretion, by Professor Chittenden, Lafayette B. Mendel, and Holmes C. Jackson; The Influence of Bile and Bile Salts on Pancreatic Proteolysis, by Professor Chittenden and Alice H. Albro; Of the Occurrence of Iodine in the Thymus and Thyroid Glands, by Lafayette B. Mendel, stand forth prominently.

Concerning alcohol, Professor Chittenden concludes that "gastric digestion in the broadest sense of the term is not markedly varied under the influence of alcohol or alcoholic fluids." This conclusion seems contrary to the universal belief of clinical men. A fact of practical application in the absorption of alcohol is established experimentally. "Thus an ordinary dose of chloral hydrate introduced in watery solution into a stomach with ligatured pylorus fails to bring about narcosis; if, however, a quantity of alcohol too small of itself to produce any pharmacological action be present, narcosis follows, just as when the open pylorus permits the intestine to participate in the absorption."

Essentials of Obstetrics. By Charles Jewett, A.M., M.D., Sc.D., Assisted by Harold F. Jewett. Philadelphia and New York: Lea Brothers & Co., 1901. 12mo, pp. 386.

The second edition of this work is a marked improvement upon the first, and presents in a concise and intelligible form all the elementary essentials of the subject.

Food Value of Meat. By W. R. C. Latson, M.D. 72 pp. New York: Health Culture Publishing Co.

This is an entertaining booklet, semi-scientific, written for the public, and as such interesting to the physician, purposing to convince the reader that many of the evils of life result from the use of meat, and that, by a proper knowledge of the combination of other foods, meat can be entirely dispensed with.

It contains nothing new for the physician, but it presents the physiological and chemical facts relating to the subject in a pleasing, readable manner. Excessive meat-eating is probably more prevalent in this country than in any other outside of England, and the general public can but benefit by being taught that many other foods are more healthful and as nourishing as meat. The little book can be read in an hour, but to those unacquainted with the chemistry of dietetics, its digestion might profitably last several months.

Le Cancer du Sein, Etude Clinique Statistique. Par A. Le Dentu, Professeur de Clinique Chirurgicale à la Faculté de Médecine, etc., avec huit figures. Paris: Librairie J. B. Baillière et Fils, 1902.

This clinical treatise contains the experiences and deductions of a noted French operator upon the subject of mammary carcinoma. The author takes up his own series of cases and describes his methods of operating, and his results, so far as he is able to give them. He has had a number of patients who have remained free from recurrence for long periods, but, apparently, no more than in similar series from other sources. The net result of the report is that those patients who are operated upon earliest in the disease, and most radically, have the best chance of immunity from recurrence. This is the conclusion of all modern operators. A chapter is devoted to descriptions of the various operative procedures which have been recommended for the radical removal of the carcinomatous breast, and details and indications are given.

A Manual of Venereal and Sexual Diseases. By Wm. A. Hackett, M.B., Ph.G., M.C.P.S. (Ont.), Professor of Dermatology and Venereal Diseases, Michigan College of Medicine and Surgery; Attending Physician to the Emergency Hospital, Detroit, etc., and N. E. Aronstam, M.D., Ph.G., Assistant in Chemistry and Clinical Dermatology, Michigan College of Medicine and Surgery, etc. Chicago: G. P. Engelhard & Company, 1901.

Like old Gaul this book is divided into four parts. Otherwise there is no close resemblance. For a book of its small page area, one finds the essentials concerning gonorrhœa, chancroid, syphilis, and sexual matters fairly well encompassed in the two hundred pages. Of course, a student's book should have this amount of space devoted to each separate division of the matter, and then it would not be a large book. The illustrations are limited to the usual instruments for genito-urinary work. While such a work may be useful as a "remembrancer" in the classes taught by the authors it takes altogether too superficial a view of a vast territory to be recommended as a text book to those preparing for practice, and hence would be of little use to one already in it.

Progress of Medical Science.

Boston Medical and Surgical Journal, March 27, 1902.

Sterilization of "Gum-Elastic" Catheters.—F. J. Cotton has experimented with ammonic sulphate and concentrated salt solutions for the purpose of sterilizing "gum-elastic" catheters and bougies. As a result of these tests, the author claims that all such instruments may be boiled repeatedly and for long periods in saturated (or something less than saturated) solutions of ammonic sulphate or sodic chloride without essential damage.

The Suture of Arteries.—J. C. Hubbard describes the technique of various methods which have been devised. In all these procedures absolute asepsis is necessary. The circulation must be controlled sufficiently far away from the injury to give room to work, and especially far away if a resection is to be done; but whatever the means employed, the slightest pressure possible should be used to prevent bruising. The suture must just fill the hole made by the needle, and both must be the finest that can be handled. All clots must be removed from the wound in the artery. A continuous suture is recommended. Compression must first be removed from the distal end of the artery. This will let the blood flow back and test the suture before allowing full blood pressure against the stitches. Real bleeding can be again controlled by additional stitches; oozing can be stopped by gauze pressure for a minute or two. Suturing of the sheath of the vessel is recommended, as it makes a barrier to sepsis. The author hopes the lateral implantation of one artery in another will be found possible.

Catgut as a Ligature and Suture Material.—Hugh Cabot writes that, as a general rule, catgut should be used in sizes as small as will do the work required in any given case, as the use of too large sizes is one cause of unsatisfactory results; also that care in tying and cutting catgut ligatures is essential to safety. It will generally be admitted that where vessels of large size or large masses of tissue are concerned, the softening which takes place in catgut when in contact with moist tissues will make its hold less secure than that of silk. The fault under these circumstances and the liability to secondary hemorrhage belong not always to the material, but to the manner in which it is applied. The dangers of trusting to two knots instead of three, and of cutting the ends too short, have not been sufficiently recognized. Many surgeons prefer to use large sizes instead of small ones, on the ground that the latter are not strong enough. This seems to imply that too great tension is put on the sutures. No suture tied under much tension can be depended upon to maintain nice approximation, for it will inevitably cut out until this tension is relieved. This process of cutting involves a certain amount of necrosis of tissue and consequent wound infection.

Journal of American Medical Association, March 29, 1902.

The Use of the Gall Bladder to Restore a Prolapsed Liver.—A. F. Jonas finds this a practicable procedure, the idea being to use the viscus as a suspensory ligament. In two instances it was sutured in the uppermost part of the wound, snugly against the costal arch, the sutures passing through the gall bladder wall, parietal peritoneum and muscles. Jonas concludes as follows: (1) The cause of hepatoptosis consists in a modification of one or more of its normal supports, or in an increase in the size and weight of the liver; (2) It is impossible for the liver to descend without producing a descent of the hollow abdominal viscera; (3) The utilization of the gall-bladder as a suspensory ligament, to maintain and hold in its normal position a prolapsed liver, together with certain other abdominal organs, seems practicable.

End-to-End Approximation of the Broad Ligaments and Other Points of Technique in Abdominal Hysterectomy.—E. C. Dudley enumerates the advantages of the mode of approximation referred to in the title as follows: (1) The broad ligaments when thus approximated take the place, in an anatomical sense, of the excised uterus, and form a pouch posteriorly that corresponds to the *cul de sac* of Douglas and anteriorly a depression that answers for the uterovesical pouch; (2) The broad ligaments, if brought together end to end, give support to the rectum, vagina, bladder and other parts of the pelvic floor, and in so doing prevent the descent of those parts—a descent which so commonly results from hysterectomies as ordinarily performed; (3) The broad ligaments, when brought together by end-to-end approximation, are interposed between the bladder and rectum, and thus prevent the intimate union of these two viscera—a union that would leave a very thin wall between them through which infection might pass from one to the other; (4) The operation is more quickly and easily performed by this method than by that of side-to-side union of the ligaments.

The Prostate.—From an extended study of the effects of prostatic enlargement, J. B. Murphy comes to the following conclusions: (1) From the clinical reports and experience, it seems evident that in extreme cases prostatotomy is the operation of election; (2) It appears evident that in the hands of safe, far-seeing, informed practitioners, few cases will now be allowed to progress to this extreme condition before radical means are resorted to for permanent relief; (3) Continued use of the catheter is a menace to life, not to mention its discomfort, no matter how favorable the conditions for its performance. The patients all, sooner or later, suffer from cystitis and its sequelæ; (4) Prostatectomy gives the best permanent result, and is fraught with very little more danger than prostatotomy; (5) Suprapubic prostatectomy should be limited to exceptional cases of enormous intravesical enlargements of the prostate. It appears to endanger the sphincteric control more than the perineal operation. It is more sanguinary, and the work is more difficult and distant from the operator; (6) The perineal is the most direct and least bloody route. It admits of a very large opening, and permits the prostate to be drawn quite into the open before it is attacked. It gives the greatest security against injury to the bladder wall and least liability to disturbance of the internal sphincter. It endangers the rectum least and affords the best drainage; (7) It can be best performed through a Y-shaped incision, with a Sims' speculum for a posterior retractor. The prostate is drawn out easily with sharp hook retractors, and best separated from the bladder from behind forward. The operation should never be performed in the dark, *i. e.* through a small incision; (8) It should always be an intracapsular enucleation *en masse*, allowing the anterior isthmus to remain. The hemostasis may be secured with forceps or a packing of subiodide of bismuth (not iodoform) gauze. The permanent catheter should not be introduced until the perineal drain is removed. (9) The patient should be kept in a semi-sitting position for seventy-two hours after the operation, and should be out of bed by the fifth day; (10) Anæsthesia is *sub judice*. Phosphate of soda should be given to keep the urine acid and urotropin as an antiseptic. Water should be taken freely throughout.

The Philadelphia Medical Journal, March 29, 1902.

The Supraorbital Reflex—An Explanatory Note.—D. J. McCarthy states that the upper part of the face is richly supplied with sensory nerve filaments from the fifth nerve, all of which are accessible to mechanical or sensory irritation. A careful study of the reflexes in this area will show that there are several independent and distinct reflexes, as follows: (1) A pure sensori-motor reflex, in the nature of a skin-muscle reflex, elicited from the supraorbital distribution exclusively; (2) A periosteal reflex may be obtained when there is an excited condition of the reflexes, by irritation (percussion) over the malar arch or the periosteum of the nose (v. Bechterew, Overend); (3) The corneal and conjunctival reflexes may be obtained by irritation of these structures; (4) The corneomandibular reflex of v. Solder is a lateral movement of the lower jaw, produced by irritation of the cornea.

A Case of Herpes Zoster Ophthalmicus.—W. S. Durand reports the case of a man aged fifty-two years. For about three weeks prior to the eruption of vesicles there was extreme pain in the region of distribution of the left cervical plexus and through the region of the eruption, although there was no sign of eruption in the cervical region. The monolateral distribution of the eruption was perfect. There was a vesicle in the median line on the summit or root of the nose, and two or three larger ones reaching just to the middle of the forehead and along the sagittal suture. The vesicular eruption was profuse, reaching almost to the left ear, the ear and region of distribution of left cervical plexus remaining extremely painful. When first seen the left eye was completely closed. The writer dropped a drop of a solution of adrenal in chloride, 1 to 1000, in normal sodium chloride solution, with 5 per cent. chloretone, into the eye. The drop was repeated in about a minute, and in about another minute the patient could open the eye which had by this time completely blanched. The use of the solution was continued, generally diluted, 1 to 10,000, four or five times a day. The 1 to 1000 solution was also freely applied with a camel's hair brush over the entire region of the eruption two or three times a day when pain returned. The results of this treatment, combined with the necessary constitutional treatment, were most gratifying. The sight of the eye was as good as originally.

New York Medical Journal, March 29, 1902.

The Radical Cure of Hydrocele by Minute (Two Minim) Injections of Carbolic Acid.—This plan of treatment is highly commended by W. B. Coley and P. A. Satterwhite, who review the literature of the subject and report several personal cases. At the Hospital for Ruptured and Crippled in New York City the routine treatment in infants and children consists in simple daily applications of equal parts of tincture of iodine and tincture of belladonna. Long experience with this method has convinced the authors that it has some effect in hastening the absorption of the fluid, although doubtless spontaneous cure would result without any application. Occasionally, when the hydrocele is very large, the fluid is aspirated and the tunica irritated by the point of the trocar. This is not done more than three or four times in the course of a year. Hydrocele in the adult, however, is a condition that requires more serious consideration. Formerly ten minim injections of carbolic were used, but experience has shown that practically as good results can be obtained with two-minim doses. This small amount the authors believe to be absolutely free from all risks.

A Prostatectomy Forceps.—R. Guiteras figures the instrument thus named, and states the following as his procedure in cutting through the floor of the urethra: (1) Perineal urethrotomy; (2) Dilatation of the prostatic urethra by means of the Kollman dilator; then with the forefinger and sometimes with the thumb; then, after inserting the forefinger of the left hand into the rectum and placing it at the apex of the prostate, the operator passes a thin pair of sharp-pointed curved scissors into the perineal incision until their points have come in contact with the prostatic urethra. He then either cuts through the floor or passes the points of the scissors through the mucosa and capsule at this point, and spreads open the blades so as to tear the tissue at this point. It is now easy to insert the forefinger of one hand, usually the left, into this space, and, having made a few sweeps of the forefinger around the apex of the gland, the forceps can be pushed up alongside the finger and can grasp the lobe. Gentle traction is then exerted by the hand holding the forceps, while the forefinger of the other hand proceeds to sweep around between the gland and its capsule until the former has been loosened and removed. A similar enucleation is then performed on the other lobe, and if any middle lobe is present it can be grasped by other forceps and removed. In this way the prostatic urethra is injured less extensively than if it is split down vertically through the middle of its floor by a knife inserted into it. Besides, there is not so much danger of wounding the rectum by this method. It is important to remove the lateral lobes separately, even if the whole prostate can be removed *en masse;* for otherwise the entire prostatic urethra would come away with it.

The Obesity of Adolescence.—Heinrich Stern says that most cases of transitory obesity in adolescents run an uneventful course. Anorexia, chlorosis, constipation, headache, and dull pains in back and loins are often present; a sense of rigidity in the joints and sacro-lumbar region, giving rise to ungraceful and awkward motions, is not uncommon; circulatory disturbances, synchronously produced with transitory obesity, or appearing during the course of the latter, are not very frequent and seem comparatively slight; however, pre-existing anomalies of the circulatory apparatus may occasionally become decidedly aggravated after abnormal fat deposition. In severe cases we may meet with pronounced anæmia or leucocytosis; and, in rare instances, with vertigo and cardiac dyspnœa.

The dietetic treatment alone will suffice in most instances. In other cases an increased amount of exercise, gymnastics of the lungs, massage, hydrotherapeutic and other measures, must be resorted to in addition to the former. Medicines should be administered, if at all, only for the accompanying disorders, and never for the reduction of metabolic obesity during adolescence. In cases of transitory obesity demanding treatment, dietetic restrictions are not only superfluous in the vast majority of cases, but often effect lasting injury on the youthful organism. Our therapeutic efforts in such instances should be directed rather to the complications and concomitant disturbances than to the obese condition itself. The latter, if extreme and giving cause for alarm, may be treated by preparations of thyreoid. A safe form of administering thyreoid substance is this: Arsenous acid, 1-60 grain; adonidin, 1-12 grain; thyreoid gland, dry powder, 2 grains.

American Medicine, March 29, 1902.

Movable Kidney; with Possible Explanation of Failure in Some Cases to Relieve Symptoms by Nephrorrhaphy.—George H. Mallett believes that in cases of movable kidney, when an operation is indicated and the symptoms persist after operation, in most instances the kidney has been fixed in a malposition, and when the operation has been performed by the method which is most frequently used at present, it has been rotated outward on its vertical axis. He emphasizes the fact that when performing nephrorrhaphy, fixation of the kidney alone is not all that is required, but care should be exercised that the circulation of the ureter and vessels is not interfered with, since the possibility of these occurrences is not so remote as has been supposed.

Sand Filtration in Relation to Disease.—James M. Anders declares that the deleterious and devitalizing effect of imbibing impure water, especially when bacterially contaminated, upon the general health of the community is practically inconceivable. It lowers the resistance to the large class of infectious diseases, and it is productive of much suffering, caused by the habitually depressed and weakened systemic condition due to its ingestion. Much inconvenience and ill-health, caused by impure drinking water, originate primarily from the digestive tract, and are due to gastric and intestinal disturbances. Impure water is often used for a long time without causing any specific disease, in those who have grown accustomed to drink it, while a stranger drinking it for the first time is quickly attacked by the specific malady, the germs of which have been introduced into the system by the water. The writer believes in the efficiency of sand filtration as a practical means of minimizing the prevalence of diseases produced by polluted drinking water. Although the primary cost of slow sand filtration is greater, and although it requires more space, still it is superior to mechanical filtration. The latter is more expensive to operate and demands the utmost care. Sand filtration is also a natural process.

The Treatment of Suppuration in the Uterine Appendages.—Charles P. Noble gives the results of his experience with 200 cases of pelvic suppuration which have been operated upon. The advance made in this work during the last fourteen years has reduced the mortality from more than 16 per cent. in the first half of this period to less than 5 per cent. in the second half. This improvement has been obtained by: (1) Abandoning abdominal section in the treatment of pyosalpinx and abscess of the ovary when complicated by intraperitoneal abscess, and by substituting direct incision and drainage in this group of cases, and also for recent cases of pelvic suppuration of puerperal origin; (2) By substituting hysterectomy for oophorosalpingectomy for the removal of bilateral suppuration in the uterine appendages. The results of the improved technic are excellent. Ventral hernias, pedicle abscesses and troublesome intraperitoneal adhesions have become very rare. Free incision and drainage in cases of suppuration of the uterine appendages complicated by intraperitoneal abscess has proven to be a most valuable life-saving measure. It has proven also to be a most conservative measure in the conservation of the sexual organs. Direct incision and drainage finds its best indication in: (1) Puerperal phlegmon; (2) Puerperal ovarian abscess, intraperitoneal abscess and pyosalpinx; (3) In complicated cases of pelvic suppuration, of whatever origin, in which the pus is not contained within the ovary and tube. The value of direct incision is most manifest in the worst class of cases, and in which the abdominal section gives its worst results.

Medical News, March 29, 1902.

The Detection of Typhoid Bacilli in the Fæces as a Diagnostic Test of Typhoid Fever, and a Comparison of This Test with the Widal Reaction.—Henry A. Higley concludes that: (1) During the second week of typhoid fever, when technical aids are of the greatest value to the practitioner, isolation of typhoid bacilli from the fæces gives slightly better results than does the Widal test. These two methods used in combination, when the tests are carefully and persistently made, render material aid in the diagnosis of this disease previous to the appearance of distinctive clinical symptoms; (2) By the use of the Hiss isolation method, especially with the substitution of the new platinum medium, the detection and isolation of typhoid bacilli are, to one familiar with bacteriological methods, simple, reliable, and practical.

Remarks upon Some Experiences with the Widal Reaction.—E. Libman believes that: (1) A positive Widal reaction always means that typhoid fever is or has been present; (2) Partial reactions are to be absolutely ignored; (3) A negative reaction does not exclude the existence of typhoid fever. It occurs under any of the following conditions: (*a*) The reaction may have already disappeared; (*b*) The reaction may only appear later; (*c*) The culture may be at fault; (*d*) The case is clinically one of typhoid fever, and there may never be a positive reaction; (*e*) The disease is not typhoid fever. A negative reaction may occur if the patient is suffering from an infection by a paracolon bacillus, and still, for the practitioner, the case is identical with one of typhoid fever. Again, a positive reaction may occur when the case is clinically not one of typhoid fever, and yet the autopsy may show the presence of the typhoid bacillus in some part of the body, or it may be found during life in the urine, fæces, rose spots, blood, or some complicating lesion; (4) Scientifically, the Widal reaction is of the greatest value in establishing the presence of infection by the typhoid organism in certain cases and in assisting in identifying the typhoid bacillus. It is of great practical use, but it is not so valuable as could be wished. In many cases, however, it can alone establish the diagnosis. This is especially true in the atypical cases in which pneumonic or miningeal symptoms usher in the disease.

The Lancet, March 22, 1902.

The Etiology of Typhoid Fever and Its Prevention.—In the first Milroy lecture, W. H. Corfield traces the development of the nature of typhoid during the last thirty-five years gradually leading up to the discovery of the bacillus typhosus. Frequent references are made to the literature of the subject and the lecture is of especial interest from an historical point of view.

A Case of Primary Hemorrhage into the Fourth Ventricle.—H. W. Reynolds reports this rare case. His patient was a woman of thirty-five years, admitted to hospital with renal disease, hydrothorax and edema of the legs. One day, about a month later, she suddenly developed bilateral paralysis of the lips, tongue and pharynx, so that she could not articulate properly, protude her tongue, or swallow except with difficulty, while saliva dribbled from the mouth. There was no headache or any other premonitory symptom except, perhaps, the vomiting, and consciousness was perfect throughout. There was no paralysis of the limbs or ocular muscles. The most marked feature was the defect of articulation which really drew attention to the condition, the defect being inability to pronounce the labials. She died three days later, and the autopsy showed a hemorrhage into an otherwise healthy brain. The Sylvian iter was free from clot, as were the third and lateral ventricles, showing the hemorrhage to be primarily of the fourth ventricle. It was seen that the blood had plowed its way into the posterior part of the pons and medulla, where it would involve the nuclei of the cranial nerves, but not the pyramidal tracts. Judging from the symptoms, the nuclei affected were those of the seventh, tenth, and twelfth, the sixth being unaffected. The sudden death may perhaps have been due to a second hemorrhage involving the respiratory center.

Electric Shocks at 700 Volts.—A. P. Trotter says that the dangers of electric shocks at 500 volts have been much misunderstood, greatly exaggerated, and little investigated. The pressure of 500 volts has been deliberately chosen by electrical engineers, because it is not dangerous under ordinary conditions. The conditions under which serious shocks are not produced by 500 volts are discussed in the paper, and it is safe to assume that all shocks more serious than those which are recorded are dangerous. Dry wood and dry boots without large nails offer so great resistance to electric current, that it is perfectly safe to touch a trolley wire while standing on a dry tram-car, or even while standing on the ground or on the rails. Wet weather makes a considerable difference, but boots must be very wet to allow enough current to pass to produce a severe shock. Men engaged in electric traction work receive many slight electric shocks at 500 volts, and they might avoid most of them by taking more care. Dry clothing offers so great a resistance that no shock can be transmitted through it. The peculiar conditions under which shocks at 500 volts have caused death are discussed, and are shown to be very exceptional. Experiments have been made on some thirty persons, including twelve women and six children, and it is proposed to make other experiments. With sound, dry boots hardly anybody can feel a shock when standing on the live rail of an electric railway with one foot and a running rail with the other. With damp or wet boots a shock is felt, but neither the sensation nor the degree of wetness of the boots can be measured accurately. It is not possible to receive a shock by sitting or lying on a live rail so long as the clothes are dry and continuous—that is to say, so long as the live metal is not touched by the bare skin.

The Pulmonary Circulation, More Particularly in Relationship to Variation in Cardiac Activity.—In a lecture upon this subject, T. C. Brodie mentions, among other topics, the effect of suprarenal extract upon the heart. He notes from his experiments that this remedy causes a profound influence on the heart, the rate of which is increased while output is nearly doubled. The effect on the heart, however, is complicated, if the vagi be undivided, by a marked inhibition of the heart, occurring mainly during the period of heightened aortic pressure. The effect of suprarenal extract upon the blood volume of the lung is to cause first a small diminution in volume, soon followed by a marked increase, which persists during, and for a short time after the rise in aortic pressure. Thus the main effect is to produce a distinct congestion of the lungs. The effect upon the pulmonary blood pressure is a rise to nearly double its original amount, commencing with, but lasting rather longer than, the rise in aortic pressure. The left auricle pressure at first falls, but rises rapidly when the aortic pressure has reached a high point. The effect upon the right auricle pressure is a gradual and slight rise following the rise in aortic pressure. From these results it is concluded that the effects are mainly due to the action of the peripheral bloodvessels in causing the large rise in aortic pressure. They are, however, complicated by the action upon the heart. The increased output observed at first explains the preliminary diminution in volume of the lung and the rise in pulmonary pressure. The later effects are due to the rise in the aortic pressure and the consequent inability of the left ventricle to empty itself. The more reflex inhibition there is produced, the more marked, as a rule, is the pulmonary congestion. These facts have an important bearing upon the question whether suprarenal extract can be advantageously used in hemorrhage from the lungs. Certainly in the doses which Brodie has employed, and with intravenous injection, his experiments strongly contraindicate its employment for such a purpose.

British Medical Journal, March 22, 1902.

Carcinoma and Malaria.—Albert R. Cook declares that in his experience in Central Africa he has had over 1,000 in-patients and about 16,000 out-patients under treatment the last year. Among this number were some 1,300 cases of malaria, while malignant cases were not rare. He believes that malaria is no bar to the occurrence of carcinoma, and he protests against inoculating cases of carcinoma with the protozoon of tertian fever as a preventive of carcinoma.

A New Diagnostic Point in Typhoid Fever.—Heneage Gibbes believes that the method of showing the eruption of typhoid fever by photography, before it can be either seen or felt, will prove of great value to the clinician. The best plan is to use orthochromatic plates, and make a number of exposures as quickly as possible. The directions are as follows: Cover the face and head with a light shawl and remove the coverings from the abdominal region; moisten a small bit of printed matter and stick it to the skin to get the focus; have an assistant throw as much light as possible on the part, with a mirror. Out of six exposures of varying lengths one or two should show the rash. Great care is required in developing the plate. Over-exposure must be avoided. Hydrokinon or paramol give good negatives. The writer believes that this method will prove of value in atypical cases.

Pince-nez in Ophthalmic Practice.—Robert D. Joyce has observed a number of persons wearing pince-nez who complained of epiphora or flowing of tears. In some cases two pairs of glasses were used, pince-nez and ordinary spectacles, and only when the former were worn was the trouble noticed. At first the writer thought the irritation was caused by not wearing the glasses exactly straight, but he discovered later an entirely different cause for the trouble. It is caused by the compressing force of the pince-nez dragging on the tissues at each side of the nose to such an extent that the lower lid is actually pulled away out of position and is no longer in close contact with the bulbar conjunctiva. Even a small amount of eversion is sufficient to cause the epiphora. The surgeon should see the frame on the patient before the lenses are fitted into it, and assure himself that the spring is as weak as is compatible with steadiness. In some cases the pince-nez cannot be fitted without causing this ectropion.

Notes on Adrenalin Chloride Solution in Ophthalmic Practice.—George A. Ferdinands states that when adrenalin chloride solution is instilled into the healthy eye (solution 1 in 1,000) it first causes a slight smarting, and within a few minutes a blanching of the conjunctiva, which is best marked at the caruncle. The blanching reaches its maximum within five minutes. The solution is non-irritating, and causes no dilatation of the pupil. It does not render the conjunctiva or cornea insensitive to any extent. It has no effect on accomodation. It gives relief in a few minutes when applied to an inflamed conjunctival sac. It is particularly valuable in iritis and relieves photophobia. It assists the absorption of subcorneal deposits and thus improves vision. In tenotomy and advancement of the rectus the previous instillation of this solution helps to control the hemorrhage. The writer has never observed any toxic effect. In cases in which the nutrition of the tissues is at fault, the solution of adrenalin chloride is contraindicated.

Deutsche medicinische Wochenschrift, March 6, 1902.

Tonic Contractions of the Stomach.—I. Boas says that tonic contractions of the fundus of the stomach may be divided into three classes according to their intensity and duration: (1) Slight contractions, which are only with difficulty felt by the hand and involve but a portion of the fundus. They last but a few seconds and are not perceptible to the patient. As a rule, they are accompanied by no gurgling sound; (2) Moderate contractions which are plainly felt by the hand and are generally visible to the examiner. They are of but short duration and are always followed by a gurgling sound. The patient complains of slight pain during the continuance of the contraction; (3) Powerful contractions which produce a movement of the entire anterior abdominal wall and are accompanied by loud gurgling sounds and pronounced pain. They are of much longer duration than either slight or moderate contractions. Tonic contractions of the stomach are only observed when food is present in the organ. They are diagnostic of pyloric stenosis and vary in intensity directly with the degree of such stenosis. Pyloric stenosis may be nervous in origin (spasm of the pylorus) or it may be due to cicatricial narrowing resulting from carcinoma, ulcer, etc. The varieties of tonic contractions of the fundus do not suffice for a diagnosis of the cause of the pyloric stenosis, but only for an estimation of its degree. Thus powerful contractions may accompany spasm of the pylorus, while carcinoma may only cause slight contractions. However, when tonic contractions are present it is certain that pyloric stenosis exists and further measures should be instituted to ascertain its cause. Three cases are related in illustration of the above principles.

Berliner klinische Wochenschrift, March 10, 1902.

Alcohol as a Hand Disinfectant.—R. Schaeffer reports the results of his experimental researches concerning alcohol as a hand disinfectant or sterilizer. The hot water-alcohol method of hand disinfection is usually conducted in the following manner: The hands are thoroughly washed with soap and a sterile hand-brush in water as hot as can be borne for from five to ten minutes, after which they are soaked for five minutes in absolute alcohol. It has been thought by some that the hot water washing in itself is the most important part of the process. In Schaeffer's first series of experiments the hands were thus washed successively five times in five separate portions of water, a new brush and soap being used each time. The entire washing occupied thirty minutes. Plate cultures were then made from each portion of water, and it was found that the last portion contained one hundred and twenty micro-organisms to the cubic centimeter. The first portion contained seven hundred bacteria to the cubic centimeter. In the second series of experiments the hands were washed in the prescribed manner and dried with a sterile cloth. Plate cultures were then made from the hand-scrapings, and it was found that on the average five hundred micro-organisms to the cubic centimeter were present. It is thus shown that after such washing the hands are by no means sterile. In the third series of experiments, in addition to the washing the hands were soaked in alcohol for five minutes and then placed in sterile water for fifteen minutes. Cultures were then made from the hands, and it was found that on the average only three micro-organisms per plate were present. Since alcohol in the manner used is not a powerful bactericide, the author thinks that its chief action is one of mechanical purification although its property of hardening the skin undoubtedly plays a certain part in the process. In a final series of experiments the efficiency of the hot water-alcohol method was compared with that of other procedures, and it was found it gave much better results than any of these. The method of Mikulicz is fairly efficient, as following its use only twenty-five bacteria per plate were present. None of the so-called antiseptics are efficient. One hundred and fifty micro-organisms per plate were present after the use of bichloride (1-1000), seventy-six after lysol (1¾ per cent.), five hundred after chinosol (6 per cent.) and fifteen hundred after lysoform (3⅓ per cent.). In cases of necessity the washing with the hot water and soap may be reduced to five minutes, but the soaking in alcohol must always last five minutes and can never with safety be reduced below this time. A final washing with bichloride (1-1000) would undoubtedly make the process still more effectual.

The Hydrotherapy of Pulmonary Tuberculosis.—S. Munter draws attention to the fact that the physiological processes of the body are accelerated by thermic irritations so long as such irritations are confined within suitable limits. In hydrotherapy water is used as the source of this thermic irritation. In pulmonary tuberculosis suitable hydrotherapy is followed by an increase in appetite and in the assimilation of food, and by an improvement in the general condition, with an amelioration of the special symptoms. As long as the normal temperature of the body is not altered, cold increases oxidation and heat decreases it. The reverse is the case, however, if abnormal bodily temperatures are present. Since in pulmonary tuberculosis, on account of the sensitive metabolism present, the bodily temperature is very easily changed, it is necessary in the hydrotherapy of this disease to employ methods which produce neither subnormal nor hypernormal bodily temperatures, since the former in pathological conditions reduce the functional activity of the various organs, while the latter markedly increase oxidation, so that the weight and strength are more or less rapidly reduced. In order to avoid these consequences, the following method should be employed: (1) The surface temperature of the body should be increased by the application of heat. Thus the superficial capillaries are dilated, and the heat which is added is concentrated on the surface of the body; (2) Cold is applied, by means of which the added heat is withdrawn and the capillaries contracted; (3) A reaction is produced by friction, which restores the capillaries to their previous condition. In this manner the entire system is brought under the tonic influence of the cold without producing alterations *in toto* of the body temperature. Cases of pulmonary tuberculosis in which there is no mixed infection are treated most successfully by the use of the more pronounced measures. Cases of mixed infection should be treated by the milder methods, since marked fever is here present, and the effect of pronounced thermic irritations is unfavorable. Local hydrotherapy is very useful in the treatment of specific lung symptoms, such as pain, cough, and dyspnœa, and, furthermore, in improving the cardiac action, which, in turn, cannot fail to increase the functional activity of the entire body. The principles of this local treatment are the prolonged application of heat, the short application of cold, and the production of a good reaction. Atonic stomach and intestinal disorders, which frequently accompany pulmonary tuberculosis, are usually successfully treated by the use of such local hydrotherapy applied to the abdomen. Many cases of pulmonary tuberculosis show marked improvement by the use of the following method: The body is sponged from two to three minutes with water at 40°C.; the temperature of the water is then suddenly changed to 16°-20°C., and the sponging continued for 20-40 seconds; finally, a proper reaction is produced by friction. It is important to remember that in all hydrotherapeutic methods the change from heat to cold should be sudden and pronounced. Only in this manner can the full tonic effect be produced and serious consequences avoided. A further benefit of hydrotherapy in pulmonary tuberculosis is to be found in the fact that patients thus treated rarely contract the colds to which phthisical patients are extremely susceptible. Complications are thus frequently avoided. Some have thought that patients so treated are especially prone to hemoptysis. Extended observation shows that such is not the case. It should be remembered that cases of pure tubercular infection are the most suitable for hydrotherapy, and that when mixed infection is present great care should be exercised in the use of the so-called "water treatment."

French and Italian Journals.

Pulsatile Palpebral Tumor.—Lagrange has a patient who, since the age of fifteen, has had a pulsatile palpebral tumor showing an exacerbation of symptoms at each menstrual epoch. During the last year the phenomena of irido-choroiditis have appeared, but they have yielded to treatment (iridectomy). The inflammation has disappeared, but the arterial vessels persist. The case is interesting by reason of the rarity of arterial varices; because these varices have determined an ocular inflammation; and because the affection, which began with the appearance of the menses, is aggravated at each menstrual period.—*Journal de Médecine de Bordeaux*, March 9, 1902.

The Treatment of Rheumatism by Lemon Juice.—Desplats reviews his experience with this method. The first case that he treated was that of a young girl, who had been attacked primarily with angina, probably grippal. Following this attack she had suffered from acute articular rheumatism. She had been temporarily relieved by salicylate of soda, and then her condition became stationary. At this time the administration of lemon juice was begun. In about eight days there was a marked improvement. At the end of fifteen days the patient was entirely cured and left the hospital. The second case was treated with salicylates for three weeks without much success, but as soon as the lemon juice was begun the results were the same as in the first case. In fifteen days there was a complete cure. The first case in the second series of cases was treated from the beginning with lemon juice. The results were encouraging, but at the time of the report it was only the ninth day of treatment. Another case, a chronic rheumatic treated by this method, was relieved of her severe pain. The treatment is begun by giving two lemons, this number being increased to four, then to six, and so on till the patient shows a marked improvement, and then the dose is kept uniform at what is considered the effective point.—*Journal des Sciences Médicales de Lille*, March 1, 1902.

Spasm of the Pylorus Mistaken for a Tumor; Operation; Cure.—Poirier reports the case of a woman of fifty-eight years, who presented all the symptoms of a cancer of the pylorus—signs of pyloric stenosis, a cachectic appearance, and sub-clavicular and inguinal adenopathies. This diagnosis was confirmed by several physicians and surgeons. Nevertheless, this woman had never had hematemesis, and she did not present the appearance of tumor of the epigastric region. The operation revealed a condition of simple pyloric spasm (the stomach contracted with great readiness under the fingers of the operator). this being due, probably, to the presence at the level of the pylorus of a small indurated area about the size of a small nut. This was excised, and since the operation the patient has not shown the least gastric symptom.—*La Presse Médicale*, March 1, 1902.

The Treatment of Wounds by Alcohol Acidified by Acetic Acid.—Luigi de Gaetano holds that, in the treatment of wounds healing by first intention, this method is a very great preventive of infection. The suture material should soak in the solution (20 drops of acetic acid to 100 grammes of ordinary alcohol) during the operation, and be dried by sterilized gauze before using. The needles should be pushed from beneath upwards and outwards. As soon as the operation is completed, the surface of the wound is to be washed with the acidified alcohol, and dabbed with gauze soaked in the solution. The first layer of gauze used in the dressing is also to be soaked in it. Two days after the operation the dressing is removed and the surface of the wound washed and dressed as before. On the fifth day the wound is washed with the alcohol, the stitches removed, and the moist dressing again applied.—*La Riforma Medica, March* 4, 1902.

Delirium in Croupous Pneumonia.—A. Brancati concludes that delirium is fairly frequent in pneumonia, and, as in all acute infective processes, constitutes a grave complication. Certain predisposing conditions—as alcoholism, syphilis, malaria, auto-intoxications, excitability of the nervous system and extension of the pneumonic process—act in conjunction with the influence of the bacterial toxin, to produce this delirium. It is observed especially at the acme of the disease, because that is the period of greatest activity of the microorganism in the production of toxic substances. It also, usually, coincides with a high temperature, the cases of delirium with a low temperature being due to incomplete elimination of the toxins, and a lack of equilibrium in the cerebral circulation from diminished febrile stimulation.—*La Riforma Medica*, March 5, 6, and 7, 1902.

Extract of Suprarenal and Adrenal Glands in Nasal Surgery.—Carlo Biaggi, in operations on the nasal septum or on the turbinated bones, applies a small tampan, soaked in a 50 per cent. glycerin solution of the extract of suprarenal gland, and close to it another tampon, soaked in a cocaine solution. The mucous membrane becomes very pale and shrunken, and no loss of blood occurs. After the operation another tampon, steeped in the solution, is laid along the line of incision to prevent hemorrhage. The extract of adrenal gland has a powerful vaso-constrictor action, and can be applied in a 1 to 1000 solution, by simply painting it on the mucosa with a brush, without the necessity of prolonged contact with a tampon. Followed by an application of cocaine, the operation can be performed without the slightest pain or the least hemorrhage.—*La Tribuna Medica*, February, 1902.

A Case of Cataract Due to Lightning.—Francesco Gozzano reports the case of a soldier who was struck by lightning and rendered senseless for awhile. After recovery he felt perfectly well, with the exception of a burning and redness in the left eye. The discomfort persisting, he entered the hospital a week after the accident, where a diagnosis was made of conjunctivitis. After treatment of boric acid and rest for eighteen days, the patient was discharged cured. Gradually, however, he noticed diminished vision, first in the left and then in the right eye, and at the present time cataract of both eyes is very evident. It is not to be denied that this is the effect of the lightning. Some authorities consider the condition due to shock, others to the heat or to the chemical action (electrolytic) developed by the electric spark. By electric shocks to animals Hess has determined mortification of the capsular epithelium with resulting cataract.—*Giornale Medico del Regio Esercito*, February 28, 1902.

Sudden Death Due to Dyspepsia.—Lancereaux states that dyspepsia is an important factor among the causes of sudden death. The physiologists have offered the explanation for sudden death coming after a shock to the epigastrium, that it is due to an excitation of the nervous system. In legal medicine a number of like cases are reported under the term inhibition. A pathological condition of the stomach often plays the same rôle. A proof of this is the frequency of sudden deaths soon after eating. The writer reports a case of sudden death due to excitation of the nervous filaments of the gastric mucosa. He also cites cases of sudden death in individuals without objective lesion of the heart or vessels, but who are suffering from gastric affections. Diet will often prevent these accidents. If they occur, rythmic traction of the tongue and flagellation will help to combat them. Sudden death may also be due to the condition of the respiratory mucosa.—*La Tribune Médicale*, March 12, 1902.

Injections of Durand's Fluid into the Pulmonary Substance.—G. Stefanile and S. Fabozzi have found in their experiments on rabbits with Durand's iodo-iodized solution that the weight of the animal is increased, which demonstrates positive improvement in the general nutritive condition. Were this same result obtainable in a tuberculous patient, it would mean that his organism would be placed in a better condition to resist the invasions of the bacillus. Hyperemia and the presence of leucocytes in the injected lung authorize the supposition that the reactionary inflammatory process induced by the Durand solution may neutralize the destructive activity of the Koch bacillus and destroy the virulence of its toxin. In conclusion, the authors assert that injections of this solution can be made with impunity into the lung substance under proper aseptic and antiseptic precautions, and that even larger doses will cause no inconvenience. They hope later to report more positive results obtained by the remedy on the human lungs.—*Il Policlinico*, February, 1902.

Lesions Produced in Various Organs by Experimental Intoxication with Typhoid Toxins.—Luigi Simonelli describes his experimental methods in detail. Myeloid degeneration of the spleen occurred in guinea pigs, but, strangely enough, in rabbits it was absent, and there was an increase in the pre-existing mononucleated cells. In the liver fatty degeneration was most diffuse and abundant in rabbits, while in guinea pigs there was cloudy swelling and plasmolysis. In the kidneys the lesions were not at all times of equal gravity; in some cases there was a true nephritis and not merely a degeneration, as occurs in nearly all experimental intoxications. A phenomenon found in all the organs and tissues is the infiltration of leucocytes, this being especially marked in the liver. The mononucleated cells are in the greatest abundance. The conclusion reached by the author is that the toxic substances derived from the typhoid bacillus prepared by his special method have produced in the animals inoculated with it lesions localized more especially in the lymphatic apparatus, but involving glandular parenchyma as well, and producing important and characteristic lesions.—*Giornale Internazionale delle Scienze Mediche*, February 28, 1902.

Black Water Fever and Quinine.—Leonardo Cega de Celio reports a case of black-water fever which is interesttng in many respects. The patient was suddenly taken sick with what was apparently a malarial attack, and took, of his own accord, a small dose of quinine. On the following day his fever increased and hematuria set in. A physician was called, who prescribed euchinin. No benefit was derived therefrom, and on the following day de Celio saw the patient. At this time the temperature was 39.5° C.; pulse 130. Hematria was still present. No malarial organisms were found in the blood. Euchinin was continued, and a small dose of quinine given hypodermically. This was repeated on the following day, but the patient rapidly grew worse and died in a comatose condition. Previous examination had eliminated disease of heart or lungs, but the spleen and liver were found enlarged. The author thinks that the diagnosis lay between pernicious malaria and black-water fever, due to the quinine taken by the patient himself. In such cases it is well nigh impossible to make a correct diagnosis and direct treatment accordingly. In black-water fever, due to quinine, euchinin, as a rule, gives prompt relief. Nevertheless, in this case it was without avail.—*Wlener klinische Rnndshau* February 23, 1902

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, Held March 18, 1902.

James K. Crook, M.D., Chairman.

Symposium on Acute Articular Rheumatism.—This was the special subject for the evening.

Remarks on the Pathogenesis.—Dr. Heinrich Stern read this paper. He said that the hypothesis of the microbic origin could not be said to be founded on clinical facts. Regarding the old theory of acidæmia, the speaker said that he had estimated the blood alkalinity in a number of cases and had found the average to be 379, whereas from 1,000 determinations in normal blood he had found the alkalescence to vary between 300 and 500. He concluded that the acids that had been detected in the transudate in some uncomplicated cases of rheumatism owed their presence to some other factor, probably a ferment. The urine in acute articular rheumatism does not ordinarily exhibit a very high degree of acidity. It was commonly spoken of as "highly acid," but such a term was inaccurate and misleading. He had resorted to acidimetry in the examination of twenty-eight specimens taken from five males in the first week of acute articular rheumatism, and had found the highest and lowest results to be 0.66 and 0.29 respectively. This did not indicate a great deviation from the normal, as the average for normal urine was 0.43. If the urinary chlorides were found to be considerably increased, the disease could hardly be rheumatic fever. In acute rheumatism the urinary chlorides would be found decidedly reduced, and this occurred in only one other disease, pneumonia. In the latter it was most marked in the stage of congestion, but in many cases it was not a striking feature.

The Symptomatology and Diagnosis.—Dr. Leonard Webber read this paper. He said that, although there might be some antecedent malaise, the onset was sudden and rapid, the disease often being fully developed within twenty-four hours, with a pulse of 100 or more and a temperature of 102° to 104° F. The urine would be found acid, and there would be free perspiration. He saw more cases of acute rheumatism in the spring and summer than at any other time. Monoarticular rheumatism was very rare. Occasionally the vertebral column was affected. The effusion sometimes extended to the neighboring muscles and tendons. In very well marked cases anæmia developed rapidly. A soft cardiac murmur was frequently heard at the beginning, and was the result of the fever and anæmia, and was not due to endocarditis. If, however, this murmur persisted after defervescence, the patient was kept in bed and absolutely quiet for several weeks. Endocarditis occurred so frequently in acute rheumatism that it should be considered as a feature rather than a complication. In considering the differential diagnosis one should bear in mind that gonorrheal arthritis was usually monoarticular and did not respond to the salicylates. He had known joints previously affected with genuine rheumatism to become affected some years later in connection with an attack of gonorrhea. Such cases he looked upon as examples of subacute rheumatic arthritis plus gonorrhea. They would react more or less to the salicylates and to salol. The ordinary septic arthritis was usually a streptococci infection, and the effusion purulent. Acute osteomyelitis and necrosis of bone might be multiple and be mistaken for rheumatism. Gout and acute rheumatism would not be readily confounded if the attack were typical, but in other instances a search for deposits of urates about the joints would aid in the diagnosis.

The Complications and Sequelæ.—Dr. Frank W. Jackson discussed this topic from the viewpoint of his personal experience. He said that the complications of rheumatism were certainly very numerous, the principal ones being hyperpyrexia, delirium, coma and convulsions, tonsillitis, bronchitis, pneumonia, meningitis, pleurisy and inflammations of the other serous membranes and inflammations of the kidneys. True hyperpyrexia, meaning thereby a temperature over 105° or 106° F., and usually terminating fatally, was not frequent in this locality. Pure delirium due to rheumatism he had not seen. He had noted delirium in young subjects, but it had subsided promptly on stopping the salicylic acid. Coma and convulsions he had not seen. Acute rheumatic iritis, occurring in connection with acute articular rheumatism, was of occasional occurrence. There was certainly a distinct connection between certain forms of rheumatism and inflammations of the throat, but he was not sure that it was a distinct part of rheumatism. He did not feel sure that he had ever seen bronchitis as a distinct part of acute articular rheumatism, and this was in sharp contrast with the connection between gout and bronchitis. His experience had been the same with regard to pneumonia and rheumatism. Rheumatic inflammation of the meninges, he thought, must be exceedingly uncommon, for he could not recall having seen one such case. Inflammation of the pleura, however, was quite a different matter, for, rheumatic pleurisy was fairly common in this locality. He had seen a good many cases in which there seemed to be very little doubt as to the connection between the rheumatism and the pleurisy. They were, for the most part, cases of acute dry pleurisy, or a mild form of pleurisy going quickly to the formation of adhesions. Pleurisy with serous effusion was not common in connection with rheumatism. This relation between rheumatism and pleurisy was of practical importance, because it was easy to account for sharp pain in the chest in a rheumatic patient on the theory of its being muscular rheumatism, and hence one was apt to omit a physical examination, and so overlook the presence of a pleurisy. Peritonitis in connection with rheumatism undoubtedly occurred, but he had never seen such a case. Rheumatic inflammations of the kidneys were also of very great rarity, but he had seen it.

Pericarditis.—He had not happened to see a very large number of cases of pericarditis, and, according to his experience, it was not a very frequent complication of rheumatism. He was of the opinion that a good many cases of pericardial friction were not cases of pericarditis at all, but cases in which there was a plastic inflammation between the pleura and the external layer of the pericardium. In pericarditis there would be fever, pain over the pericardium, dyspnœa and rapid heart action, but these symptoms were often absent in this form of pleuropericarditis. For this reason he would distinguish between a pericarditis revealed by the rational symptoms and one made evident only by the physical signs. Pericarditis with effusion was less common than dry pericarditis. The recognition of a myocarditis as a part of an acute articular rheumatism was a matter of the greatest difficulty. Of course, when there was a pericarditis and an endocarditis present it was reasonable to assume that the myocardium was also involved.

Endocarditis.—A good many cases of endocarditis probably go unrecognized. Any valve of the heart might become inflamed and swelled without the production of a characteristic murmur. If a patient with acute articular rheumatism suddenly becomes worse without any change in the joint symptoms, one would naturally look to the heart, and if with this change there was an alteration in the heart's action, one would be justified in assuming the presence of an endocarditis, even though no murmur could be detected. It was quite common in cases of acute articular rheumatism for a murmur to be audible at the apex or base of the heart on one day, disappear the next, and perhaps alternate in this way for several days. Usually in the course of about a week, these cases develop a sufficiently characteristic murmur to justify the diagnosis of endocarditis. He was of the opinion that some patients absolutely recover from such an endocarditis, and he based this belief on careful study of some cases which he had followed for many years, and which presented subsequently a perfectly normal heart action. Again, many such persons were left with a crippled valve, but the compensation was so perfect that no harm resulted.

The Prognosis and Treatment.—Dr. William H. Thomson took up this part of the subject. He said that, in a general way, it might be said that acute articular rheumatism, which was now considered to be a microbic infection, ran its course in about six weeks. Aside from controlling the symptom, pain, it was doubtful if the salicylates accomplished much—in other words, it was probable that they exerted their influence more upon the toxins than upon the organisms generating the toxins. Concerning the mode of entrance of the infection into the system, the speaker said that it was highly probable that the tonsil was the point of entrance. Antecedent tonsillitis had been found in from 20 to 25 per cent. of cases of rheumatism. For this reason he favored, as a prophylactic measure, the douching of the throat with water impregnated with oil of peppermint. The profuse sweats of acute rheumatism he would ascribe as much to the peculiar derangement of the cutaneous circulation as to the infection. It was evident that the skin of a rheumatic person should receive careful attention from the physician. The patient should be dressed in flannel and lie between blankets, and the precordial region should be most carefully protected in this way. This was a most important prophylactic measure against relapse. He was strongly of the opinion that the modern displacement of the treatment of rheumatism by alkalies had led to a greater proportion of cases exhibiting heart complications. Aconite was most useful in securing the needed rest to the heart. The anæmia of rheumatism was quite *sui generis*, and iron in such cases was mischievous. Cod liver oil was especially indicated. The salicylates were most useful, but, like all really good remedies, they required to be used with discrimination. The sodium salt now and then excited delirium, or was depressing. Many young subjects do better with the salicin itself in doses of fifteen or twenty grains. It was often well to omit the salicylates altogether, and prescribe lemon juice instead. He preferred the strontium salts to the salicylates.

Dr. Morris Manges said that all our knowledge of rheumatism pointed to a microbic infection, but as yet the evidence in this direction was most contradictory, and showed the necessity for further research. Possibly the solution of the whole question lay in assuming various germs as being among the etiological factors. Leube said that muscular rheumatism was really a masked form of acute articular rheumatism, and that both were different phases of a bacterial process. The chemical theories had been of service as pointing out the value of the alkaline treatment. He was disposed to think that even more than 25 per cent. of cases of acute articular rheumatism showed antecedent tonsillitis. The anæmia of rheumatism was a very impressive feature of that disease. He could not agree with Dr. Thomson that iron was injurious in this form of secondary anæmia. He made use of the milder ferruginous preparations, the organic rather than the metallic ones. He would endorse the view already expressed this evening, that endocarditis should be looked upon as a part rather than as a complication of rheumatism. Dr. Jackson had spoken none too emphatically of the false or pleuropericardial murmurs. Such murmurs occur sometimes in connection with acute osteomyelitis. Cases of adherent pericardium were frequently found at autopsy, though overlooked during life. Such a condition ordinarily originated in connection with tuberculosis, nephritis or rheumatism, particularly the latter. Many of the heart murmurs heard during an attack of rheumatism were hæmic or myocardial, thus from day to day explaining the great variations alluded to by Dr. Jackson. The best medical treatment for rheumatism was a combination of the alkaline treatment with the salicylates. It was remarkable how difficult it was in many such cases to keep the urine alkaline. The rule should be to give the alkalies in sufficient quantity to keep the urine alkaline. In some especially difficult cases it would be necessary to give liquor potassæ in doses of ten drops every three or four hours. Rest in bed during convalescence from acute articular rheumatism was of the utmost importance.

Therapeutic Hints.—Dr. S. Baruch was of the opinion that the principal reason for disappointing results with the salicylates was to be found in the use of inadequate doses. For the last six or eight years he had made use of the pure salicylic acid made from the oil of wintergreen in combination with bicarbonate of soda, thus making the salicylate of soda extemporaneously. He generally gave it in doses of twenty grains of pure salicylic acid combined with ten grains of sodium bicarbonate. If possible, he avoided giving it until 4 o'clock in the afternoon, and repeated it at intervals of two hours until eighty grains had been taken. There was no use in giving the salicylates unless tinnitus aurium was produced, but most of this would pass off during the night. The treatment of the disease was assisted by the application of a cold wet compress to the affected joint. The compress should be made of three or four thicknesses of linen wrung out of water at 60° F. and covered with a layer of flannel. The compress should be renewed at intervals of two or three hours. If the fever were quite high the compress should be applied very wet. As a rule, he did not employ these compresses unless the body temperature was over 100° F. As a rule, an ice bag should not be applied continuously for more than half an hour, for, it produces a localized cyanosis by a paralysis of the cutaneous circulation. The ice bag should be applied in this intermittent manner over the precordium.

The Microbic Theory of Rheumatism.—Dr. Abraham Mayer said that, notwithstanding all that had been said by Dr. Stern regarding the bacteriology of this disease, we were still very far from knowing the exact cause of rheumatism. There were very few physicians at the present day who did not believe in the bacterial nature of rheumatism, but the exact germ responsible for it was still unknown. Long ago English and American physicians had called attention to the angina which preceded attacks of acute articular rheumatism, and supposed the infection might arise from this point. He agreed with Dr. Manges that more than 20 per cent. of cases of acute articular rheumatism are preceded by tonsillitis. A diplococcus had been found on the tonsils, which would grow on certain culture media and change into a streptococcus. Singer had found in five cases of acute articular rheumatism a larger streptococcus invading the tissues in various parts of the body. Injections of Meyer's delicate streptococcus into animals invariably gave rise to the peculiar temperature curve of acute articular rheumatism, and often produced effusions into the joints and pleuræ. However, the same results had been produced by the injection of other microorganisms. Such experiments forced us to believe that acute articular rheumatism was not an entity, but was caused by various germs. If this were so, then it was easy to understand why the salicylates would not prove to be specific in all cases.

Impure Salicylate Dangerous.—There are three kinds of salicylate: (1) That made by synthesis; (2) That made from the synthetic oil of wintergreen, and (3) That made from pure oil of wintergreen. The impure varieties commonly cause delirium; the pure sodium salicylate rarely does this. He often gave as much as 120 grains of the pure sodium salt in the tweny-four hours, and rarely produced delirium. With regard to the use of iron in persons suffering from rheumatism, his experience fully coincided with that of Dr. Manges.

Dr. Andrew H. Smith commented upon the change in the type of rheumatism in recent years. He said that in the earlier years of his practice he saw cases in which the patient suffered excruciating pain, but he rarely sees such cases now, and he was inclined to attribute this to the introduction of the salicylate treatment. In his hospital practice he was accustomed to keep the urine of rheumatic patients alkaline by the administration of a mixture composed of equal parts of the acetate, bicarbonate and the citrate of potassium. He thought there could be no doubt about the close relation between tonsillar inflammation and acute articular rheumatism. He thought he had aborted a number of cases of peritonsillar inflammation by the use of the same treatment that he would employ in acute articular rheumatism. Mention was made of one case in which a pericardial murmur developed twenty-four hours before the first signs of an acute articular rheumatism. As a local application in acute articular rheumatism he often made use of equal parts of guaiacol and glycerin, and the patients found this very comfortable. He had but little difficulty in getting patients suffering from acute articular rheumatism about three-fourths well, but the chief difficulty experienced was in bringing them through the last quarter. For some time after the temperature had reached the normal the patient should be confined to bed.

Dr. Louis Fischer said that in cases of acute rheumatism occurring in children he had observed vomiting, fever, anorexia and malaise. His hospital records showed that in the cases of polyarthritis 70 per cent. developed heart complications and 11 per cent. of the cases terminated fatally. If necessary, the affected parts should be kept at rest by bandages or plaster of Parish. The dietetic treatment was more important than the medicinal. A sulphur bath at 75° or 85° F., lasting for an hour, had been found to give relief to the pain. About two ounces of the sulphuret of potassium should be added to the water in a bath sufficiently large to bathe the whole body of the child. A 10 per cent. ointment of the salicylate of methyl, applied over the affected joint, would relieve the pain in some cases. Incidentally, the speaker expressed the belief that in many cases of diphtheria treated with antitoxin the polyarthritis had nothing whatever to do with the use of antitoxin, and was the result of the infection with the Klebs-Loeffler bacillus.

Dr. James J. Walsh remarked that, after all, the valves of the heart were only joints, and hence, rheumatic endocarditis should not be looked upon as a complication but as a part of the rheumatism.

Dr. Kinch of Westfield spoke of an interesting case of rheumatism, in which the manifestations of that disease had remained in abeyance during an intercurrent attack of diphtheria, but had reappeared on the subsidence of the diphtheria.

Dr. Heinrich Stern said that the great number of bacteria found in connection with rheumatism seemed to him to throw considerable doubt upon the microbic theory. To his mind, there was a general constitutional condition predisposing to bacterial invasion, and the nature of the infection determined the special features of the individual case. The salicylates act as would the tartrates or any other organic acid, not chemically, but mechanically; the salicylates act in rheumatism by increasing the osmotic tension of the blood.

Dr. William H. Thomson expressed his belief that we were very near the identification of the bacterial cause of rheumatism. He had never been satisfied with the investigations of Meyer and of Singer, but it was very different with the investigation of Wassermann and others following him. They had found a bacterium, cultivated it outside of the body, injected it into a number of animals, found it again in the joint effusions and in the pericardium, had recultivated it and, in one case, reproduced the disease by five different generations of the same bacterium. This same bacterium, found in the effusions of the knee and pericardium in man, when injected into animals gave rise to the same conditions. He thought Wassermann's bacterium would be found to be the ultimate cause, and he distinctly disagreed with the notion that such a definite disease as rheumatism can be due to a number of bacteria.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Held March 24, 1902.

Frank Van Fleet, M.D., President.

Pathology and Bacteriology of Empyema.—Dr. David Bovaird read this paper, which was based on observations, in the New York Foundling Hospital, on 101 fatal cases of empyema, occurring in children ranging in age from seventeen days to eight years. He said that empyema was relatively, as well as absolutely, more frequent in children than in adult life, and was also more fatal. The affection was, in the majority of cases, unilateral, though it might occur bilaterally. Thus, of the 101 cases under consideration, seventy-seven were unilateral and seventy-four bilateral. The part of the pleura most often affected was that covering the lower lobe. In six cases out of the series tuberculosis of the bronchial lymph nodes was present. The thick purulent exudate was regularly of a distinctly greenish color. The unusual consistency of the exudate in children was of importance, particularly in connection with exploratory puncture as a means of diagnosis. There was no sharp distinction between serofibrinous pleurisy and empyema in children. Sacculation was much more frequent in children than in adults. The quantity of the effusion was usually remarkably small, even in the fatal cases. It was rarely more than seven or eight ounces, and often not more than one or two ounces. The empyemas of children, in his experience, had not perforated the chest wall or other parts. The lungs were compressed, without other lesion, in thirty-five out of the 101 cases and consolidated in part in sixty-six cases. The consolidation was lobar in ten, bronchial in twenty-seven and of an indefinite type in fourteen cases. It was associated with tuberculous lesions in four, with small abscesses in six and with gangrene in five cases. The associated lesions of empyema were practically inflammation of other serous membranes, such as the pericardium, meninges and the peritoneum. The pneumococcus was responsible for the empyemas in children in the great majority of cases, and in such the exudate is thick and creamy. When the exudate was thinner the streptococcus or the staphylococcus was generally present. It was safe to say that primary tuberculosis of the pleura, in children at least, was extremely rare. Of the 101 cases tuberculous lesions of the body were found in only six cases, and in only one tuberculosis of the pleura itself.

Clinical Features of Empyema in Children.—Dr. Henry Koplik considered in this paper the etiology, symptomatology and prognosis, basing his remarks largely on his experience in the Mount Sinai Hospital. His cases numbered 120. Sixteen of these were less than one year old. There seemed to be a special tendency to suppuration in pleurisy, as in other inflammations occurring in children. In sixty-nine of his cases pneumonia was probably the primary cause, as the pneumococcus was present. The tubercle bacillus was found in only seven cases. In infants and children empyema is an acute infection following the acute infectious diseases, tonsillitis, mediastinal abscess and chronic gastro-intestinal catarrh. In the majority of cases the effusion into the pleura has the gross characteristics of ordinary pus. In some instances the effusion consists of cloudy serum, which, on further investigation, proves to be purulent. Hemorrhagic empyema in children had not the serious consequences that it possessed in the adult. He had seen a number of hemorrhagic exudates which did not appear to be tuberculous or due to new growths of the pleura. Out of his 120 cases three were hemorrhagic All three give the streptococcus but not the tubercle bacillus in the exudate, and all three patients recovered. The disease was marked by the symptoms of the primary disease. The persistence of an elevated temperature and a rapid pulse after pneumonia was suspicious of empyema. In some cases the pneumonia and the empyema are concomitant and give rise to marked symptoms; in other cases the onset of the empyema was more insidious. Exhausting night sweats and a distinctly intermittent temperature, with increased frequency of respiration, point strongly towards empyema, but there are no pathognomonic signs of empyema. The signs of fluid in the chest of a child were different from those found in the adult, and if the chest were full of fluid the difficulty of diagnosis was increased. The pleural cavity might be be filled with fluid and still the voice and respiratory murmur be only slightly diminished both anteriorly and posteriorly. Bronchophony and bronchial breathing might be heard in some cases all over the chest. The percussion note posteriorly was flat, and there was a peculiar and characteristic sense of resistance imparted to the finger. On the left side, displacement of the apex of the heart, and on the right side, of the liver downward, were useful as confirmatory signs. Encapsulation of fluid was most apt to occur between the lobes of the lung. In certain localities the diagnosis of fluid must be made with reserve, and in all cases the diagnosis should be made positive by exploratory puncture. This should never be omitted, and should be done with the patient in the upright posture. If no fluid were obtained at the first attempt, and the symptoms continued without abatement, another exploratory puncture should be made after a reasonable time. Of 120 cases operated upon in his hospital service twenty died. Of the fatal cases four died within one to five days after admission, and in these not the operation but the delay in coming under observation was the real cause of death. Pneumonia, either persistent or recurrent, caused the fatal issue in eleven cases. The complication most to be feared was bronchopneumonia after operation. It might involve the lung of the operated side. He had not been able to find the cause, though it seemed to be a reinfection traceable to the presence of infectious matter in the system at the time of the operation, though then dormant.

Surgical Treatment of Empyema.—Dr. CHARLES N. DOWD presented this paper, which was based on his experience in St. Mary's Free Hospital for Children. There were seventy-five cases, seventy-three of which were under the age of fifteen years. The cases were conveniently divided into three groups, viz.: (1) Simple empyemas which recovered within three months; (2) Protracted empyemas, and (3) The fatal cases. Most of the first group were due to the pneumococcus and many of the protracted cases were tuberculous. In the simple cases there was considerable effusion, with compression of the lungs, but very little thickening of the pleura. In the second group there was not much effusion but considerable thickening of the pleura. A very similar condition prevailed in the third group. The ordinary treatment had been to excise, under anæsthesia, about an inch and a half of the eighth rib in the posterior axillary line. The pus and coagula were allowed to escape, and then a large absorbent dressing was applied. The patients were encouraged to get up as early as possible, and expansion of the lung was favored by having the children blow through a tube, forcing water from one bottle to another. In the protracted cases portions of the chest wall were removed according to the methods of Estlander and Schede. There were forty simple empyemas. Nine of these healed in the first month, sixteen in the second month, and the remainder in the third month. This was the class of cases most often seen in private practice, and about which the question was often raised as to whether aspiration or incision should be employed. He saw no objection to making use of the simpler methods in this group of cases, provided more radical methods were promptly resorted to if the progress of the case were not satisfactory. There were twenty-four cases of protracted empyema. In four the pus perforated the chest wall; in two it perforated the lung; in one there was abscess of the lung; in one pus perforated the diaphragm; in three there was empyema on both sides; in three there was tuberculosis with healing; in four no definite reason could be assigned except the extent and severity of the disease. Five of the fatal cases should also be counted among the protracted cases. Of the protracted cases, 38⅔ per cent. had tuberculosis or some other complication, which was responsible for the protracted course of the disease. The earlier cases of this series were treated by Estlander's operation, and the others, for the most part, by the Schede operation, but in a few instances a portion of the thickened pleura was stripped from the lung, in order to allow better lung expansion. This last method seemed to him a distinct improvement in the treatment of empyema. The deformity would be less and convalescence would be hastened by this operation. In this connection Dr. Dowd exhibited three patients. One of them was a boy, in whom the empyema had perforated the chest wall in two places. Resection of rib was done at first, and later a portion of the chest wall was removed and a portion of the pleura was stripped off. There was now only very moderate deformity, and the boy had been in excellent health for two years since the operation. The second case was that of a boy who had first been operated upon for empyema in 1897. He was proved to be tuberculous, yet the very severe empyema had practically healed, and his general condition was quite satisfactory. Dr. Fowler had recently reported thirty cases of decortication of the lung for empyema. Of this number seventeen had been cured, nine were unimproved, three had died, and in one the result was doubtful. A study of the fatal cases impressed one with the importance of tuberculosis in empyema, and led one to look upon empyema as not a disease in itself but a complication of other diseases.

Fluoroscope, Useful in Diagnosis of Empyema.—Dr. J. E. STUBBERT said that he had found a very useful means of diagnosis in cases of empyema to be examination of the chest with the fluoroscope and the *x*-ray. This gave even more positive results than puncture, the picture being especially characteristic of empyema when pulsation of the fluid was visible on shaking the patient. He had heard nothing said about the treatment of the protracted cases by the injection of antiseptic fluids into the pleural cavity. A case was narrated in which the treatment had consisted in the injection of a solution of ichthyol in glycerin. At first a 10 per cent. solution was injected through the drainage tube twice daily, and the strength of the solution was gradually increased until finally 100 minims of a 90 per cent. solution were injected three times a day. When the strength of the solution reached 50 per cent. the temperature of the patient began to fall and the character of the discharge improved. In the operative cases of empyema the expansion of the lung could often be very materially improved by the use of a rubber valve over the opening in the chest.

Methods of Favoring Lung Expansion.—Dr. ANDREW H. SMITH thought it was of the utmost importance that an empyema should not be allowed to go on to the extent of causing compression of the lung. The lung, when compressed, becomes encysted, as it were, in an unyielding bag, very much like a ham sewed up in a canvas bag. The operation originally suggested by Dr. Fowler of Brooklyn, of stripping up a portion of this very tough envelope, had entirely changed the treatment of the severe cases of empyema. Formerly, if the lung could not be made to expand satisfactorily, various mutilating operations were done in order to make the chest wall meet the lung. In the milder cases expansion could be increased by the forcing of air from the sound lung into the diseased one. This forcing of air occurred whenever there was cough, but if the patient were instructed to take a deep inspiration and try to make expiration while holding the nostrils, this dilating effect would be greatly enhanced. The value of the method was that it required no apparatus and could be practiced many times a day by the patient. Expansion of the lung was also favored by a process of traction from without, arising from the traction force of the chest wall upon that portion of the lung which was adherent to the lung by granulation tissue. The former practice of *freely* irrigating the pleural cavity was to be condemned because it served to break up the adhesions. The use of small quantities of antiseptic fluids, as suggested by Dr. Stubbert, was a different matter. Sometimes when the drainage tube was not shortened soon enough, the purulent discharge would persist, and it would be found, by injecting a measured quantity of water, that the tube was in reality in a sinus. Whenever such a condition was detected it should lead to the immediate shortening of the tube. When the pleural cavity was completely filled the auscultatory sounds must be transmitted through the fluid to the chest wall, whereas if the pleural cavity were only partially filled these sounds would be partly above the level of the fluid.

Dr. Charles G. Kerley said that he had never met with cases in which bronchial breathing was very plainly heard over the chest, both front and back, that pleural effusion was not present. Mention was made of a case in which a dangerously profuse hemorrhage had occurred on incising the thickened pleura, and subsequently, at autopsy, it was found that the vessels of the pleura were enormously enlarged. So profuse was the hemorrhage that it was necessary to pack the wound with gauze and make pressure in order to avert death on the table from loss of blood.

Dr. Rowland G. Freeman said that his experience with empyema in children impelled him to emphasize the need of great watchfulness in cases of pneumonia that do not resolve promptly. If the sounds on auscultation become distant it was well to make an exploratory puncture at once, and if such a puncture were made it should be done with a large needle. The experience at the New York Foundling Hospital showed that simple incision and drainage were sufficient, and that it made no difference at what point in the pleural cavity the opening was made.

Technique of Drainage for Empyema.—Dr. Charles L. Gibson said that he was inclined to look upon a tuberculous empyema as a cold abscess, and to treat it as a cold abscess in any other part of the body would be treated. Some cases of tuberculous pleurisy, in adults at least, do badly after the evacuation of the fluid. It was thought that the relief of the venous congestion resulting from the removal of pressure explained this bad effect. For these reasons he was disposed to leave tuberculous pleurisies alone. Even in small children resection of a rib could be done very satisfactorily under anæsthesia produced by nitrous oxide gas. As soon as the incision had been made the opening should be closed with the finger until an accurately fitting tube can be inserted. Gauze is packed around the tube and between it and the chest wall, and the tube is covered with a rubber valve. While this is being done none of the fluid is permitted to escape, and hence the child is not disturbed by a sudden change in the equilibrium of the thoracic pressure. After the insertion and arrangement of the tube the usual voluminous dressing is applied, and the chest is thus gradually drained into the dressing.

Natural History of Empyema.—Dr. Floyd M. Crandall said that empyema should be looked upon as a disease of childhood which sometimes occurs in adult life. At one time he had met with three cases in close succession, which illustrated well the natural history of empyema in children. In the first case the empyema had existed for sixteen weeks, but the patient recovered. The second case had begun with pneumonia. Perforation of the empyema occurred about five months later, but two and a half months more elapsed before consent could be obtained to operate. The child recovered. The third case also started with pneumonia, and perforation occurred after five months. Operation was refused, and the child died twenty-two months later of tuberculosis. Dr. Crandall said that it was dangerous to allow these cases of empyema to run on to spontaneous opening, for practically recovery never takes place under such circumstances; moreover death occurs many times before such an opening takes place. He had found that, in very young children, simple puncture would usually be followed by prompt recovery, though a more radical operation was frequently wise and often necessary. The greater the delay the more radical must be the operation.

A Modified Operation.—Dr. Arthur I. Boyer described a method of operating that he had employed with success in an adult coming under observation quite late. Under chloroform anæsthesia a glass nozzle, connected with a fountain syringe, placed at a height of six feet, was introduced, and normal saline solution, at a temperature of 100°F., allowed to gradually displace the 1,500 cc. of pleural effusion. By this method the danger of hemorrhage was obviated. For the first two days after the operation an absorbent wick was used to drain off the saline solution. The patient made a good recovery in three weeks.

An Improved Technique.—Dr. Samuel Lloyd said that 58 per cent. of the cases of empyema in the babies' wards of the New York Post-Graduate Medical School and Hospital had shown the pneumococcus. He thought nearly all surgeons would agree with the treatment laid down by Dr. Dowd, but he would differ a little as to the technique. The anæsthetic should be stopped on exposing the pleura, and the finger used to break up the adhesions. The lung then expands, and the child, coming out of the anæsthetic, cries or coughs, and so assists in this expansion of the affected lung. It was remarkable how promptly and well the lung would expand under this simple breaking up of the more recent adhesions. In the cases of long standing the adhesions were so firm that nothing short of an Estlander operation, or similar radical measure, would suffice. Dr. Furness had had rubber drainage tubes made with a soft rubber flange on the outer end to prevent the tube from falling into the pleural cavity. He had used these tubes with much satisfaction.

A New Empyema Drainage Tube.—Dr. F. N. Wilson said that he had devised a self-retaining tube, and one which would not cause any irritation of the lung when the latter had expanded. The tube is very short, and has a soft rubber flange on each end. By folding up the flange on the pleural end, the tube can be easily introduced, and can be as easily removed. These tubes are made in two sizes, one for children and one for adults. Dr. Wilson exhibited the tube.

Dr. Bovaird said he desired to emphasize the fact that empyema may occur entirely independent of pneumonia, and that it was very apt to go unrecognized even by expert clinicians.

Dr. Koplik said that he was surprised at the large proportion of bilateral empyemas occurring in Dr. Bovaird's cases. This might perhaps be explained by the fact that many of the children were under two years of age. Out of his own 120 cases only two were bilateral, as determined by clinical observation. Of course these statistics should be sharply differentiated from those in which the bilateral empyemas were diagnosed at autopsy.

Dr. Dowd said that the operation of decortication of the lung was still on trial, but was certainly a very promising procedure.

Demonstration of a Method of Seeing the Curvatures of the Stomach with the Naked Eye.—Dr. Mark I. Knapp gave this demonstration. The clothing having been removed from the abdomen, the patient is instructed to take deep inspirations, and while this is being done, the observer stands at the shoulder, and brings his eye to the level of the abdomen. The movement of the organ under the abdominal wall may be seen quite easily in this way, even when the abdominal walls are quite thick. Occcasionally it was desirable to use inflation of the bowel in addition.

Dr. H. Stern said that this mode of examination often failed, and was chiefly available in cases of gastric dilatation or gastroptosis. The outline of the organ could be seen just as well from the foot as from the head of the patient. This mode of examination had been described twenty years or more ago, and he had employed it frequently.

Disposition of Stable Manure.—On recommendation of the Committee on Hygeine, the society adopted a resolution requesting the health department to require the compression or baling of manure, and its removal from stables in suitably-covered receptacles.

Therapeutic Hints.

Typhoid Treated by Chlorine.—Put thirty grains of chlorate of potassium in a dry bottle, and add sixty minims of hydrochloric acid. Allow to stand until the chemical action is complete, then add twelve ounces of distilled water, little by little. Give a tablespoonful every two hours until the stools become less offensive, then at longer intervals. —Peck.

Tonsilitis.—

℞	Quininæ hydrobromat.	gr. i.
	Sodii benzoat.	gr. ii.
	Salol	gr. v.

M. fl. caps. S.: one every three hours.

—Abraham.

Incoercible Vomiting of Pregnancy.—Rectal injections of artificial serum (deci-normal saline solution), of a daily dosage of three or four quarts, divided into enemeta of ten ounces each. The liquid should be warm, and injection practised very slowly (ten to fifteen minutes). In cases of intolerance, a few drops of laudanum might be added; or resort to hypodermoclysis. Treatment should last ten days, during which time the patient should receive no nourishment, either solid or liquid. After this interval commence giving liquids, and gradually return to solid food.

—Condamin.

Reflex Vomiting in Children.—

℞	Ol. absinthii	gtt. 1/16
	Sodii bicarb.	gr. ii.
	Aq. menth. pip	ʒi.

M. S.: Every half hour until relieved.

Lobar Pneumonia.—

℞	Tinct. aconiti	♏i.
	Tinct. digitalis	♏iii.
	Spir. frumenti	ʒiii.

M. S.: Dose every three hours.

Gall-stone Colic.—

℞	Potass. iodidi	2-3.0
	Aq. destil.	100.

M. S.: ℥ss. ℥i. t. i. d.

—F. Garouski.

Scarlatinal Angina.—

℞	Sozoiodol. sodium	
	Sulphuris precip. āā	℥ss.

M. S.: Insufflate several times a day.

Rheumatic Arthritis.—

℞	Salicylate of methyl	℥iv.
	Chloroform	ʒii.
	Menthol	ʒss.
	Lanolin	ʒii.

M. ft. mist. S.: Apply.

Hemorrhoids.—

℞	Vaselin	℥i.
	Cocain muriat.	gr. xii.
	Morphin sulph.	gr. vi.
	Hydrarg. chlor. mitior.	gr. xl.

M. S.: Apply night and morning. If itching, apply menthol, ʒi. – ℥i.

Anthrax.—Daily intravenous injections of 5 ccm. of a 1 per cent. solution of collargol (Crede).

Tetanus.—Injections of a 5 per cent. solution of the tersulphate of sodium.—A. Gelibert.

Atonic Dyspepsia.—Chief indication, as regards diet, is to avoid over-distension, either by giving small meals at shorter intervals than usual, or by allowing fairly substantial meals at longer intervals than usual. The latter is the better if appetite is good.

As regards character of food, (1) reduce quantity of fluid taken *with* food to a minimum, and (2) select compact, nutritious food, such as meat, lightly boiled eggs, and easily-digested cereals, as flaked wheat or oatmeal. Milk taken alone is eminently unsuitable. Animal food is preferable to vegetable, and such vegetables as are prescribed should be pulped. Easily fermentable food, sugar and preserves, should be avoided. Soups sparingly. Light wine may be permitted to stimulate appetite.

Rest for at least twenty minutes after each meal; abdominal exercise; massage; loose clothing. The Scotch abdominal douche is valuable in some cases.

Medicinal: Strychnine, with arsenic and sodium bicarbonate, given before meals, or combined with muriatic acid and pepsin, given after meals. —A. H. Carter.

Dermatitis Serpiginosa.—Brush surface with a strong solution of nitrate of silver, or apply moist compresses of rectified alcohol. The latter is also useful in the intertrigo of fat people.

Flatulent Dyspepsia.—

℞	Magnesia	
	Phosphate of lime	
	Powdered charcoal	
	Sublimed sulphur āā	10.0

M. S.: Teaspoonful in water p. r. n.

Enema in Tympanites.—

℞	Tinct. asafetidæ	℥ii.
	Spir. Terebinth	℥i.
	Magnes. sulphat.	℥ii.
	Aq. ferv.	Oi.

M.

Pleurisy.—

℞	Morph. acetat.	gr. ½
	Potass. acetat.	℥ss.
	Tinct. verat. virid.	♏xxiv.
	Syr. tolu	℥ss.
	Sol. potass. citrat.	℥iiss.

M. S.: Dessertspoonful every three hours to lessen probability of effusion. —Da Costa.

Report of Cancer Laboratory, University of Buffalo.—Roswell Park says that the results of the past year's work have been to strengthen the ever-growing conviction that cancer is an infectious disease; also that cancer is on the increase. The problems involved in connection with parasites which may play a rôle in the production of cancer, and their culture on artificial media, have been studied; efforts have been made to acclimatize yeasts, fungi protozoa and the like to development in living animals, and then conditions were chosen which, from a theoretical standpoint, would be most likely to lead to the formation of tumors by this means. On the other hand, every effort is being made to cultivate parasites from cancerous material on artificial media, and to facilitate their growth and development in animals. Investigations of a toxicological and physiological nature have been carried out, the problems of the disease, from a chemical standpoint, and a considerable number of experiments, especially of a microchemical nature, have been carried on with a view to confirming and supporting the work of the pathological department. No small part of the work has consisted in examining, indexing, and comparing the work and results of others in all parts of the world. *X*-ray apparatus has been promised for the experimentation of the treatment of cancer by this means.—*Buffalo Medical Journal*, March, 1902.

New Instruments.

NEEDLE-HOLDER.

By HENRY H. MORTON, M.D.,

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE LONG ISLAND COLLEGE HOSPITAL, AND GENITO-URINARY SURGEON TO THE LONG ISLAND COLLEGE AND KINGS COUNTY HOSPITALS AND THE POLHEMUS MEMORIAL CLINIC.

THE writer has endeavored in vain for some years to find a needle-holder that was entirely satisfactory.

Some forms which seem quite popular are provided with a catch to prevent separation of the handles after the jaws are closed upon the needle. This catch is often the cause of the needle's breaking, is troublesome to work and is, in the writer's opinion, entirely unnecessary.

The ordinary needle-holder will not hold a Hagedorn needle unless especially designed for the purpose, while, for general use, the writer prefers a three-cornered needle with a moderate curve; for certain purposes, such as introducing retraction sutures through the bladder in suprapubic cystotomy, or sewing up the inguinal canal in Bassini's operation, the extreme curve, which is only found in the Hagedorn needle, is very convenient.

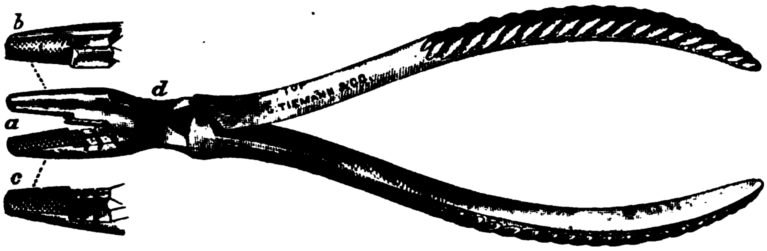
The Deeffenbach needle-holder, which is a simple instrument and without a catch, has been found fairly satisfactory, and has been used for some years. Its disadvantages are the long handles, which are rather heavy and clumsy, and as the jaws are made perfectly flat they are of necessity quite narrow, to avoid breaking the needle: in consequence they do not hold the needle as firmly as they ought, and the size and weight of the instrument prevents a very fine needle being held in it to good advantage.

It is a common experience with all surgeons that complicated instruments may work well in the shops of the instrument-makers, but their shortcomings become only too evident when brought into actual use in an operation.

For this reason all instruments which approach the simple type of the tools used by mechanics in their daily work at the bench, are the most efficient instruments which the surgeon can make use of.

With this thought in mind the writer selected, from the stock of a large hardware store, two varieties of pliers or pincers, one with flat, broad, powerful jaws, used for holding wire, and the other used by umbrella-makers, with a concave lower jaw, into which the convex upper jaw fits closely when closed.

With these tools as models and some suggestions from the writer, Messrs. Tiemann & Co. constructed the accompanying form of needle-holder:



a—Concave and convex jaws. *b* and *c*—Jaws in detail. *d*—Open box joint.

Description.—The posterior part of the lower jaw is grooved in the center, leaving two ridges, which are notched to receive Hagedorn's needles. An elevation on the opposite jaw fits into the groove and firmly holds in place any size of Hagedorn's needles.

The forward part of the lower jaw is concave, while the upper jaw is convex, and both are serrated with fine cross cuts.

These jaws will grasp and firmly hold any size of the ordinary curved surgical needles, without breaking it. The writer has used this needle-holder in several operations, and has found it to be eminently satisfactory.

The advantages it possesses are as follows: (1) It can be taken apart and boiled; (2) There is no catch to break needles or embarass the surgeon; (3) The needle is held firmly; (4) It will hold the largest or smallest size of curved surgical needle; (5) It holds a Hagedorn needle equally well.

40 SCHERMERHORN STREET, BROOKLYN.

Surgical Suggestions.

Benzine is one of the best things for cleansing the skin after ointments have been used, and for removing sticking plasters. It is cheaper than ether, does not produce a cooling effect, and causes no irritation.—FRANKS.

Chancroid.—

℞	Creosote	♏iij.
	Hydrarg. bichl.	gr. iv.
	Glycerini	℥ij.
	Aquæ Rosæ	℥iij.

M. S.: Apply frequently as a wash.

Pruritus Vulvæ.—

℞	Cocaine	2.0
	Orthoform	1.5
	Menthol	0.5
	Carbolic acid	1.0
	Vaseline	20.

M. S.: Apply.

Cauterize excoriations with a 10-per-cent. silver solution.

Umbilical Hernia.—A new method advocated calls for an overlapping of the fascia of the external oblique.—"Steps of Operation" in *Annals of Surgery*, August.—W. J. MAYO.

Recent Fractures.—A prolonged experience of the use of the combined methods of massage, early movements, and rational posture in the treatment of ordinary fractures confirms the writer in the favorable estimate formed by him as reported in his first communication upon the subject in *The Lancet* of 1897.—Sir W. H. BENNET, *The Practitioner*, August, 1901.

In Chronic Cystitis irrigate the bladder daily with a quarter to a half per cent. solution of formaline.

The Uvula, when elongated, may produce chest symptoms suggestive of phthisis, and may even predispose to the latter. An irritable cough associated with persistent infrascapular pain has been promptly cured by removing the uvula.—LENNOX BROWNE.

Disinfection of Instruments.—The official spirit of soap of the German Pharmacopœia offers a convenient means of effectually sterilizing surgical instruments. This spirit is made by combining six parts of olive oil with seven parts of caustic potash, subsequently diluting with thirty parts of alcohol and seventeen of water. The caustic action of the potash is neutralized by the olive oil and water.

Instruments thoroughly washed with this solution, or simply wrapped snugly in cotton saturated therewith, may be kept aseptic for considerable periods of time. Exclusion of air is an important consideration.

The same agent may be employed to disinfect the hands of the operator, or skin of the patient, as it is harmless even when applied in full strength.—*Deutsche Medizinal Zeitung.*

Urethral Chill.—To ward off urethral chills as the result of passing sounds, etc., the following is recommended:

℞	Sulphate of morphine	grs. 1-10.
	Tincture of aconite	♏ij.
	Oil of wintergreen	♏xv.

For one dose. —WEIR.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending March 29, 1902:

	Cases.	Deaths.
Measles	681	30
Diphtheria and croup	339	46
Scarlet fever	328	22
Smallpox	69	4
Varicella	68	..
Tuberculosis	295	166
Typhoid fever	18	9
Cerebro-spinal meningitis	..	6

Divorce Statistics.—Connecticut, once regarded as the worst of Eastern States in respect to easy divorce, now shows some improvement as compared with the increase of population, and even absolutely; for she has granted fewer divorces in the last seven years than in the preceding seven. A better public sentiment and a more careful procedure of the courts seem to be the chief reasons for this. The ratio of divorces to marriages is now 1 to 15.8. In earlier years it was as high as 1 to 9. Rhode Island, on the contrary, now grants four hundred or more annually, or 1 in 8.2 marriages. In Massachusetts divorces are increasing, though as yet the ratio is not more than 1 to 20.2, and the number granted in 1889 was 1,163. One divorce to fifty marriages is about the highest ratio known in New Jersey.

Three or four typical States in the interior give some striking figures. Divorce in Oklahoma increased from 2,270 in 1889 to 3,217 in 1899, and the ratio to marriages has become 1 to 10.9. There were 2,418 divorces in Michigan in the year 1900 or 1 to 9.6 marriages. Here about two-thirds of the applications are granted. In some States three-fourths of the suits are successful. In Michigan the statistics show that nearly all the divorces are granted to residents of the State. Indiana shows a remarkable change for the worse. Almost a generation ago Indiana was notoriously bad. Then the laws were improved and her divorce rate was no worse than that of some States in the East; but for some unexplained reason divorces of late have increased rapidly.—*Michigan Monthly Bulletin of Vital Statistics.*

Mosquitos Attracted by Sounds.—Dr. S. M. Lawrence (Port of Spain, Trinidad) writes to the *British Medical Journal* concerning the fact observed by a correspondent to that paper that certain sounds attract mosquitos. Dr. Lawrence says that in his childhood days, with others, a favorite amusement at dusk was to attract and kill mosquitos by these means. His companions and he would vie with each other in hitting off the note that would prove most attractive to these pests, which so far as he can remember was a continuous "oo" pitched in a medium key, and then suddenly changed to a lower "ah," drawn out in the same way. Most vivid—proceeds Dr. Lawrence—is the recollection of the sudden rise in the volume of their noise, and the equally sudden attack on the face as they promptly answered the invitation. We often had recourse to this ruse, not only for amusement, but also to put a stop to their unwelcome attentions.

The Doctor's Conscience.—The following tale, which if not true is "ben trovatore," is told of a deceased well known London physician whose pride it was to declare that he could feel a patient's pulse, auscultate him, write a prescription, and pocket a fee in a space of time varying from three to five minutes.

One day a man was shown into the consulting room and was rapidly examined. At the conclusion he shook hands with the doctor and said:

"I am especially glad to meet you, as I have often heard my father, Colonel——, speak of his old friend, Dr. ——."

"What!" cried the doctor, "are you Dick——'s son? My dear fellow, fling that prescription into the fire, and sit down and tell me what is the matter with you."

Bakers' Teeth.—A dentist has called attention—says a London weekly journal—to the deplorable condition of the teeth of bakers, and asserts that he is often able to tell the profession of the patients by the condition of their teeth. The tooth decay is soft and rapidly progressive. The principal parts attacked are the outside surfaces of the teeth, commencing at the top of the root and rapidly extending to the grinding surface.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended March 29, 1902:

		CASES	DEATHS
SMALLPOX—UNITED STATES.			
California, Los Angeles	Mar. 8–15	6	
Sacramento	Mar. 8–15	1	
San Francisco	Mar. 8–16	13	
Colorado, Denver	Mar. 8–15	8	
Illinois, Belleville	Mar. 15–22	7	
Joliet	Mar. 1–15	8	
Indiana, Evansville	Mar. 15–22	5	
Indianapolis	Mar. 15–22	14	
Iowa, Clinton	Mar. 15–22	1	
Kansas, Wichita	Mar. 15–22	5	
Kentucky, Covington	Mar. 16–23	8	
Maine, Portland	Mar. 15–22	4	
Massachusetts, Boston	Mar. 15-22	19	2
Cambridge	Mar. 15–22	3	1
Fitchburg	Mar. 15–22	3	
Lawrence	Mar. 15–22	4	
Malden	Mar. 15–22	2	
Somerville	Mar. 15–22	2	
Michigan, Detroit	Mar. 15-22	13	
Grand Rapids	Mar. 8–22	4	
Ludington	Mar. 15–22	19	
Nebraska, Omaha	Mar. 15–22	20	
New Jersey, Elizabeth	Dec. 28–Feb. 15	12	1
Elizabeth	Mar. 8–15	1	
Hudson County	Mar. 9–16	48	
Jersey City	Mar. 9–23	78	1
Newark	Mar. 15–22	25	5
New York, Binghampton	Mar. 15–22	1	
New York	Mar. 15–22	66	13
Yonkers	Mar. 14–21	2	
Ohio, Cincinnati	Mar. 14–21	25	
Pennsylvania, Allegheny City	Mar. 15-22	1	
Philadelphia	Mar. 15–22	35	3
Pittsburg	Mar. 15–22	4	
Rhode Island, Providence	Mar. 15–22	5	
South Carolina, Greenville	Mar. 8–15	7	
South Dakota, Sioux Falls	Mar. 15–22	4	
Tennessee, Memphis	Mar. 15–22	13	
Washington, Tacoma	Mar. 8–15	10	
West Virginia, Wheeling	Mar. 15–22	2	
Wisconsin, Green Bay	Mar. 15–22	23	1
Milwaukee	Mar. 15–22	3	
SMALLPOX—FOREIGN.			
Belgium, Antwerp	Mar. 1– 8	18	3
Canada, Halifax	Mar. 15–22	9	
Hamilton	Mar. 15–22	1	
Quebec	Mar. 15–22	22	
Winnipeg	Mar. 1–15	9	
China, Hongkong	Feb. 1–8	1	
Colombia, Cartagena	Mar. 3– 9		1
Panama	Mar. 10–18	50	
France, Paris	Mar. 1– 8		3
Great Britain:			
England, Leeds	Mar. 8–15	2	
London	Mar. 1– 8	555	80
North Shields	Feb. 22–Mar. 8	16	2
Swansea	Feb. 22–Mar. 1	1	
Tottenham	Feb. 22–Mar. 1	1	
West Ham	Feb. 22–Mar. 1	7	
Scotland, Dundee	Mar. 1– 8	1	
Glasgow	Mar. 7–14	95	2
Leith	Mar. 1– 8	1	
India, Bombay	Feb. 18–25		8
Calcutta	Feb. 15–22		8
Karachi	Feb. 2–23	14	5
Madras	Feb. 8–14		5
Italy, Naples	Feb. 22–Mar. 1	0	1
Palermo	Feb. 22–Mar. 8	27	1
Rome	Jan. 18–25		1
Russia, Odessa	Mar. 1–8	2	1
St. Petersburg	Feb. 22–Mar. 1	11	8
Warsaw	Feb. 15–22		2
Spain, Barcelona	Mar. 8–15		5
Straits Settlements, Singapore	Jan. 18–25		2
Uruquay, Montevideo	Jan. 26–Feb. 8	152	14
SMALLPOX—INSULAR.			
Porto Rico, San Juan	Feb. 22–Mar. 1	14	
YELLOW FEVER.			
Mexico, Vera Cruz	Mar. 8–15	4	2
CHOLERA—INSULAR.			
Philippines, Manila	Mar. 24	18	
CHOLERA—FOREIGN.			
China, Canton	Mar. 17		2
Fatshan	Mar. 19	Raging.	
India, Bombay	Feb. 18–25		5
Calcutta	Feb. 15–22		84
Madras	Feb. 8–14		10
Straits Settlements, Singapore	Jan. 18–25		21
PLAGUE.			
Australia, New Castle	Mar. 21	Present.	
India, Bombay	Feb. 18–25		701
Calcutta	Feb. 2–9		176
Karachi	Feb. 2–23	105	93

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Original Articles.

THE TRAUMATISMS OF PREGNANCY.*

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CHICAGO.

PRESIDENT OF THE ATTENDING STAFF OF COOK COUNTY HOSPITAL,
CHICAGO.

A CONSISTENT consideration of the various injuries and accidents to which the genitalia of pregnant women are liable necessitates an attempt at definite nomenclature. Accidents are chance occurrences, of interest here only when detrimental in their effects. Injuries, in their relation to the conditions under consideration, are detrimental occurrences, often accidental, evidenced by structural changes, which may be microscopical in character, and which are occasioned by violence more or less pronounced. The term "traumatism" may very properly be used to designate the untoward effects of accidents or injuries. Traumatism is sometimes accidental, and usually injurious, but, under certain conditions, it is conservative. Although often used as a synonym for wound, it is susceptible of a wider and more generalized definition, or, at least, of a construction that will include microscopical lesions as well.

The different effects of traumatism require definition. A laceration is a solution of continuity of the soft parts, usually of limited extent, but sometimes extending to the peritoneum or bony confines of the pelvis. If the injury be produced by violence, often in the use of an instrument or other foreign body, the laceration may be multiple, and the destruction of tissue sufficient to warrant the term mutilation. Where laceration or mutilation of the vagina is sufficient to result in loss of tissue, the different fistulæ may result. The qualifications, complete and incomplete, are applied to injuries of the soft parts, and an extensive laceration is often called a rupture. This latter term, when applied to the uterus, may be complete or incomplete, and is also called external or internal in reference to its location. Specific terms are also in use, indicating not only the nature of the injury, but referring also to the etiology. There may be mentioned annular separation of the portio vaginalis, which signifies an amputation and a casting off of the parts; avulsion, which means a violent tearing away of a considerable portion of the uterus, and perforation, which I would define in reference, to the uterus, as that species of rupture produced by violence through the agency of a foreign body other than the child. It is described as internal or external, according to the starting point of the injury, and complete or incomplete, according to its extent.

The consideration of the traumatisms of pregnancy divides itself conveniently into a consideration of those injuries which are due to attempts at an interruption of the pregnancy and a consideration of injuries which occur incidentally, often by accident. I have elsewhere spoken of the facts regarding criminal abortion,[1] and have alluded to the tenacity with which, in spite of serious injury, the fecundated ovum may cling to its attachment once it is anchored to the uterine wall. I have also referred to those seemingly trivial accidents which suffice, sometimes weeks afterwards, to cause an interruption of the pregnancy.

A vaginal douche of hot water has caused abortion, and excited medico-legal interest in England, because it was not proved that the liquid used was noxious.[2] The use of an alum water injection has caused death,[3] and a bichloride douche has resulted in mercurial poisoning.[4] Death has occurred in consequence of intra-uterine injection of fluids, often undoubtedly because of the entrance of air into the circulation. Martin of Berlin mentions two cases of this character, and additional cases have occurred in this country.[5] Moreover, the instrument used has caused traumatism—in one instance causing a uterine perforation, which resulted in metroperitonitis and death.[6]

The use of foreign bodies to interrupt pregnancy has resulted in a great variety of injuries, as would be expected when it is remembered that the woman herself, or some ignorant midwife, is often the would-be abortionist, and that almost every conceivable appliance has been brought into requisition. Sometimes the uterus is not entered. Thomas reports a case where a physician's wife, thinking herself pregnant, passed an umbrella rib through the vaginal fornix, abdominal cavity and diaphragm, until it penetrated the right lung to the extent of two or three inches, in which position it was found at the autopsy.[7] In contrast to this case is one reported to the London Obstetrical Society, where a woman produced abortion on herself thirty-five times without injury by the use of a knitting-needle.[8] The foreign body may remain in the vagina without causing much inconvenience. On one occasion an elastic sound encircled the cervix, and was wound around it in a knot. It had been used to induce abortion, and remained in place afterwards for two years and a half, causing abdominal pain, especially during menstruation, until it was removed with forceps.[9]

When the uterus is entered, the results vary. Death has occurred simply from the introduction of a canula,[10] but often there is traumatism, which varies from a simple laceration to a complete internal perforation. Sometimes the injury heals unnoticed, but if infection occurs all the well-known sequelæ are possible. Among them I have observed a metastatic abscess of the brain, which was fatal, and in another case fourteen abscesses, which appeared on the legs and arms during a period of four months.

I append a record of some of the findings in septic cases: In the Tinkler case, a piece of wood produced the expulsion of a living fœtus; but at the autopsy there was found in the wall of the uterus evidences of injury consisting of numerous tears and perforations, which had resulted in gangrene.[11] In the case of a girl, sixteen years old, several punctures had been made in the anterior uterine wall by a knitting-needle or straightened hairpin. In the lateral wall was a large laceration, one and one-half inches long, made by a different instrument, and probably at a later period. The cervix was bruised, but not involved in the laceration of the body of the uterus, which latter traumatism probably caused death.[12] At the post-mortem of a single woman, two months pregnant, who died four days after visiting an abortionist, there was found general icterus, foul discharge from the vagina and diphtheritic patches about the introitus. General diffuse purulent peritonitis, large soft spleen, gray liver, and other evidences of sepsis were present. Near the patulous os was a punctured wound, and higher up another one, half an inch deep, while at the fundus there was a rupture with sloughing edges, through which three fingers could pass.[13] In another case, where the woman was four and one-half months pregnant, death occurred within thirty hours. The cervix was lacerated; in the fundus uteri was a perforation of 4 to 5 cm., in which were engaged débris of placenta; in the peritoneal cavity was a large quantity of blood, partly coagulated, and there were signs of commencing inflammation.[14] Winter demonstrated two uteri; in one there was local gangrene of the posterior wall, to the extent of a five-mark piece. It was thought that the abortion was responsible for a laceration of this part of the uterus, and the acute gangrenous metritis had terminated in secondary perforation. In the other case the patient had died of diffuse septic peritonitis on the sixth day. Small collections of putrid pus were found between the intestines. The uterus was surrounded by encysted abscesses, containing a highly offensive matter, and which filled the pelvis. Near the fundus, on the posterior wall, was a perforation, the size of a five-pfennig piece, with ragged edges, to some extent gangrenous. The difference in the two cases is thus explained: In this case the wall of the uterus was perforated and the virus was deposited directly in the peritoneal cavity, while in the former case the virus was apparently deposited on the uterine wall, and resulted in a gangrenous peritonitis, which terminated in secondary perforation.[15]

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*Read before the Medical Society of the State of New York, Albany, January 28, 1902.

It is unnecessary to cite other cases, for the effects of infection in criminal abortion are the usual ones. The traumatism, whether slight or extensive, is often the determining factor, for each solution of continuity in the soft parts becomes an additional door of entrance for pathogenic bacteria. Serious hemorrhage from injured bloodvessels has often resulted. One woman, six months pregnant, died twelve hours after consulting an abortionist. An enormous quantity of blood, partly coagulated, was found in the abdominal cavity. The posterior wall of the uterus showed an opening, of the diameter of an ordinary sound, extending to the right iliac artery, which was itself perforated a little below its origin. Three other punctures had their starting point in the cervix. In spite of these punctures, the fœtus had not been reached, the membranes remained intact.[16]

The foreign body itself is often the cause of serious complications quite independent of the injury it may inflict or its instrumentality as a determining cause of infection. In addition to producing fatal hemorrhage by the puncture of a bloodvessel, or being the starting point of septic processes, an examination of the recorded cases shows that it passes through the uterus into the peritoneal cavity, or else it remains in the uterus or its tissues. In either event abortion may or may not occur. When the foreign body is retained, there may be no appreciable inconvenience, as in Bunge's case, where a needle was pushed into the internal os, and remained there twelve days after the abortion,[17] or suppuration may supervene, through the agency of which the foreign body may be expelled into the adjoining viscera, or penetrate neighboring tissues.

When the foreign body escapes into the peritoneal cavity, its fate is variable. My own case, so far as I know, was the first where a foreign body, introduced through a uterine perforation into the peritoneal cavity, was removed by abdominal section, an ovarian cyst and tube being removed at the same time, and the pregnancy continued without interruption until term. The case occurred thirteen years ago, and was, in brief, as follows: A physician was endeavoring to produce abortion in a woman about three months pregnant, by means of a silver male catheter. The patient was nervous and had suffered from melancholia. The point of the catheter was introduced within the uterus, when suddenly the woman made a convulsive movement, and the physician, to his horror, saw the catheter disappear. When I was called to the patient, some hours afterward, I recognized a uterine perforation of the posterior wall, through which I could pass a sound some 10 to 15 cm., but I could not feel the catheter within the abdominal cavity. An abdominal section was made, but nothing was discovered in the pelvis. Finally, the intestines were brought out of the abdominal cavity, and, after some little search, I found the catheter under the liver, and removed it. The uterine wound was closed with three sero-serous sutures, and the right tube and ovary were removed, together with a cyst about the size of a hen's egg. The patient made an uneventful recovery, and some six months later, after a normal labor, was delivered of a child, which is alive to-day.

Dr. Gill Wylie reports a case presenting certain points in common with mine. A girl inserted a glass rod into the uterus. It slipped beyond her reach, probably perforating the uterus. The following day the girl went to her work as typewriter. Some five weeks after that she aborted, and about two weeks after that time a tumor, the size of an egg, was felt in the left ovarian region. Celiotomy showed adhesions about the uterus and left ovary. This ovary and tube were removed, as well as the glass rod, which was found near the left kidney. No point of perforation was found. The patient made a good recovery.[18]

The literature of the past few years shows a number of similar cases where foreign bodies, which had entered the peritoneal cavity through a uterine perforation, were found at the autopsy, or were removed by abdominal section. A glass rod, for instance, is reported to have been removed from under the right kidney without interrupting the pregnancy, or causing much appreciable inconvenience.[19] In another case, at the autopsy of a young woman, three or four months pregnant, an irregularly-shaped hole was seen in the posterior wall of the uterus, and, directly behind it, lying transversely in the pelvic cavity, was found a sea-tangle, or laminaria tent, about the size of a thumb.[20]

In place of perforating the uterus and passing through into the peritoneal cavity, the foreign body may remain in the uterus, causing various sequelæ, sometimes without inducing abortion. In one case a hard, irregular tumor filled the pelvis, extending into the right iliac region. A wooden spit, 12 cm. long, was removed from the uterus, where it had remained two years, after an abortion.[21] A sinus over the sacrum, of six months' standing, was operated, and the following day pus escaped from the vagina. A bougie over six inches long, which had been introduced eleven months previously, and which induced abortion within two days, was removed from the uterus.[22] In another case a seton needle produced an abortion at three months, but remained in *utero.* About a month afterward an abscess formed in the inguinal region, and on the seventy-fifth day the needle, six inches long, appeared at the surface.[23] I find record of an unusual case where a twig, six inches long, and as thick as a goose quill, remained in the pelvis five months without the patient's knowledge and finally penetrated the rectum.[24] The spindle of a spinning wheel was retained two years *in utero.* The patient was reduced and weak from the discharge which had become offensive to herself, her family, and all who approached her. The spindle was removed by two incisions in the cervix, and the patient recovered.[25] An abortionist introduced a catheter, and the patient pushed it in farther, until it disappeared. Two or three months later the patient complained of severe pain in the left thigh, hip and leg, and a large abscess formed near the left hip. A transverse bar was felt between the vagina and rectum, and was removed through the latter by means of forceps from a pouch extending to the lateral walls of the pelvis. It was the catheter which had passed through the posterior uterine wall, and had resulted in a phlegmon of the pelvis and perimetritis, giving rise to abscesses of the hip and perineum.[26]

As curiosities I instance two cases, where women produced abortion on themselves by forcing respectively a hairpin and a knitting-needle into the uterus through the abdominal wall. In one case, when a young girl left the hospital after being delivered of a dead fœtus at term, it was learned that she had forced a long hairpin through her navel to a great depth, with the avowed intention of destroying her child. She suffered great pain, which she concealed, and it was observed that some pus issued from her umbilicus after delivery. This discharge gradually ceased, and the patient left the hospital in good condition.[40] Another girl, six months pregnant, after failing to induce abortion by thrusting a knitting-needle through the vagina into the uterus, forced it through her umbilicus. Two days later abdominal section was performed and the tip of the needle was seen projecting from the fundus uteri. It was seized with forceps and removed, a stitch being inserted in the uterine puncture, as there was some hemorrhage. Two days later the patient miscarried and a black spot was seen on the child's buttocks, where apparently the needle had penetrated. The mother recovered.[41]

As regards treatment, these traumatisms of pregnancy may well be considered by themselves. They are due to a foreign body which has been introduced for the purpose of inducing abortion, and which has entered or remains in or about the uterus. In most instances the injuries produced interrupt pregnancy, and the dangers of a septic abortion are added to those of trauma. If the foreign body remains in the uterus, and especially if it projects through it, infection is liable to occur, and, if an abscess forms, it extends, as a rule, into the cellular tissue, pushing up the peritoneum in many instances, and pursuing, to a great extent, the course of other extraperitoneal pelvic abscesses. At times the infection is intrauterine and extends by continuity of epithelial surfaces to the fimbriated extremities of the tubes, and exceptionally beyond.

It is wise in every abortion to consider the possibility of its having been induced. It is important to understand that serious traumatism may have been ignorantly inflicted, and that the foreign body, probably not aseptic, may still be in the uterus or may have passed through it. A realization of this possibility, and a knowledge of the dire results that have followed different injuries, must modify our treatment in some important details. If the fœtal envelope be not injured and the condition of the patient be good, the case may often be let alone, unless the evidence of serious traumatism is plainly manifest, or it is probable that the foreign body is still retained or has entered the peritoneal cavity. Reasoning from the analogy of these cases of perforation to cases of rupture occurring at the time of labor, it is apparent that the first indication, after the arrest of hemorrhage, is to secure coaptation of the edges of the wound. This is accomplished, according to Fritsch, by pressure of the abdominal walls and counter-pressure of the floor of the pelvis.[27]

Vaginal douches should be avoided, swabbing out of the parts is unnecessary, and the use of drainage, except perhaps a small strip of gauze, is ill-advised. The perforation on the peritoneal surface is apt to be small, and the surfaces easily fall together. Should suppuration now occur, it will probably be without danger to the peritoneum.

In case the perforation be complicated by the presence of an incomplete abortion, it is desirable to secure the removal of the secundines without delay. I do not, however, sanction the frantic haste which some practitioners display in their efforts to empty the uterus. It is understood that the presence of membranes favors infection, but, after all, the danger is the infection itself. Moreover, it must be acknowledged that an exact knowledge of the extent of the injury is rarely possible, and that the use of the curette at this time is a real element of danger. Liebman of Trieste has demonstrated how easily a sound or curette passes through the uterus,[28] and nearly every gynecologist of experience can tell of instances in his individual practice where the uterus has been perforated. While it is true that statistics show that such an accident is rarely fatal, it need not be urged that it is most undesirable, and it is also true that the result is sometimes serious. Hoffman mentions a case where the omentum protruded at the os through an accidental perforation, necessitating a laparotomy and suture of the wound. This patient recovered.[29] Bratenahl speaks of removing a macerating fœtus at the third month. The small forceps used perforated the uterus and pulled a loop of intestine into the vagina. Abdominal section, performed an hour later, showed a quart of blood in the peritoneal cavity and a spurting artery at one side of the rent which was situated on the posterior and right surfaces of the uterus and was one and one-half inches long. The intestine was replaced and the uterine wound closed by deep and superficial sutures. The patient was well and at work in three weeks.[30] Kiwisch mentions a case where ileus occurred and an artificial anus formed in the uterus. For ten days fecal matter was discharged through the uterus, but the fistula then closed.[31]

If the fingers or the blunt curette can remove the secundines without inflicting additional injury, let it be done. Otherwise, I advise packing the uterus with strips of iodoform gauze, as Duehrssen first recommended.[32] An interval of twelve or twenty-four hours will allow of a partial separation of the decidua, often facilitating the removal of the secundines, but such interval will be of special value in permitting the peritoneal surfaces of the perforation to become agglutinated, thus diminishing the danger of infection of the peritoneum.

If the foreign body is within the uterus and accessible, it must be removed. If it has escaped into the tissues and become the starting-point for suppuration, the abscess, in most instances, will be easily reached through a vaginal incision, the foreign body will be removed and the abscess-cavity will be drained with iodoform gauze or rubber tubing. If the abscess formed has extended upwards, it may, in some instances, be more conveniently incised from above, near Poupart's ligament. The peritoneum, as is well known, is often displaced upwards, or the abscess becomes adherent to the parietal peritoneum, so that the suppuration in either case is practically extraperitoneal. In certain cases counter-drainage will be advisable.

If the foreign body has escaped into the peritoneal cavity, a section should be made at once. On rare occasions the foreign body can be felt in the Douglas, and the section will be vaginal. In most cases the location of the foreign body is unknown, and the section must be abdominal, often of considerable extent, to permit a diligent search and, if necessary, a careful evisceration. In either event, unless sufficient time has elapsed since the perforation to allow the peritoneal surfaces to become agglutinated, the uterine wound should be closed. The effect, if any be discoverable, of the presence of the foreign body within the peritoneal cavity should receive attention. Adhesions of uterus, tube, or ovary should be separated, and occasionally a resection or removal will be performed. Pregnancy is not a contraindication to the intraperitoneal surgery of pathologic conditions.[33] On the contrary, it often, in my judgment, makes imperative the advisability of resorting to operative measures.[34]

In certain cases of mutilation, of ulceration, or of septic infection involving a considerable portion of the uterine parenchyma, hysterectomy will be thought of. The indications for this operation during the puerperium I have elsewhere considered.[35] As regards traumatism in this connection no definite generalization can be made. It can only be said that if the injury is beyond repair, or if the danger of infection is deemed imminent, the uterus, and perhaps its adnexæ as well, should be removed. The same remark applies to injuries occurring late in pregnancy, often as a result of injudicious, unskilful, or ignorant attempts at delivery. The history of obstetric medicine in this connection offers a most dismal picture, since the days of Mauriceau. The entire uterine parenchyma has been torn out by manual interference.[36] A case of rupture of the vagina, extending into the right side of the uterus, presented no symptoms until the fourth day after labor, but terminated fatally on the tenth day, from granular endometritis and diphtheritic exudate.[37] The injuries due to accidents and unskilled manipulations that occur in many fatal cases of operative interference are only exceptionally recorded. Portions of the uterus have been torn away and different instruments, introduced within the uterus, for the purpose of effecting the delivery of the child or placenta, have penetrated the uterine wall, or have so mutilated the tissues that ulcerative perforation has occurred, or fatal hemorrhage has resulted as a consequence of an extension of infection into blood-vessels.

The traumatisms of pregnancy, due to direct or indirect violence, apart from attempts at the induction of abortion, are, as would be expected, most varied. It is to be remarked that an amount of violence sufficient to cause a fatal peritonitis, or to produce the most serious results, may not separate the connection between mother and child. At other times a slight injury suffices to interrupt pregnancy; it may be weeks after it has been inflicted.[38] Serious and, at times, fatal injuries occur as the result of severe, or apparently trivial, violence applied, as a rule, directly to the abdominal parietes. Such injuries are recorded as the result of falls, beating, lifting, pumping, crushing, kicks, and other forms of direct violence.

In one instance, a woman, eighty days pregnant, fell from a wall ten or twelve feet high. She was found delirious, half an hour afterward, with blood issuing from her nose and ears. Five hours later she sank into complete coma, and death was momentarily expected. Fourteen hours after the accident she recovered consciousness, but complained of intense pain in the head, neck, and shoulders. On the tenth day she aborted, with the loss of about two ounces of blood, but without parturient pains, and two days later she resumed her usual occupations. Her pregnancy was twin, for seven months after the accident she was delivered of a boy at term.[39] In another case a woman, about seven months pregnant, slipped down a pair of stairs and struck astride the edge of an upright open barrel. She sustained an oblique fracture of the body of the left os pubis. A roller bandage was applied, opiates were administered, and the urine drawn for three days. In six weeks the patient could walk about. The labor at term was normal, but the fracture, we are informed, "of course reopened, and symptoms of peritonitis presented themselves, which yielded kindly to treatment and the patient recovered."[42]

Another woman pitched headlong downstairs, bruising herself considerably by the fall, but retaining sufficient consciousness to remount the steps to the room above, where she fell unconscious to the floor. She became feverish and flighty, and then became unconscious for five days. Miscarriage was expected, but did not occur. There was a gradual gain of consciousness. After the lapse of a month she was delivered of a child exhibiting no marks of injury, although it lived but twelve hours. The puerperal period passed satisfactorily until the third day, when she had a severe chill, followed by a rapid rise of temperature, accompanied by violent pain in the pelvis and the lower part of the abdomen. Local treatment caused improvement locally, but her general condition grew worse. Examination revealed an immense pelvic abscess, consequent, most likely, on cellulitis, and evidently pointing to the umbilicus, above which it extended on her left side. The whole pelvis was full of pus, which had pushed the uterus down until the vagina was almost obliterated. Poultices were ordered on the umbilicus, and a tonic containing iron was given. That night the abscess burst at the umbilicus, discharging large quantities of pus. There was improvement from that moment, which continued until the patient had completely recovered.[43]

A multipara at full term, while walking on the ice, fell and struck the anterior surface of the abdomen with the entire weight of her body, producing a sensation as if she were "split open." Fainting, amounting at intervals to complete syncope, followed. During the first twenty-four hours of the injury there was incessant vomiting, coldness of surface and extremities; the countenance was sunken and the aspect deathlike. There were occasional abdominal pains, but the os uteri was not in the least dilated. The external appearance of the abdomen was natural, but tender to the touch. Three days after the accident forced labor and delivery of child were resorted to, which required four to five hours. Profuse post-partum hemorrhage came on. The uterus not exhibiting the least contractile effort, the hand was introduced and immediately returned, detaching the placenta with facility, until it arrived at the upper and anterior portions of the uterus, where it met a resistance which seemed to be a perfectly firm adhesion of the placenta, extending over a surface of from four to five inches. This adhesion could not be broken with any prudent exertion. The patient was now much exhausted, and it was concluded that efforts to separate the detached mass from the adherent portion would be attended with most imminent danger. Death occurred six days after the accident. At the autopsy, sixteen hours later, gangrenous spots were to be seen on the inner surface of the parietes for four or five inches around the umbilicus. Some portions of peritoneum were adherent to the intestines, while other parts were softened in structure. Much fetid gas escaped from the cavity. A perfectly formed fœtus, in natural position, was found projecting from the uterus; the head and shoulders were lying closely upon the abdominal parietes, to which a portion of the placenta was adherent to the right and left of the umbilicus, extending downwards and laterally from three to four inches. The child was lying anterior to all the abdominal viscera. The intestines were mortified at various points. A rupture of the uterus occupied its anterior and superior portions, through which the child must have escaped with its own placenta at the time of the accident. A considerable quantity of serous fluid was found in the cavities.[44]

I also instance two other cases of fatal rupture of the uterus as the result of falls. In one case it will be observed the pregnancy continued until term—a period of two months—before the fatal effects of the injury became apparent.

A II-para, twenty years old, received a fall when in the seventh month of pregnancy, which, however, did not cause her much pain then nor afterwards. She went on to full term. After a restless night, with occasional slight uterine pains, she began to vomit. This was followed by pretty strong pains, during one of which she experienced a severe crack in the back, with a feeling of something suddenly giving way in her inside, which was immediately followed by a discharge of liquor amnii from the vagina. The os uteri was nearly closed, hard and incapable of admitting the end of the finger. There was a slight dark-brown discharge from the vagina, and death occurred two days later. At the autopsy a large rupture of the uterus, extending from the center of the fundus posteriorly along its whole length as far as the os uteri, was found. The opening was seven inches long. The uterus seemed to be perfectly healthy, and contracted over a firmly adherent placenta. The child had evidently been dead for some days, the first stages of putrefaction having set in.[45]

Veit showed the genitals of a forty-five-year-old IV.-para. When five months pregnant, she fell down, and with her abdomen struck the edge of a curb. Violent pains, vomiting and hemorrhage ensued. The patient was seen two days after the accident. There was vomiting, hemorrhage and discharge of pus. The cervical canal was penetrated with difficulty; there were shreds of decidua. The catheter went into the abdominal cavity. Celiotomy was performed. The fundus uteri was ruptured; the edges of the wound were suppurating. Death occurred in four hours.[46]

Smellie's case arouses the suspicion of ectopic gestation. A woman, four months pregnant, had a fall and three weeks later felt a load in her abdomen, which continued on the right side of the same for between two and three years. She then became pregnant again, and the child pressed so much upon the lump as to cause her great uneasiness. Three and one-fourth years after the accidental fall, she was delivered of a live child of full growth. From this time on she grew worse and worse, with violent pain above the umbilicus, and an inflamed tumor appeared near the part. Fomentations were used, which produced a suppuration at a small breach near the umbilicus. It continued discharging a fetid purulent matter for three or four months longer. A year or more after her last delivery she was suddenly seized in the night-time, and a hardened putrid mass of flesh, seemingly about eight inches long, was discharged through the old opening in her abdomen. The lump was rather thicker than a man's wrist, and, being opened, contained all the bones of a four-months' fœtus. At this time the woman was much emaciated, caused by the discharge of a large amount of pus from the wound, and, what was more extraordinary, whatever she ate or drank came out digested through the opening. She continued to discharge her excrement in this manner for six months, when it left her. After this the ulcer was kept open for six months more, when it dried of itself, with a very firm but small cicatrix. Nine months after the wound healed she was delivered of another child at full term, but with great difficulty. The bones of the fœtus lay in the woman's abdomen about four and a half years.[47]

Serious injury from falls has resulted where no direct violence was done to the abdominal walls. Reusing records a case where a young primipara, eight months pregnant, fell from a barn, four meters high. She lighted on her feet and sank down on her knees, but did not lose consciousness. Bimanual examination showed a contracted uterus and other symptoms, which warranted the diagnosis of rupture of the uterus and exit of the child into the abdominal cavity. Abdominal incision in the linea alba, about 15 cm. On opening the peritoneum a large quantity, consisting partly of fluid, partly of coagulated blood, intermixed with meconium and liquor amnii, escaped. The child, apparently in the eighth month of pregnancy, lay free in the abdominal cavity, and was extracted by the feet. The firmly-contracted uterus was taken out of the abdominal wound; it showed a long rupture, extending through the entire posterior surface of the fundus. The placenta was located in this rupture. While the uterus was compressed on the cervix, the placenta was extracted through the rupture, the membranes were also taken out, the somewhat ragged borders of the wound were smoothed, and the rupture was sutured through the entire substance of the uterus with nine sutures of silk. The abdominal cavity was carefully sponged, and the abdominal wound closed with silver wire sutures. Iodoform, plaster-of-Paris bandage; a thick drainage tube was introduced into the vagina and cervix up to the uterus. The hemorrhage was small during the operation, which lasted thirty-eight minutes. Drain was withdrawn on the sixth day. On the seventeenth day the patient was out of bed. On the twentieth day the bandage was changed and the sutures removed. On the twenty-third day she left the hospital in perfect health.[48]

A primipara, nineteen years old, when eight months pregnant, fell backwards on her shoulders and the upper part of her back from a loaded hay wagon, and at once experienced acute pains in the abdomen. Five hours after the fall her respiration was 36; her pulse was rather small and 106. The contracted uterus and large portions of the child could be felt around the umbilicus, separated from it and easily movable. An abdominal section was made. There was no free discharge in the abdominal cavity. The rupture extended through the whole posterior surface of the fundus uteri, then made a right-angled turn to the left and separated the fundus from the cervix for the distance of two and a half cm. From the uterine wound drainage was made through the vagina; the rupture was sutured with silk knots and the abdomen was closed. Convalescence was complicated by the bursting of the abdominal wound and the formation of an abscess. The patient was dismissed in twelve weeks with an abdominal fistula, which eventually healed. Four years later the patient was again pregnant and delivered by version. On account of severe hemorrhage during the extraction of the placenta, a tamponade of the uterus was necessary. The placenta was at the anterior surface of the uterus, over the cicatrix of the rupture.[49]

A thirty-seven-year-old IX-para, a week before term, was knocked down by a horse from a horse-car, fell with her left side on the track and was struck by the front end of the car. There was a severe hemorrhage at once. Twenty-four hours later she was taken to the clinic. In the abdomen very large child parts were very distinct. The contracted uterus could not be felt. Internal examination showed the portio preserved, the cervix admitting two fingers. Through the membranes a foot was felt. The child lay free in the abdominal cavity; the uterus had a large rupture, extending upward, obliquely to the right and down to the left through the whole posterior surface of the fundus. The uterus was amputated according to Porro. Convalescence was complicated by fever and prostration, but the patient finally recovered.[50]

A twenty-year-old primipara fell from a third story on the plaster pavement, alighting on the right half of the trunk, the right elbow and the knee. The patient was pulseless, in agony. At the autopsy the child and placenta were found lying in the abdominal cavity under the liver. A penetrating rupture extended through the posterior wall of the fundus uteri and extended to the upper third of the uterine wall. Besides that, there was an incomplete, oblique, tear of the cervix, three centimeters long, and an incomplete tear, eleven centimeters, of the fundus. In addition, there were fracture of the skull and several fractures of the pelvic girdle.[51]

I append a case of traumatism from beating: A multipara, thirty years old, received a severe beating when four and a half months pregnant. On examination a few superficial excoriations were found on the face, and ecchymoses of abdomen over the right iliac fossa. The uterus was about two and a half inches beneath the umbilicus. The patient had not yet noticed the movements of the child. No fœtal nor uterine sound could be heard; there was no oozing of any kind from the vulva. The cervix was large, soft and velvety; the os transverse, and admitted the end of the finger. The patient complained of pain over the seat of ecchymoses, but this pain seemed superficial. She was ordered rest in bed and friction with camphorated oil over the hypogastrium. She came to the hospital on the 9th and left on the 15th. She had a normal delivery at term.[52]

I find a case of traumatism of the uterus from lifting, which I here submit: A XVI-para, thirty-four years old, while lifting a heavy load, was suddenly seized with abdominal pain and other symptoms. Treatment was instituted for acute peritonitis. The fœtus had not been felt since the accident. A guarded stylet was passed into the upper and posterior part of the uterus, where the membranes were punctured, giving exit to a large quantity of extremely fetid gas and some yellowish brown liquor amnii, which continued to drain away, followed in ten hours by the expulsion of a fœtus of, apparently, seven months utero-gestation, in an advanced stage of decomposition. The placenta and funis were much softened and speedily exracted. There was no hemorrhage; the vomiting ceased, and in six weeks the patient had recovered.

Accidental rupture of the uterus has occurred from exertion while pumping. The strain differs little, if at all, from the conditions present when lifting. A woman, thirty-five years old, five months pregnant, while in the act of pumping from a pump, the handle of which was suspended higher than usual, so that she was obliged to use considerable exertion in order to raise the water, suddenly experienced a strange sensation in her abdomen, accompanied with fainting, so that she was compelled to go to bed. Very soon afterwards she was taken unwell with a great deal of pain and soreness, which continued with very little variation for nearly a week. Six weeks afterwards a doctor was called. He considered it probable that premature labor was about to commence and ordered rest and castor oil. In the evening of the following day the patient complained of pain, of a sharp and stitchy character, in the left hypochondrium, like that of costal rheumatism. The next day a vaginal examination was made, but not the slightest dilatation nor discharge was observed. The os was as small and rigidly contracted as in a virgin. Five days later there occurred uterine hemorrhage and slight labor pains, which lasted for thirty hours. The fœtus could be felt distinctly on external examination; the whole abdomen seemed to be enlarged, and the child appeared to lie transversely across it, principally above the umbilicus. Five days after this, labor came on and a fœtus was extracted with the vectis. The placenta was adherent, and, in separating it with the fingers, a portion was found elongated and extending back to a perforation, the edges of which were contracted and tense, barely of sufficient size to admit the index more than half-way. At the end of a week the patient had recovered, but the fœtus could be felt as before. Ten months afterwards she miscarried at five months, and a hard, irregular mass was felt above the uterus, about the size of a fœtal head. It was believed to be the escaped fœtus of her former pregnancy, now partially ossified.[53]

The crushing traumatisms recorded vary in severity according to the extent of the injury. A woman, thirty-eight years old, and near term, was crushed with very considerable force between the hinder end of the shaft of a cart and a wall, the shaft striking her on the right side of the uterus, her left side being towards the wall. There was great abdominal pain, profuse hemorrhage from the vagina, frequent vomiting and weak pulse, about 125. When she was seen there were no external marks of violence, but a considerable amount of effused fluid in the lower part of the abdomen. The os uteri was closed. No part of the child could be felt and hemorrhage now was very slight. A grain of opium every hour was ordered. The next day the fœtus was recognized free in the abdominal cavity by external palpation. Forcing open the uterus under chloroform, a transverse rupture was apparent towards the back and right side. Abdominal section permitted an easy removal of child and placenta. The abdominal incision was closed with wire, but the patient died sixty hours after the accident and thirty hours after the operation.[54]

A young Irish woman, in the sixth month of pregnancy, was crushed between the parapet of a bridge and the wheel of a large dray bearing an iron fly-wheel weighing twenty tons. The lower part of the abdomen and the pelvis were compressed within a space of two inches in the antero-posterior diameter. At the moment of the accident she had a gush of blood from the vagina. When seen, her pulse was slow and scarcely perceptible, and occasional rigors occurred. The surface of the body was cold and the patient complained of being chilly, but especially of an intense pain about her hips and the lower part of the abdomen, where, about two inches above the symphysis pubis, was seen a transverse bluish mark about three inches long and one inch wide. The abdomen was very tender in the hypogastric region. The right iliac bone was easily movable and appeared to be separated from the sacral bone. In front, about midway between the symphysis pubis and the anterior superior spine of the ilium, there was a fracture through the horizontal ramus of the pubis. The line of fracture was felt or indicated by pain, on pressure in the vagina, but the pain caused by examination was so extreme that it was made only cursorily. About the sixth month of pregnancy the uterus appeared to be normal, and the child's head could be easily distinguished. The os uteri admitted the end of the finger, but the plug of pregnancy still remained firm. Eight hours afterwards she was delirious and continued in a desperate condition for four days, but, to the surprise of her attendant, she then began to improve, and within two weeks could get around with a cane. The right iliac bone remained about one inch higher than the left. The right side of the pelvis was flatter than the left. Three months after the accident the fœtus and membranes protruded from the vagina. They were carefully removed by means of the funis, and a small hard placenta was extracted. The uterus contracted feebly, and some oozing of blood continued for some hours afterwards, so much so as to cause her to faint, but it stopped on the administration of ergot. She said that she had felt only two or three slight pains before the fœtus was expelled. Within two and one-half months afterwards she was able to walk one and one-half miles up-hill and down again. The fœtus was between five and six months, much wrinkled from long maceration, but presenting no marks of injury. The placenta was very firm and solid. Twelve months afterwards the patient was taken in labor at full term. After she had been in labor thirty-six hours, a physician who knew nothing of the previous fracture applied forceps and extracted a dead child. The patient died one hour afterwards.[55]

I now append a case of rupture of the uterus in consequence of a kick. An XI-para, aged thirty-seven years, who had had no miscarriages and all of whose previous labors had been normal, with the vertex presenting in every case, was, in the evening of July 11, 1890, when her labor was nearly due, violently kicked in the right groin by her drunken husband, who was wearing heavy hobnailed boots. She became sick and faint and was in considerable pain throughout the night. Twelve hours after the assault labor came on. Everything progressed well until 9 P. M., when she complained of considerable tearing pain in the lower abdomen, accompanied by a sensation of faintness. Soon afterwards the pain became less frequent. There was an extensive bruise in the right groin. The patient was in a cold sweat, her face was ashen-colored; her pulse was small but regular and about 130 per minute. The breech was presenting and lying on the perineum. At intervals very feeble pains occurred, which had no effect on the presenting part. Delivery was effected as rapidly as possible by passing a silk handkerchief over the right thigh by means of a copper wire. Extraction was quite easy. A nearly transverse rent, anterior in the genital canal, was found. Several loops of intestines could be distinctly made out. At the autopsy the abdomen was enormously distended; there was a well-marked emphysema of the abdominal wall and subperitoneal tissue. More than two quarts of blood, in a fluid state with clot, were removed from the posterior culdesac. The uterus showed an oblique tear four and one-half inches long anteriorly and to the right through the lower segment. The rupture through the tissue was complete. Elsewhere the uterine tissues were healthy. It was concluded that the kick had lacerated the uterine fibers, and that complete rupture had ensued with the labor.[65]

The spleen has been ruptured by a kick. Savor records a case where splenectomy was performed during the sixth month of pregnancy and the patient went on to full term without incident.[85]

I append a case where a woman, six months pregnant, was tossed by a cow. The horn struck her with much violence midway between the umbilicus and the pubis. Five or six hours after the accident the fœtal movements had ceased, but the uterine souffle was pretty distinct in the neighborhood of the injury. There was also an enormous circumscribed tumor, tender to the touch. The abdomen was remarkably tender and tympanitic, but there was no vomiting. A pill of one grain each of calomel and opium was given every second hour. Four weeks afterwards the patient miscarried suddenly. An abscess formed in the abdominal wall, discharging sanious fluid of intolerable fetor. A large putrid, fleshy mass was removed and the wound finally closed, leaving, however, a large ventral hernia, which was kept closed by a bandage, so that the patient was later on delivered of another child without any bad symptoms.[57]

The traumatism inflicted by external violence during pregnancy is at times evidenced by wounds—often penetrating—either of the abdominal walls or the external or internal genitals. They have occurred from falls and other accidents, as well as the result of injury due to gunshot, knife, pitchfork, nail, or cattle-horn. I instance cases of each variety:

A woman, five months pregnant, sustained a severe wound, one-half inch deep, on the internal surface of the left nymphas. Three quarts of blood were lost, but finally the hemorrhage was controlled by folds of linen, wet with cold water and applied within and without the vulva. Premonitory labor pains set in the next day and continued for four hours. Laudanum and hyoscyamus were given, and the patient went on to full term.[58]

In another instance the hemorrhage was fatal, although the wound was limited in extent. The patient, three or four months pregnant, fell over a chair, causing a laceration of the vagina, extending through the mucous and submucous tissues and exposing a plexus of veins, three of which were found to be divided.[59] A third case showed a more serious injury, the left nympha being torn across and the external genitals being much bruised. This woman also fell across the chair and there immediately gushed forth blood and liquor amnii. She was eight months pregnant. The abdomen, we are told, was quite soft after the accident, but filled up slowly in a few days, and the wound finally healed perfectly. Two and a half months later a healthy child was born. It was noticed, when the membranes were ruptured, that a very large quantity of water escaped, followed by a great deal of hemorrhage.[60]

There is a record of a fatal rupture of the vagina with hematocele produced by a fall. As the woman, near term, was about to sit down, her little son had pulled away the chair and she fell to the floor. For ten days she flowed until she became faint, nauseated, extremely pale, covered with a cold perspiration and possessed of feeble pulse. A dead child was born by forced delivery, but the woman died soon afterwards. At the junction of the vagina and uterus was a rupture—a round, ragged hole as large as a half dollar, from which extended a large hematocele. Blood was found in the abdominal cavity.[61]

When there occurs a penetrating wound of the abdominal wall, the prognosis is often grave, because there is a greater likelihood of infection, while hernial complications and possible intestinal injury may add to the seriousness of the accident. A woman, five and one-half months pregnant, fell into a well, at the bottom of which were masons' tools. She received an enormous wound, extending obliquely, in the form of a circle, from the right flank to the left iliac fossa and including the right iliac region as well as the hypogastric region. The wound was 3 cm. deep, but was not penetrating. It cicatrized in thirteen days. The next day the patient died of cholera. The egg was found intact, the membranes everywhere unruptured, and the uterus healthy.[62]

Another woman, near term, fell in a dark cellar while carrying empty bottles in her arms. She received serious wounds in different parts of the body and a penetrating wound, two inches above the umbilicus, through which protruded omentum, small intestine and transverse colon, forming a mass the size of a man's head. This hernia was reduced and the abdominal wound closed with five sutures. Ice dressing was applied and opium was given. Labor pains started up the same day, and the woman was safely delivered of a healthy boy. She suffered from sepsis for two months, but finally recovered. The abdominal wound healed in seven days.[63]

Penetrating knife wounds of the abdominal wall during pregnancy and of the pregnant uterus vary from a simple puncture to a true Cæsarean section—often self-inflicted. In the former case pregnancy appears to exert no effect on the prognosis, and in the latter the fœtus is often injured by the same violence which causes the traumatism of the uterus. A drunken husband stabbed his wife, who was near term, with a penknife in the left side. An omental hernia protruded; it was ligated, and the sixth day it fell off and the wound healed kindly. The woman was delivered at term without incident. Since then she has had two more children.[64] I cite a case where uterine perforation occurred by a knife-stab entering the sciatic notch and extending through the pregnant uterus into the fœtus. The patient, eight months pregnant, received a knife stab in the left buttock. There was considerable hemorrhage, a sensation of numbness throughout the lower part of the body, but no pain. The next day she was delivered of a dead child, which showed on the left parietal and near the median suture a sharp incision involving the integuments and extending to the bone, which was scratched, but not perforated. There was total insensibility of the sole of the foot and of the external border of the foot up to the last three toes. In fifteen days the patient was up and the wound had nearly cicatrized. An abscess formed on the foot, and numbness, anæsthesia and pains along the outer border of the leg and back of the toes persisted for seven months.[65] In Laborie's case a wide knife-blade penetrated the uterus through the abdominal wall and evacuated amniotic fluid. Ten hours afterwards the woman, who was five and one-half months pregnant, aborted. Grave symptoms of prostration without symptoms of peritonitis appeared. Death occurred two days after the stab wound. The anterior superior part of the uterus had a small perforation, also slight traces of peritoneal inflammation.[66]

The cases of self-inflicted Cæsarean section are most remarkable and show a wonderful tolerance to traumatism on the part of the pregnant uterus. A woman in Italy cut through her abdominal wall to the extent of four and three-fourths inches, killed the fœtus by wounds in its chest and abdomen before extracting it, and finished by cutting off its head. She recovered completely in forty-eight days.[67] A seamstress, between six and seven months pregnant, received a knife wound near the umbilicus, through which protruded both feet of the fœtus and about a yard of small intestine. The patient was seen seven hours after the receipt of the injury. The temperature was normal, the pulse frequent but not small, and her condition fair. The intestines were uninjured. The uterine wound was enlarged to facilitate the extraction of the fœtal head. The opening in the uterus was transverse between the cornua but the placenta was not wounded. The uterine incision was closed with twelve catgut sutures and the abdominal wound with ten metallic ones. Death occurred from peritonitis in four and one-half days. There were abundant intestinal adhesions and some seropurulent fluid in the abdominal cavity, but the uterine and abdominal wounds were freely united, and the condition of the uterine cavity was normal.[68]

There are cases in which the penetrating wound was accidental and made by other agencies than a knife.

A healthy woman, aged twenty-seven years, pregnant five and a half months, holding the handle of a two-pronged fork in her hands, was chasing a cow. She fell to the ground, stumbled over the pronged end, forcing one tine into her abdomen and uterus through the edge of the placenta and into the lower angle of the left shoulder-blade of the fœtus. The fork entered about two and three-quarter inches above the pubes, near the external border of the right rectus muscle, and its withdrawal was followed by an evacuation of liquor amnii, slightly streaked with blood. Four days later she gave birth, without special hemorrhage, to a dead male fœtus, which presented by the breech. After a serious illness the patient recovered. The wound of the abdomen became fistulous and did not close for four months. An abscess opened into it and discharged freely, also a small fecal fistula developed, through which currant seeds, gas and fluid having a fecal odor escaped. This fecal fistula did not make its appearance until eighteen days after the accident and followed an attack of diarrhœa lasting over two days. The uterine wound is believed to have healed in a few days.[69] A woman, seven months pregnant, was pierced by a long, large and square nail, attached to the backboard of a wagon. It entered the abdomen to the left of the umbilicus, penetrated the uterus and wounded the child. At the time the woman experienced only slight pain. Water mixed with blood escaped at once through the wound in a jet. The patient had the courage to return home on foot. The wound was narrow and would not admit the little finger. A mixture of blood and water was escaping from it. The uterus was contracted, rigid and painful to pressure. Cæsarean section was proposed but rejected. At the end of fifteen hours the wound ceased to flow. Then supervened general disorder, convulsions, a sort of momentary catalepsy and a burning thirst. Sleep was disturbed by dreams, grinding of the teeth, and a foamy agitation of the lower jaw. The patient's eyes were haggard and pale, her pulse small and concentrated; there supervened hiccough and vomiting, accompanied by a discharge of green bile. Death occurred sixty hours after the accident. At the autopsy it was found that the hole in the skin did not correspond with that in the uterus. The latter was two inches above it, and was remarkable only on account of an inflammatory, very thick tumor; it scarcely permitted the introduction of a stylet, being so narrowed through contraction. In the uterus was a considerable quantity of water; but there was neither a bloody flow nor clots. More resistance was presented by the orifice than by the body of the uterus. The child had been reached by the nail in the middle of the right subspinous fossa of the scapula. The puncture, although very small, had caused an ecchymosis, which extended from the shoulder to the nates.[70]

The subject of cattle-horn lacerations has been exhaustively considered by that indefatigable worker, the late R. B. Harris of Philadelphia. He instances twenty cases of cattle-horn perforation of the abdomen in pregnant women. In two cases particulars, as regards the extent of the injury, are unknown. In six cases the uterus was uninjured and the victims recovered. In one case the uterus is described as bruised, also resulting in recovery. In another case the perforation was not complete, and the wound healed by granulation. In four cases different portions of the fœtus protruded. Here the fœtus was removed through the abdominal wound, in three cases by enlarging the uterine wound sufficiently to permit of its escape. These three cases recovered. In the fourth case a dead fœtus was delivered *per vias naturales*. The woman recovered, but died from hemorrhage following a subsequent pregnancy. The autopsy showed blood in the abdominal cavity, but no rupture of the uterine cicatrix is reported. In six cases the fœtus was expelled through the perforation, which varied in length from five inches to the distance from one ischium to the other. Of these cases three recovered. The patient in one instance sewed her own abdomen.[71]

The cases of gunshot wounds are of interest. Where the uterus is not entered, the pregnancy usually goes on without incident. Even when the bullet perforates the uterus, it does not necessarily result in an interruption of the pregnancy unless the fœtus is killed. The important facts in relation to eight cases are appended:

CASE I.—Stage of pregnancy, six months. Shot in abdominal cavity, on line from left nipple to anterior superior spine of right ilium, three inches from ensiform cartilage, passing upwards. Bullet lodged in lung, at posterior border of serratus magnus. Result to fœtus, none. Result to mother, perfect female fœtus sixteen weeks afterwards; recovery. Treatment not stated.[72]

CASE II.—Stage of pregnancy, six months. Shot four inches to the right and on a line with umbilicus. Fate of bullet not stated. Result to fœtus: Bullet wound behind acromion process of right scapula; another above umbilicus; right leg shattered below knee. Result to mother: Abortion next day. Discharged fully recovered four weeks later. Treatment: Celiotomy. Uterine wound closed with three Lembert sutures; two drainage tubes. Abdominal wound closed with wire sutures.[73]

CASE III.—Stage of pregnancy, five months. Shot to the right and a little below the umbilicus. Bullet not found. Fœtus uninjured. Result to mother: Labor fourteen days later. Recovery on twelfth day. Treatment: Celiotomy six hours later showed wound in anterior uterine wall, which was sutured.[74]

CASE IV.—Stage of pregnancy, nine months. Bullet entered uterus. Living child born. Bullet had passed through arm and chin of fœtus. Death in eight hours. Result to mother: Labor imminent; twelve hours later, delivery. Recovered, with slight symptoms of traumatism. Treatment not stated.[75]

CASE V.—Stage of pregnancy not stated. Probably near term. Bullet entered uterus. Fœtus living; bullet, size of pea, near right clavicle, subsequently extracted. Result to mother: Labor at once. Recovered, but wounded in shoulder, side and hip. No treatment.[76]

CASE VI.—Stage of pregnancy, near full term. Wounded two inches above right ilium, back of anterior superior spinous process, bullet passing downward and inwards into fœtus. Fœtus dead. Bullet entered body. Result to mother: Delivery forty hours afterwards. Some shock. Recovery No treatment.[77]

CASE VII.—Stage of pregnancy, six months. Wounded two inches above anterior superior spinous process of ilium, upwards through uterus and fœtus; bullet lodged somewhere in back, but was not found. Fœtus dead. Bullet entered below left scapula, ranged diagonally through the trunk, and escaped by the right hip. Result to mother: Labor within twenty-four hours; severe peritonitis; recovery. No treatment.[78]

CASE VIII.—Stage of pregnancy, four to five months. Wounded in umbilical region, four fingers' breadth from the median line. Fate of bullet not stated. Five intestinal wounds; wound of fundus uteri, through which a loop of funis protruded. Fœtus uninjured. Result to mother: Abortion the following day. Complete recovery. Treatment: Resection of 20 cm. of bowel. Loop of funis resected. Stump returned within uterus. Abdominal incision quickly closed.[79]

The pregnant uterus has been often injured during the course of some peritoneal operation. I cite three cases: In operating upon an ovarian cyst, the trocar punctured a three months' pregnant uterus two inches from the fundus to the depth of two inches. The cyst was then removed and the patient recovered. Five weeks afterwards severe hemorrhage occurred and a decomposed fœtal body was separated from the head, the latter coming away the following day. The patient recovered.[80]

A patient, thirty-four years of age, had a large abdominal tumor, which had been noticed for about four months, and was bilobular; the left lobe, the size of an orange, was fluctuating; the right lobe was less distinctly fluctuating, and extended as high as the hypochondrium, being apparently inseparable from the uterus, the neck of which was small. There was complete amenorrhea. Pregnancy was at first suspected, but this diagnosis was afterwards rejected. The trocar was introduced into the left lobe, and about thirteen ounces of slightly albuminous fluid was withdrawn. A second puncture gave exit to a reddish, gelatinous fluid. A diagnosis of cystic sarcoma was then made, and an operation decided upon. Celiotomy was performed. One lobe punctured discovered a fœtal head. The other lobe, the real tumor, having chocolate-colored contents, was then removed, and the uterine wound closed with sutures. Reproduction of amniotic fluid occurred. Labor took place twenty-four hours afterwards, presenting nothing abnormal. Recovery was slow, but complete.[81] An unmarried woman, aged twenty-three, was operated upon for an ovarian cyst without previous vaginal examination, which she objected to. A second tumor posterior to the cyst was punctured with the trocar. It proved to be the pregnant uterus. The incision was enlarged, and exposed the placenta, which was separated and removed. The breech was seized and drawn toward the opening, when the fœtus was expelled by uterine contractions. The membranes and liquor amnii were now removed. It was a gestation of seven and a half months. The uterine incision was closed by interrupted sutures passing through the visceral peritoneal muscular wall and mucous membranes. The os uteri was dilated to give exit to the lochia, and a flexible catheter was introduced for some hours. The pedicle of the cyst was tied and returned. The ligatures were brought out at the lower angle of the wound and left long enough to hang down between the thighs. The patient recovered and was never told of the pregnancy.[82]

The treatment of this class of traumatisms occurring during pregnancy depends not alone upon the conditions of the injury as they are apparent, but also, and perhaps especially, upon the recognition of possible sequelæ of a serious character, which are often due to infection. In many of the injuries to the external surface of the uterus, where women are kicked in the abdomen and otherwise suffer traumatism of the pelvic viscera, there is often a laceration of the peritoneal surface amounting, at times, to a separation of the peritoneum from the underlying tissues. The effused blood may be absorbed, and the peritoneal surfaces may be agglutinated, even if the injury is an external perforation. If the muscular tissue beneath the peritoneum is injured, there often forms a blood-cyst, which may push off the peritoneum for a considerable distance. There is also danger of subperitoneal emphysema in the anterior surface of the uterus, with a possibility of air breaking through into the abdominal cavity.[83] Moreover, the exact extent of the injury cannot always be determined at the time of its infliction without subjecting the patient to a critical examination, which usually necessitates an abdominal section.

In my judgment, the interests of the patient are more often conserved by such a procedure than by trusting to chance. It is well known that serious hemorrhage may occur within the abdominal cavity without manifesting itself by pathognomonic symptoms until too late. Cases on record show that intestinal rupture and other serious traumatism may present no untoward symptoms until infection has supervened and the patient's life is jeopardized. It is true that if the patient is first seen several days after the accident, peritoneal surfaces may have become agglutinated, effusion may have subsided, and a watchful expectancy may be sufficient. Each case must be treated on its merits, but it must be realized that traumatism sufficient to fracture pelvic bones or cause extreme shock, acute anæmia, rapid pulse, or other undue symptoms, is likely to have produced some serious internal injury which must be sought for. If none is found, it cannot be said that an abdominal section, as performed to-day, will have added materially to the risk.

With an open abdominal wound, the extent of the traumatism should be accurately determined; the wound should be sufficiently enlarged, if necessary, to permit a thorough examination of all intrapelvic viscera. Injuries of intestines and omentum should be repaired by closure of lacerations or perforations, and, if necessary, by resection. The details of a modern abdominal section will be carried out in the usual aseptic manner and all injuries of different viscera will receive proper attention. If the peritoneal surface of the uterus alone is injured, the hemorrhage may be controlled by forceps or ligature, and the peritoneal edges may be brought together by Lembert sutures. Should the muscular tissue be perforated as well, interrupted buried sutures should coapt the torn fibers and the peritoneal surfaces should be united by separate sutures, as in Cæsarean section. Should a portion of the fœtus protrude from the perforation, it will be advisable to complete its removal through the uterine wall, even if the uterine wound must be enlarged. The removal of the placenta occurs preferably by the vagina, but if the os is not dilated, or if the placenta is detached and, perhaps, protruding through the uterine wound, it should be removed, together with the membranes, in the same manner as the fœtus. The case is now practically a Cæsarean section, and will be treated in accordance with the operator's views regarding that operation. In the absence of pelvic deformity, or an excessive injury which might favor infection, the Saenger technique may well be followed. Should the patient be *in extremis*, the wound septic, or, in the opinion of the operator, likely to become so, the mutilation too great to admit of perfect union, it is preferable to remove the entire uterus, as first performed in a case of rupture by Prévôt of Moscow.[84]

The presence of a foreign body, usually a bullet, modifies the treatment but slightly. If found, it will, of course, be removed. Should it have entered the uterus beyond the reach of the operator and no point of exit be discovered, its presence may be disregarded and the details of treatment may be applied as already indicated. If the bullet has entered the child, premature delivery will probably ensue, with the possibility of a simultaneous expulsion of the foreign body. Should this not occur, the foreign body may be extracted later, or it may become encysted in the uterine wall without inconvenience, as so often occurs in other parts of the body.

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A CLINICAL REPORT RELATING TO (*a*) HEMORRHAGE PERSISTING NOTWITHSTANDING CURETTAGE, AND (*b*) SECONDARY HEMORRHAGE FOLLOWING ABDOMINAL SECTION.*

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I SHALL limit my remarks to the conditions specified in the title, for the reason that I desire chiefly to provoke discussion, and the less time I consume, the more will remain for those who favor me with their criticism.

Uterine hemorrhage is suggestive of three cardinal conditions: (1) Either there is something in the uterus requiring removal; (2) There exists disease of the uterus; or (3) There is present an extra-uterine condition demanding careful scrutiny and often speedy operation. To exemplify these premises, I record the following cases:

Case I.—I was requested, recently, to see a lady who, notwithstanding thorough curettage for menorrhagia, was flowing profusely. Owing to the hyperæsthesia of the patient, I was unable to determine more than that the uterus was not enlarged, the cervix was closed, and that there lay in front of the uterus a tense mass of uncertain character. My request for examination under anæsthesia met with ready response, and I determined the mass to be the enlarged Fallopian tube. The woman's pulse was not accelerated, and there was absence of temperature rise. The family physician informed me that at the time of the curettage he had not found this mass. I advised an exploratory abdominal section, giving it as my opinion that there might exist an ectopic gestation, even though the subjective symptoms of the condition were absent. Within a week, I was requested by a colleague to assist him at an abdominal section, and found this same woman, who had drifted away from her family physician, and had employed another. A day or so previously she had had an attack of abdominal pain, and the pulse was slightly accelerated. Under anæsthesia, I determined that the mass in front of the uterus was less elastic, and I ventured a diagnosis of ruptured ectopic gestation. On section clots and blood were found in the peritoneal cavity emanating from the ruptured right Fallopian tube, which lay in front of the uterus. Examination after removal confirmed the diagnosis of ectopic pregnancy.

This case certifies the position which I have maintained in papers and in discussions for years, that the symptomatology of ectopic gestation is very unreliable, and emphasizes the necessity of most careful examination of every woman who complains of uterine hemorrhage, especially where the bleeding persists notwithstanding curetting.

Case II.—About five years ago I saw, in consultation, an exceedingly exsanguinated young married woman, who had been curetted three weeks previously for metrorrhagia following a suppositious miscarriage at six weeks. Notwithstanding the curettage, the hemorrhage had continued, and intrauterine packing, and the application of astringents locally, and the administration of ergot and cotton root, having failed, I was sent for to make a diagnosis on a woman in the very jaws of death—for it has rarely been my fortune to see such an exsanguinated woman live. The pulse was barely perceptible; the mucous membranes were absolutely colorless.

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Under stimulation I managed to secure sufficient reaction to justify the removal of the woman at a private hospital, where she was quickly anæsthetized. Exploratory curettage was negative, and vaginal hysterectomy was quickly performed as the sole remaining means of checking the hemorrhage. For days thereafter the woman hovered on the verge of death, but finally convalesced. On section of the uterus a vascular nodule was found at the left uterine cornu, and this was the causal factor of the hemorrhage. Unfortunately, the specimen was lost before it could be subjected to examination, but I have little doubt but that I was dealing with a deciduoma malignum, a condition which, at the time I am speaking of, was not discussed as much as of late.

Case III.—Recently, at the General Memorial Hospital, I had referred to me a lady who had been thoroughly curetted and yet was suffering from metrorrhagia. The uterus was slightly enlarged, there was a history of malignant disease in the family, both appendages were enlarged and adherent. Consent was secured for the performance of radical operation under anesthesia if such be deemed wise. Exploratory curettage simply proved that my predecessor had curetted the uterus well. On opening the abdomen the diseased adherent appendages were removed, and after duly weighing the fact that nothing to explain the metrorrhagia had been found, hysterectomy was performed. On section of the uterus a nodule of a vascular type was found, and this is being examined by Dr. W. S. Stone. I fancy that his report will be *deciduoma malignum*. But even if he do not I should not regret the hysterectomy, for the reason that both appendages having been removed for disease and the double curettage having yielded negative result from a diagnostic and curative standpoint, the uterus was not alone a useless organ but one open to suspicion.

These cases call for no comment at my hands beyond the statement that rarely will such a radical measure as hysterectomy be required to control hemorrhage from the uterus, but nevertheless the instances are extremely suggestive as reminding you and others that this recently described disease—*deciduoma*—offers, possibly, with greater frequency than we have hitherto fancied.

The second subdivision of my paper deals with secondary hemorrhage after abdominal section—a very rare occurrence nowadays in view of the betterment in our technique towards the securing of hemostasis. There is absolutely no complication following abdominal section which can give more concern and which offers the greatest ground for indecision—indecision which can have but one outcome where it prevails, and this outcome the death of the patient. At the very outset I wish to protest against the use of the word shock as unscientific, as a mere cloak for either ignorance or timidity. Let us remember once and for all that after an abdominal operation the symptomatology of shock is radically different from that offered by intraperitoneal hemorrhage, and let us further remember that when death ensues the use of the word *shock*, while it may satisfy our conscience, falls far short of desirable scientific accuracy, to say the least. Bear in mind that I am referring to symptomatology occuring after an abdominal section which has been *elected*, and where, in consequence, the patient has been carefully prepared after the manner with which you are all so familiar. There is a vast difference between such a case and the victim of a railroad accident, for example, or a patient suffering from the effects of the rupture of an abdominal or pelvic viscus, as a further example. The symptoms to which the term *shock* may be applied after a predetermined abdominal section are evanescent in character, and yield to proper stimulation; the symptomatology of slow intraperitoneal bleeding is progressive and can have but one ultimate issue if we satisfy our minds with the term *shock* and fold our hands in complacency. The pallor of the surface, the cold and the clammy body, the extremely rapid pulse, and the high temperature, the result of paralysis, so to speak, of the heat center—these signs differ absolutely from the rapidly increasing pulse, the anxious fancies, the gradually progressive pallor of the mucous membrane, the sighing respiration, the increased elevation of temperature of the abdominal surface apparent to the *touch*—symptoms of internal hemorrhage. I yet recall a life sacrificed to indecision some fifteen years ago, because I, together with colleagues, was satisfied with calling that condition *shock* which after death was found to be *intraperitoneal hemorrhage*, and until recently I have had no occasion to put into practise a vow registered at the time, that in any future case with the like symptomatology I should reopen the abdomen at the risk of finding absence of hemorrhage rather than pinning my faith to problematical shock as an explanation, which, under the given conditions, never explained anything. I would reiterate to-night that which I have repeatedly stated: *After an elective abdominal section the word shock means hemorrhage.*

Finally, let me state that to-day there exists no ground for indecision, for if we dread—and naturally so—the reopening of the abdominal incision we may at least make our diagnosis with absolute certitude by playing the trump card when in doubt, and this card is an exploratory vaginal section—something which may be performed for diagnostic purposes with the minimum disturbance of the patient and, indeed, where need be, without anæsthesia. The diagnosis established, abdominal section follows as a *sine qua non*.

In my own work I have seen three cases of secondary hemorrhage following abdominal section. The first case I have referred to above, and the woman died because I did not know enough to save her. And yet it should be remembered that it is not such a simple matter to be able to make up our minds in time for reoperation to be of utility. In memory of the fact, however, that it is, as a rule, within the twenty-four hours following abdominal section that the type of secondary hemorrhage, which alone is to be discussed to-night, occurs, the point I desire to impress is that where the symptoms are obscure it is wiser to explore through the culde-sac than to dally. The two cases which I proceed to report were plain enough, certainly the second case, in which the diagnosis was made for me, but the rule I have laid down for myself for future guidance is that which I have impressed above.

Case IV.—Salvatore T. entered my service at the Columbus Hospital on December 5, 1901. In March of the same year I had opened her abdomen, performed plastic work on her right ovary, had punctured some cysts in the left ovary, and had suspended the uterus to the parietal peritoneum.

She re-entered the hospital complaining of pain in the left side of the abdomen. Examination revealed disease of the appendages on the left side and I reopened her on December 20, 1901. Left salpingo-oophorectomy was performed, the broad ligament being transfixed and the appendages doubly ligated with medium catgut prepared in the hospital; her pulse after operation was 84 and her rectal temperature was normal. At 7:30 that evening the pulse rate was 122, the temperature 100. At 6 A. M. the next morning the pulse was 128 and the temperature 98°. At 10 A.M. the pulse had risen to 130. A hypodermatic injection of morphia of one-quarter of a grain—a most valuable means of differentiating shock—had no effect on the pulse, which steadily rose to 134. The caliber was good, however, since she had been freely stimulated. I saw her at two in the afternoon, and the *elevation of the abdominal surface temperature* made me suspicious that internal hemorrhage was progressing. There was no pallor, but the facies was anxious and the respiration markedly accelerated. I reopened the abdomen and evacuated a large number of clots. On bringing the pedicle into view I found the ligature *in situ*, but the catgut had frayed and active hemorrhage was progressing. I religated, filled the abdomen with salt solution, and closed by through and through silk-worm gut sutures. The woman rapidly reacted and was discharged about the twenty-first day.

Case V.—Feti G., entered the Columbus Hospital November 26, 1901. At the time of operation, on November 29, her pulse was 76 and her temperature 98°. She was curetted, the left appendages were removed, and the uterus was suspended by the parietal peritoneum. The tube was exsected and the broad ligament was quilted with medium catgut. The abdominal incision was sewed in layers with catgut. At 7 P.M., the operation having been completed at 2:30, the pulse rate was 96. At 1 A.M., November 30, the pulse was 118, the temperature 100°. At 6 A.M. the pulse had risen to 122. At 11 A.M. the house officer notified me that the abdominal dressings were stained with blood, and that, notwithstanding stimulation, the pulse was steadily rising and losing force. At 2 P.M. I saw the woman, took down the dressings and found the entire incision gaping and clots and intestines protruding. She was transferred to the operating room, anæsthetized, the broad ligament was drawn up and a similar condition existed there as in the abdominal incision; that is to say, the catgut had frayed out. The broad ligament was again ligated, the peritoneal cavity filled with hot saline solution and the abdominal incision closed by through and through silk-worm gut sutures. The woman convalesced. The case is recorded rather as showing the wonderful toleration certain women possess than as a record of intraperitoneal hemorrhage diagnosticated. The diagnosis, indeed, was made for me by nature—or rather by poor catgut.

Case VI.—This case is recorded here as an instance of so-called *shock* where the symptomatology suggested internal hemorrhage, but where the use of morphia enabled me to exclude the latter condition.

Maria A. entered the Columbus Hospital January 2, 1902. On January 10 double salpingo-oophorectomy was performed at 2 P.M. At 4 P.M. the pulse was 104. At 6 A.M., January 11, the pulse was 122 and the temperature was 99°. At 9:30 the pulse was 134, the temperature 99°, and the respiration 22. At noon the pulse was 140, the temperature 101°, and the respiration 30; the surface of the body was cold; the pallor of the face was intensified, but the mucous membranes were red. On telephonic notification I instructed my house officer to stimulate freely and to give one-quarter of a grain of morphia hypodermatically. At 2 P.M. I saw the woman and the pulse had dropped to 120 and the temperature to 100°. From this time on the pulse rapidly fell to normal and the woman convalesced.

These cases require no comment. The point I desire to bring out in discussion is as to whether it is your opinion that a statement made not so long ago by an operator of experience be true, that the symptomatology of internal hemorrhage occurring within twenty-four hours after abdominal section is not sufficiently exact to warrant us in reopening the abdomen. My own feeling in the matter is exactly the reverse, and, furthermore, I desire to contend that vaginal section will always enable us to settle this question which is of vital moment to the patient and to our reputation. At the outset, however, it is essential that we should free our minds of the thought of that bug-bear shock, remembering that the symptomatology is essentially different and that the free use of morphia ought to make the differential diagnosis for us. I have purposely refrained from commenting on technique, and I grant that in private practise, or rather in house operating, it is not always feasible to act with the energy which is at our disposal in a hospital. It is essential to limit the discussion along the lines I have specified, otherwise the main object of my appearing here—the securing of expression of opinion as to the symptomatology of so-called shock and of intraperitoneal hemorrhage—will be defeated.

36 East Fifty-eighth Street.

GENERAL TREATMENT OF MEASLES.*

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The treatment of measles can best be divided into (1) Hygienic; (2) Medicinal; and (3) Dietetic.

The Hygienic Treatment consists in guarding the child from unnecessary exposure to the extremes of heat or cold. It is unnecessary to have the sick chamber too warm. The same is also true regarding extra clothing. The proper way is to have the temperature of the room no less than 70°F., and no more than 76°F. The surface of the body should be well protected with a covering of either flannel or woolen. To keep children in a room at a temperature of 90°F., as we frequently see them, is unscientific and positively harmful. Such patients suffer from excessive perspiration, and are certainly more prone to the chilling of the surface of the body and consequent complications, such as pneumonia and similar catarrhal troubles.

They should be placed in bed with their back to the light. In this manner the glare of the sunlight will not be permitted to strike their eyes. When possible, red shades should be used to screen the sun's rays. It is unnecessary to place them in dark rooms. At the Children's Hospital in Berlin I have frequently gone through the measles wards and found the above-mentioned conditions. There appeared far less eye trouble and far less complications where a good current of air was permitted and where also the entrance of sufficient light was allowed. Quiet and rest are of prime importance. All discharges, be they from the nose, eyes, or ears, and all expectorated matter should be thoroughly disinfected by the use of one to two-thousand solution of bichloride of mercury. Very mild solutions of

*Read, by invitation, before the Society of the Alumni of the City (Charity) Hospital, March 12, 1902.

permanganate of potassium or boracic acid serve the purposes of irrigating the ear and nose and for washing the mouth.

The above general rules can be well applied in almost every instance. In special cases special rules must be applied; thus, if malignant conditions prevail, it will sometimes be necessary to individualize.

The Pre-eruptive Stage.—During the period of incubation certain drugs will be necessary to hasten the development of the eruption.

If there is an exanthema, then mild diaphoretic treatment will be indicated. Warm, demulcent drinks, hot teas, containing some lemon or orange juice, will be advisable. Spirits of Mindererus, in half dram or dram doses, can be given in intervals of one to two hours until diaphoresis is produced. If the temperature is below 102° F., no further drug treatment may be required. The valuable point is to watch the stomach and bowels, hence stimulation of the emunctories will be urgently demanded in this pre-eruptive condition. All the functions of the body must be carefully watched.

Medicinal Treatment.—Tincture of aconite, in one-drop doses, will be found serviceable in addition to spirits of mindererus. My method is to combine the aconite with the diaphoretic when it is necessary to have both an antipyretic and a diaphoretic effect. Great care should be exercised in dealing with very weak or rickety children, or with those in whom severe cerebral symptoms exist. In the latter cases treatment should be directed towards preventing convulsions by hot mustard foot-baths and the like. They can be aided in their action by applying an ice bag or ice-cold cloths to the top of the head. When severe nervous symptoms, such as twitching or delirium, exist, bromide of sodium, in five or ten grain doses, by mouth, will be well borne. The mustard foot-bath is especially valuable where stupor or somnolence exists in the prodromal stage.

When vomiting is encountered a wise plan is to give the stomach rest. The discontinuance of feeding and medication for half a dozen hours, or even longer, may be the means of allaying severe gastric irritability. During these intervals of rest for the stomach we can resort to rectal alimentation, as well as to rectal medication. A cleansing enema, followed in about ten minutes by the injection of an ounce or two of peptonized milk with an equal quantity of starch water, will be easily absorbed. If necessary, we can repeat this form of rectal feeding in three or four hours, and can substitute it with the yolk of one or two eggs and peptonized milk. It is well to remember that the rectum merely absorbs the food, but does not digest it; hence, to properly aid nature, the food injected should be thoroughly peptonized. Medication, when given per rectum, can best be administered in small suppositories. If the buttocks are approximated after the suppository is placed *in situ*, the food or medicament will be more readily retained and absorbed.

One of the most frequent causes of death, next to pulmonic complications, is intestinal catarrh. Knowing this to be the case, great care must be exercised in the use of purgatives. Phosphate of sodium, in ten to thirty-grain doses, dissolved in a little water, is a very useful laxative; so also are small doses (a tablespoon or several tablespoonfuls) of citrate of magnesia. Not only is the latter very useful to quench thirst, but it is also a mild aperient, and, owing to the citric acid which it contains, it stimulates the action of the kidneys. Very small doses of calomel may also be given, 1-10 of a grain two or three times a day, depending on the urgency and requirements of the case.

Water should be given very liberally. I frequently add fruit juice to it, such as that of lemon, orange, or unfermented grape juice.

The Relief of Cough During the Course of Normal Measles.—When the nose and the pharynx discharge freely and irritate the child, then irrigation with some bland antiseptic, such as a one-per-cent. boric acid solution, will be useful. If, however, we are dealing with a catarrh involving the nose and throat as well as the bronchial mucous membrane, then the accumulated viscid secretion, if very annoying, can be discharged by giving an emetic. Most children cough and swallow their expectoration. For the relief of this condition a dose of castor oil will be most useful. In older children, who can cough and expectorate, an emetic is contraindicated. The compound syrup of squills, in doses of a teaspoonful, repeated every half hour until vomiting is produced, is serviceable. Syrup of ipecac, in dram doses, repeated every half hour, is another valuable remedy. When, however, emesis is not produced by giving either of the foregoing remedies, I have found the mineral emetics very prompt in their action and very serviceable.

My choice of drugs is sulphate of copper, in half-grain or one-grain doses, repeated every half hour until vomiting occurs. It is best administered in one or two teaspoonfuls of warm water.

When the cough is very distressing, especially at night, steam, impregnated with eucalyptus or oil of thyme, will be useful. Steam seems to loosen the viscid mucus which accumulates in the bronchial tubes. Continued cough at night and day will not only disturb the child's sleep, but will exhaust the patient and prevent convalescence. It is, therefore, wise to administer small doses of codeine, 1-20 to 1-10 grain, depending on the age and the strength of the little one. This is to be repeated every two or three hours if the cough is troublesome. Two or three-grain doses of chloral hydrate for a child two to three years old, and a smaller dose for younger children, may be given to produce sleep.

Heroin is a drug that has been extensively recommended by many writers for the relief of cough in adults. I cannot recall a single instance where this drug has served me. I have seen marked cardiac depression, and in one case, in consultation with Dr. J. H. Wurthman of this city, there was a distinct evidence of collapse. The child appeared to be suffering from a coma, although a very small dose of the drug had been administered. It may have been that some idiosyncrasies existed in these cases, but, nevertheless, on general principles, it is wise to be careful when we meet conditions resembling collapse, due to deficient heart action.

Malt extract, given for the relief of cough, is a very favorite preparation. It certainly relieves, and in addition thereto, is nutritious, and, lastly, has a laxative effect. A teaspoonful given several times a day is taken very eagerly, and is certainly of value.

Pneumonia Complicating Measles.—When lobar pneumonia, or when lobular pneumonia complicates measles, symptomatic treatment is indicated. Hyperpyrexia may require active treatment, such as tepid sponging, or a local application of a tepid pack. Cold baths and cold packs do not seem to be as well borne as in other eruptive diseases. If, however, pneumonia is not of an abnormal febrile type, an oiled silk jacket, enveloping the whole thorax and applied next to the skin, is very valuable.

For the relief of dyspnœa, several dry cups, applied posteriorly, are useful. If the dyspnœa recurs and relief has been afforded by the previous dry cupping, the same treatment may be renewed.

Antipneumococcic serum has been used by me in but one case in which the temperature was 104° F, the pulse 160, and the respiration 80 per minute. The disease ran a regular course, crisis appeared on the eighth day, in spite of the injection of a small bottle containing 10 c.c. of this serum. It is hardly necessary to state that no conclusions can be drawn from the injection of this serum in this particular case. The child made a perfect recovery, though I do not believe any credit for it can be given to the serum.

Diphtheria Complicating Measles.—When diphtheria complicates measles the usual form of treatment of the diphtheria is required. This should be instituted independently of the measles. The point worth noting is that there is such an œdema of the glottis during the course of measles that it frequently leads to laryngeal stenosis. Intubation should not be resorted to unless there is no other means of relief. More lives are lost in spite of intubation during the course of measles than in any other form of laryngeal stenosis. It is here that continued steam inhalations and emetics will be found useful.

Antitoxine, so valuable in the treatment of diphtheria, is certainly to be considered the moment we find the slightest evidence of a diphtheritic type. I must not be misunderstood, however, as advocating the use of antitoxine in the treatment of catarrhal laryngitis which so frequently complicates measles and which may be a non-diphtheritic condition. A great many physicians use antitoxine in immunizing doses during the course of measles to prevent a possible diphtheria. This measure I regard as altogether too radical. When, however, typical symptoms of diphtheria, with clinical evidences of the same, are present, a healing dose of two or three thousand units should be injected, depending on the age and strength of the child. This generally suffices to destroy existing toxæmic conditions.

Dietetic Treatment.—If a nursling is affected, breast milk is the only form of diet. If a bottle baby is affected, the greatest care must be exercised in the feeding, owing to the subnormal condition of its stomach. The moment gastric symptoms, such as vomiting or diarrhœa or anorexia are marked, a greater interval between the feeding period should be given. In addition thereto, a smaller quantity of food should be administered. If, for example, an infant, while in health, receives a six-ounce bottle of milk, it is wise to give but four ounces, or even three ounces, according to its appetite.

When violent gastric symptoms prevail, in spite of all precautions, absolute rest of the stomach must be enjoined. In the interim, rectal feeding may be necessary to sustain life until the gastric irritability has passed away. In older children, who have taken milk for thirst, buttermilk may be substituted with advantage. Buttermilk has a very laxative effect; it will also quench thirst and is very nutritious. Concentrated food, such as cream and butter, owing to their nutritious character, should be administered. Thus, a small quantity of cream rather than a large quantity of milk, if the stomach will tolerate it, will be beneficial. Soups, broths, eggs, and paps, of oatmeal and milk and farina and milk, are indicated. In older children, calf's-foot jelly, chicken jelly, raw-scraped steak, and oysters, in addition to broths and milk and cream, may be allowed. Fruit and fruit juices may be given *ad libitum.*

The convalescence of the patient, and the restoration of the body to its normal state, will depend on the nutrition rather than on the amount of drugs poured into the body. Subnormal conditions must be restored to their normal state. Insist on feeding per mouth if possible, per rectum when necessary, and then, and then only, can we hope for the resolution of what I consider one of the most dangerous of infantile diseases.

65 East Ninetieth Street, New York City.

RHINOLITHS AND FOREIGN BODIES IN THE NOSE.

By J. M. INGERSOLL, A.M., M.D.,

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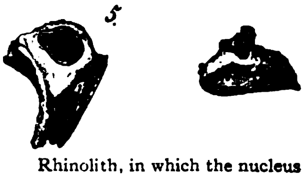
Foreign bodies may enter the nose through the anterior or posterior openings, or through the sides of the nose and face. In the latter case the foreign bodies are usually pieces of metal or some other hard substance which are acidentally hurled against the side of the head with force enough to penetrate the nasal cavities. Such cases are generally treated surgically soon after the accident. Foreign bodies which enter the posterior nares may consist of any substance which has passed through the mouth and is then forced through the nasopharynx into the nose by the act of vomiting or coughing. Frequently, the easiest way to remove such a substance is to push it back into the nasopharynx, taking care that it does not fall into the trachea.

By far the largest number of cases of foreign bodies in the nose occur in children, who put all sorts of things in their own and each other's noses. The following list of articles which I have removed serves to illustrate the diversity of character of such bodies:

A shoe-button from the right nasal fossa of a five-year-old girl; a bean from a four-year-old boy; a piece of cardboard from a five-year-old girl; a watermelon seed from a four-year-old girl; a small cloak button from a five-year-old girl; a piece of bone from a pig's foot which a two-year-old boy had pushed into his nose. This child was sitting at the table with his mother when the family were eating chopped pig's feet, and had put one of the pieces of bone into his nose.

Foreign bodies removed from the nasal fossæ of children.

A piece of chopped pig's feet.



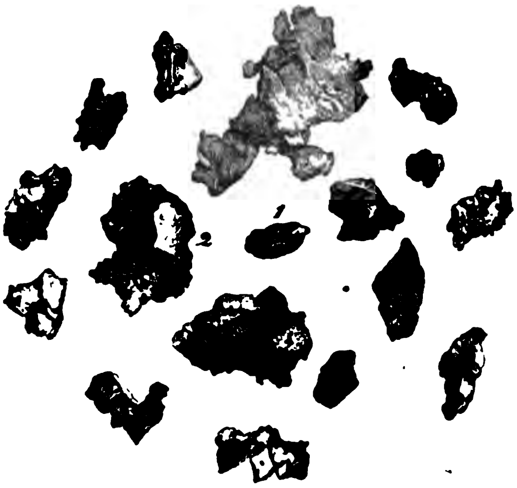
Rhinolith, in which the nucleus was a pea.

1.—Cloak button. 2.—Shoe button. 3.—Bean. 4.—Watermelon seed. 5.—Section through the smaller rhinolith, showing the nucleus, a pea, in place. (Scale ⅝ actual size.)

The symptoms of a foreign body in the nose are a unilateral discharge, at first serous, then purulent or mucopurulent, occasionally tinged with blood if there is much irritation and ulceration. Nasal obstruction develops on account of the irritation and swelling of the surrounding tissue, and the voice shows the typical nasal twang. Facial neuralgia or pain may be present if the body remains long in the nose, or if it is a substance which will absorb moisture and swell, such as a bean, thus causing pressure. The diagnosis is usually easy; the foreign body can either be seen by direct inspection or felt with a probe. If the foreign body has been in the nose a long time, it may be partially or even completely hidden by granulation tissue, but careful probing will locate it.

In removing a foreign body from a child's nose, a little chloroform should be given; in the case of an adult, cocaine anæsthesia is usually sufficient. The application of adrenalin solution prevents hemorrhage and gives one a clear field for operation, and also contracts the surrounding tissue and thus facilitates the removal of the body. Ordinarily, the foreign body can be grasped with a pair of forceps and easily removed. If it is imbedded in granulation tissue, it may be necessary to pass a probe under it and elevate it, and then grasp it with the forceps.

Undue haste in removing foreign bodies is never justifiable, for they may remain in the nose several days, or even weeks, without causing much inconvenience. If they are allowed to remain in the nose a long time, the salts from the nasal secretion may be deposited around them, forming a rhinolith or nasal calculus. Such calculi may also form around inspissated secretion, and a few cases have been reported in which no nucleus could be discovered.



Rhinolith, weight 2 grams. In the center, No. 1, is a shrivelled bean, the nucleus. On the left, No. 2, is the piece which contained the bean. (The picture is about ¾ the actual size.)

They may grow in concentric lamellæ, or by irregular concretion, when they look very much like a piece of ordinary sandstone.

The report of the following case of rhinolith is of interest mainly on account of the size of the stone, and of the nucleus, a bean, around which the rhinolith was formed.

The patient was a well-developed man, forty-six years old. He said that for thirty years or more the left nasal fossa had been obstructed. During this time he had consulted several physicians, none of whom had examined his nose, but informed him that he had "catarrh," and had prescribed a nasal wash, which had not had any appreciable effect on the rhinolith.

Externally, the left side of the nose appeared broadened, as the left nasal bone was pushed somewhat forward and upward. The left eye was inflamed and its tear-duct was obstructed. The septum deviated to the left, making a rather large right fossa, which was otherwise normal. The left vestibule was nearly filled by an irregular, jagged projection of the rhinolith, which extended down to the integument, and made it impossible to examine the left fossa. Posterior rhinoscopy showed that the rhinolith extended backwards as far as the end of the inferior turbinal.

On account of the difficulty anticipated in cocainizing around the rhinolith, I advised the crushing and removing of the stone, under a general anæsthetic, but the patient preferred to have it removed under cocaine anæesthesia. Accordingly, I cocainized around the rhinolith, as far back as possible, and broke off and removed several pieces. The hemorrhage was quite free, so that I waited a few days and then repeated the operation, removing at this time the piece which contained the bean. In the specimen can be seen the piece which contained the bean, and from which the rest of the rhinolith grew.

While I was crushing and removing one of the large pieces, a rough edge broke through the palate into the mouth, making a tear about one centimeter long; this healed by first intention. In four sittings I removed the whole stone, which weighed two grams.

The turbinals in the left fossa were atrophied by the pressure, and the mucous membrane was inflamed and ulcerated. The ulceration healed rapidly after the removal of the rhinolith, and the patient has since had no more trouble with his nose. This rhinolith grew by irregular concretions extending completely through the fossa and filling most of the inferior and middle meatuses. When I showed the patient the piece containing the bean, he said that he remembered putting a bean in his nose when he was a boy; this bean had evidently remained in the nose and became the nucleus of the rhinolith.

Recently I removed a much smaller rhinolith from the left nasal fossa of a young lady. She complained of facial neuralgia on the left side, and a persistent discharge from the left nostril, which had been troubling her for several years. On three or four occasions, after blowing her nose forcibly, she had found some small pieces of stone in her handkerchief and wondered where they came from.

Inspection of the nose showed the left fossa obstructed by hypertrophied and inflamed tissue, covered with a mucopurulent discharge. With a probe, the rhinolith could be felt in the posterior half of the inferior meatus. After cocainizing, I grasped it with forceps and tried to remove it through the anterior nares, but it was wedged under the inferior turbinal and would not come through, so I pushed it into the nasopharynx comparatively easily.

This patient had no remembrance of any foreign body being put into her nose, but a section through the rhinolith shows that its nucleus was a pea.

These specimens have not been examined chemically, but I suppose that they are composed mostly of the salts of calcium and magnesium, as these salts predominate in rhinoliths.

The Treatment of Neuralgia with Castor Oil.—F. E. Waxham reports several cases of a severe nature, in which this remedy brought about a speedy cure. It should be given in doses of from one to two ounces three or four times daily, although in some cases good results have been obtained with smaller doses. After the first two or three doses, it usually loses its cathartic effects. We should guard against its too free cathartic action by sufficient doses of opium in some form, as it is the constitutional and not the local effect we desire. It is best given (after having been thoroughly washed, and a few drops of some aromatic essence added) either in milk with effervescing seltzer or in ale, especially Bass' ale. A palatable mixture can be made by combining the oil with mucilage of acacia and lime water. It should be thoroughly shaken before giving. It may also be given in hot lemonade. The author urges the trial of this simple remedy, which has given results in neuralgia never before obtained by other medicines.—*The Colorado Medical Journal*, December, 1901.

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VOCATION AND LONGEVITY.

THE effect of employment upon man's span of life is, in the nature of things, very great. It can be easily understood that factory work, and particularly of a certain kind, such as match-making, working in copper, lead or zinc, needle-making and various other kindred trades, saps the constitutions of the laborers and brings them to an early grave.

Again, there is no cause for wonder that clerks, and, indeed, all those who are compelled to lead a sedentary life, often in unsanitary surroundings and with a paucity of out-door exercise, fail to reach by many years the average period of life obtained by their more fortunate brethren.

A consideration of the tables of occupational mortality of those which are termed the higher classes, will, however, occasion some surprise among persons who have disregarded the matter.

Dr. Arlidge, an English physician, has recently published the results of years of close study of of the subject, quoted in the Chicago *Tribune*, and his conclusions are instructive and valuable. Dr. Arlidge has decided that the indolent rich are the shortest lived of all classes, and gives as the cause of this seeming anomaly that they worry their lives away. Doing nothing, or existing without a definite and serious aim in life, leads inevitably to a constant round of so-called pleasure, but which is really nerve-racking labor of the most wearing kind, known as "killing time." The man of means and of leisure becomes sated with amusement, and finally life to him is not worth living. Of course, all the rich do not come under this category, and Dr. Arlidge excepts the philanthropists who have a purpose, and the rich traveller who has his diversions, but the gilded youth, who lavishly squanders nature's best gifts, soon finds that he has killed his zest for enjoyment, and he either dies of pure ennui, or literally burns himself out.

The farmer stands at the head of the list of long livers, he generally has to toil hard, but his work is in the open air, and in an altogether healthy environment. Good digestion with him waits upon appetite, and he eats heartily of wholesome food, which nourishes his frame and makes good red blood. The dissipation and vices of cities are unknown to him, although he has his innocent pleasures, and, above all, he is a man with an object in life.

Next in order of longevity are the clerical, legal and medical professions.

The clergyman in the country leads a life somewhat closely resembling that of the farmer, he is much out of doors, his hours are necessarily regular, and he is precluded by the nature of his calling from dissipated habits of a worldly sort.

The lawyer's lines, so far as health is concerned, are not cast in such pleasant places. His life is a more strenuous one, generally full of excitement, with the brain kept for most of the time at high pressure, and the nerves on the strain.

Of the three learned professions, the physician can calculate on the shortest life. A conscientious doctor must of necessity be the most self-abnegating of men; and, as a rule, he has little or no time to think of himself, as his mind is continually burdened with the responsibilities of his practice. In both town and country the medical man is compelled perforce to live under unnatural conditions; he is out in all weathers and at all times, and it may be truly said that a busy physician can hardly call an hour his own. Then he is constantly exposed to infection, and a large part of his life is spent in the depressing and devitalizing atmosphere of the sick room. It, therefore, will be no matter for surprise to learn that, excepting artists, the largest number of suicides are recorded among members of the medical profession. Insanity, also, has wrecked the minds of many brilliant physicians.

Politics, according to Dr. Arlidge, is one of the most healthy of occupations. This fact has been proved time and again—Gladstone, Beaconsfield, Bismarck and Thiers are conspicuous examples of the truth of this statement. Great brain workers are notoriously long lived, and among literary men, scientists, professors and teachers, the mortality if far lower than among the industrial classes. Therefore Dr. Arlidge holds that activity of the mind, if bent in the right direction, has more to do with the health of the body than muscular exertion, but he thinks that a judicious combination of both forms of exercise brings about the ideal condition.

Employers of labor are especially subject to heart affections. Nervous complaints come second, apoplexy third, and consumption fourth.

The commercial traveller is a man who seldom reaches the allotted term of years. Irregular hours, too much drinking and smoking, and poorly cooked food are the factors that tend to bring his existence to an untimely end.

Policemen are, as a class, very healthy and live to an advanced age, due to the fact that they are chosen for their soundness, and that their life is largely spent in the open air. Rheumatism is the affection with which the policeman is chiefly troubled. The mail-carrier is healthy on account of his outdoor life, but for the same reason is peculiarly subject to rheumatism.

The miner, nothwithstanding that for eight hours of the twenty-four he is working cramped in a coal pit, shut out from the sun and in an atmosphere thickly impregnated with coal dust, is, contrary, to preconceived notions, a healthy man and usually lives to a green old age.

Figures such as collected by Dr. Arlidge are not only curiously interesting, but provide most valuable data for the compilation of sanitary statistics from which boards of health and public health services may gather useful hints as to the best means of improving the condition of the industrial classes among whom the mortality is greatest.

REPORT OF INDIAN PLAGUE COMMISSION.

The *Edinburgh Medical Journal* contains a second account, by Dr. Sutherland, of the report of the Indian Plague Commission.

As regards restrictions of the movements of travelers by railways, the Commission concludes: "That any system of land quarantine imposed with the object of detaining passengers from infected areas, either at a point where the infected and uninfected areas join, or at different places within the infected area, has not been found in practice to prevent the spread of plague. That any system of medical examination on railways which falls short of keeping travelers under detention for the ordinary period of incubation must be defective. That it appears to be unnecessary to medically examine people traveling between places in an infected area. That the disinfection of personal effects of travelers by railways should not be attempted.

Respecting the mode in which rats become infected, the commission think that infection through the alimentary canal cannot be common. The experimental work done by Gibson, Hankin, and Simond has all led to negative results. As to inoculation through the skin, their results differ somewhat from those of the German and Austrian Plague Commissions, and are thus stated: "We, ourselves, found that it was in all cases necessary to inoculate a very sensible quantity of plague culture in order to insure the death of the animal, and in some cases we found evidence of great resisting powers on the part of the rats with which we had to deal in Bombay.

Respecting the agency of suctional insects in the spread of plague, the commission is skeptical with regard to Dr. Simond's well-known views on the subject, and think that the evidence brought forward by him in support of his theory is by no means convincing.

The causes concerned in the spread of plague in infected places the Commission state to be as follows: (1) Human agency, including infected clothes or merchandise carried about by man. (2) Rats.

Discussing the rat question and plague, the Commission say: (1) In some places where severe epidemics have occurred among men, rats have not been infected at all, and in many places where there have been plague epidemics among men, the disease has not appeared among rats in epidemic form; (2) Occasionally, where there has been considerable mortality among rats, there has been an absence of plague among men; (3) Even when there has been the largest amount of plague among rats, the risk to the persons coming in contact with them appears not to have approached that undergone by persons inhabiting houses in which there have been plague patients or persons coming into contact with pneumonic plague; there are, however, cases where a very considerable number of plague cases in a village has been directly attributable to an epidemic among rats; (4) Seeing that the excreta of rats may be deposited anywhere through a house, and that the number of rats which are infected may many times exceed the number of men who are infected; a severe epidemic among rats, must, we think, tend considerably to the spread of infection; (5) When plague is once established in a place we have no doubt that human agency is a more important factor in spreading the disease than the agency of rats.

The views of the President of the Commission on the effects of overcrowding and bad ventilation in disseminating the plague may be expressed as follows: (1) The extension of the disease and its great fatality are largely dependent on the vitiation of the air in the dwellings; (2) The cause of this vitiation is not only uncleanliness, but the absence or insufficiency of means of ventilation and overcrowding; (3) That overcrowding is chiefly operative by adding to the air pollution; (4) The increase of moisture and the elevation of the temperature, the increase of carbonic acid, and the diminution in the amount of oxygen in the atmosphere, together with the deficiency of light, stimulate the growth and increase the virulence of any plague bacilli that may be present, and, at the same time, predispose the occupants to attack by plague. Preventive measures recommended by the Commission's President are simple, and follow naturally from his views as to spread of disease: (1) Each room should be provided with a window for the admission of air and light; (2) Each house and its immediate surroundings should be kept reasonably free from all causes of air pollution.

The most interesting part of the Commission's report is that which refers to the propagation of plague by unsanitary surroundings. The members of the Commission, and especially its president, do not appear to have been impressed with unhygienic conditions *per se* as a fruitful cause of spreading the disease, but are of the opinion that a dirty state of, and polluted air in, the house itself are chiefly responsible for disseminating plague.

Nevertheless, there can be but little doubt that the pest flourishes most widely and most virulently in those places where filth prevails.

The Commission's views with regard to the spread of plague by insects agrees in the main with those expressed by Nuttall, that no definite proof has been as yet forthcoming that fleas or other suctional insects play a prominent part in this respect.

In the absence of any specific remedy, our efforts to prevent the spread of the plague would seem to rest almost wholly upon insuring a plentiful supply of fresh, pure air, and by keeping dwelling houses and their immediate vicinity as clean and wholesome as circumstances will permit.

Sudden Blanching of Human Hair.

Numerous cases have been recorded in which the hair of a person who has undergone some violent emotion—sudden shock to the nervous system, generally caused by fright or intense grief—has turned gray or white in a short space of time. In a certain class of novels one frequently sees it stated that some one's hair turned white in a single night, and such a remark is usually received with skeptical incredulity by the ordinary, well-educated reader.

However, an occurrence of this nature is not impossible, although it must be said that it is in a high degree improbable. Perhaps there have been few, if any, instances, in which an individual's hair has turned absolutely white in twelve hours, but there is no reason why the human hair should not become blanched or gray in a comparatively short period of time.

An editorial in a recent number of the London *Polyclinic* treats of the subject and says: "There is nothing in the doctrine which involves the element of physiological impossibility; on the contrary, there are certain facts which go to show that it may quite well be true. In the first place, it has to be remembered that a gray hair is not necessarily one that has lost its pigment. The essential change appears to be some alteration in the nutrition of the hair leading to the formation of minute bubbles of air in the substance of the shaft." A gradual atrophy of the pigment cells does no doubt occur in old age. But even here it would seem that the real fact which causes the hair to lose its color phenomenon is the appearance of air globules in its tissue.

The change in the hair structure which leads to grayness is without doubt produced by some alteration in the nervous control of the hair tissue. The suddenness of the change, which in certain instances is not in dispute, must be taken to exclude the possibility that it is caused through the agency of the blood-vessels, and by a consequent modification of the nutritive supply. It must be due to an influence acting directly through the nervous system.

Dr. Robert Jones of the London County Asylum, referring to the sudden whitening of the hair of a patient under his charge, writes as follows: "May not such cases of sudden blanching through intense emotion be analogous to the change which is known to occur naturally in the lower animals, and thus be one of those reversions which we still meet with in the physical and mental deterioration of human beings, also indicating that a sudden influence through the nervous system is brought to bear upon the organism, necessitating sudden transformation if this organism is to continue its existence under its new environment.

It would seem, then, to have been demonstrated in a fairly conclusive manner that there is no inherent impossibility in a person's hair, through the influence of violent emotion, to blanch suddenly, and that the cause of this change of color is not due to the cutting off of the blood supply and consequent lack of nutrition, but is owing to some alteration in the nervous control of the hair tissue.

REPORT OF LEPROSY IN THE UNITED STATES.

The report of a commission of surgeons of the Marine Hospital Service, appointed to investigate the origin and prevalence of leprosy in the United States, has recently been transmitted to Congress. The report shows 278 cases of leprosy in the United States, distributed by States as follows: Alabama, 1; California, 24; Florida, 24; Georgia, 1; Illinois, 5; Iowa, 1; Louisiana, 155; Maryland, 1; Massachusetts, 2; Minnesota, 20; Mississippi, 5; Missouri, 5; Montana, 1; Nevada, 1; New York, 7; North Dakota, 16; Oregon, 1; Pennsylvania, 1; South Dakota, 1; Texas, 3; Wisconsin, 3.

Of the total number 176 are males and 102 are females; 145 American-born, 120 foreign-born, and the remainder of undetermined nativity. It was stated to the commission that 186 of the cases were contracted in the United States, but the opinion is expressed by the commission that this number is too large, and that some of these cases were brought from abroad.

Summarizing, the commission states that the number of cases of leprosy in this country is smaller than is generally believed. It also states that the disease is transmitted from one person to another within the United States, such conveyance being most noticeable in the States on the Gulf Coast. It is reported that a large number of the cases are at large; that at present only seventy-two cases are provided for by the States or cities in which they are resident, and that many of the cases now at large, if not all, would be willing to be cared for by the public if proper isolation hospitals existed for their treatment and comfort. The commission recommends the establishment of a retreat for lepers, and express the opinion that it should be in the arid belt of the Southwest, or in the similar region further north, or on an island in the Gulf of Mexico, or on the Pacific coast. Of the 155 cases reported from Louisiana 101 are in Orleans County and 37 are in the leper home at Iberville. Of the 7 cases in New York 4 are in Kings County and 3 are in New York City. The commission expresses the opinion that the figures given do not represent the total number of lepers in the country, because the loathsome character of the disease causes persons so affected to conceal the fact as long as possible. The report states the belief of the commission that the disease is most frequently contracted through the inhalation of dust from places inhabited by lepers.

DOES ABILITY DEPEND UPON PHYSIQUE.

In the *Practitioner* of March is an article by Mr. James Cantlie, M.B., F.R.C.S., on the health of the people. Mr. Cantlie wrote on the same subject some years ago, and uttered a warning with regard to the degeneration that is taking place among dwellers in large cities, and especially among Londoners.

In the course of the article the writer considers the question as to whether ability depends upon physique. He commences by defining ability as he conceives it, which differs but little, if at all, from the ordinary conception of the term, and then says it frequently occurs that our greatest thinkers and our foremost men in many branches of life are far from robust. Pale, sunken-cheeked men, with an insignificant frame and a troublesome digestion, are often endowed with a mental capacity of the highest order. With these men in view, it is often argued that it is brains that are wanted nowadays, not muscle; we are apt to console ourselves that what the town-reared child loses in physique he or she gains in the rapid development of his or her mental power.

The typical citizen of the United States is pictured as a tall, gaunt, dyspeptic-visaged man with hollow cheeks and lined features, and we are told to look upon him as the concentration of progressive ability. Can this be? Can man's frame and physique be changed, and yet what we call a healthy race continue? Are the men just cited the kind of human beings wanted for the future, and if so, is this a healthy individual, and are his children to inherit the earth.

Mr. Cantlie replies to his own question by saying that, "We will let the United States answer for themselves—but as to Great Britain, such men are not the type we hope to see become general."

In the first place it may be said that the evil effects upon the health and physique of living in large cities are as greatly deplored—though not so evident—in this country as in Great Britain, and that the matter has for long received the weighty consideration of thinking men, with a view to bettering the condition of things. It is quite true that town dwellers deteriorate physically, but it is by no means certain that they, as a rule, excel in mental powers. But even if it be so, this superior agility of brain will not compensate for the loss of stamina and virility which is almost invariably the lot of a descendant of dwellers in cities.

Regarding Mr. Cantlie's remarks on the European's idea of a typical American, although the picture is not entirely out of drawing, yet it is sufficiently so to convey a mistaken impression of the inhabitants of America taken *en masse*. The American whose ancestors have been in the country for generations is, perhaps, inclined to be a nervous, excitable, energetic, and somewhat dyspeptic individual, but, nevertheless, not generally unhealthy, and most decidedly not effete.

But the fact must always be borne in mind that the United States is continually taking in fresh blood, which keeps up the standard of her population as a whole, to a height quite equal, if not superior, to that of any European nation.

No one, however, can disagree with Mr. Cantlie's contention that ability without physique is not of much use, and also that town life tends to degenerate the physical powers.

Loss of Life in the United States by Lightning.

Mr. Alfred J. Henry, Professor of Meteorology of the Weather Bureau, U. S. Department of Agriculture, has published a bulletin relating to the above subject.

Statistics of the loss of life by lightning have been collected for a period of eleven years; but for the earlier part of that time the results of the inquiry were so incomplete as to be worth little as a means of accurate information.

The number of persons killed by lightning during 1900 was 713; of this number 291 persons were killed in the open, 158 in houses, fifty-seven under trees, and fifty-six in barns. The circumstances attending the death of the remaining 151 are not known. Nine hundred and seventy-three persons were more or less injured by lightning during the year.

In a previous paper on this subject, the writer had occasion to discuss the relative frequency of fatalities by lightning in the several States and Territories. At that time, since the statistics covered but three years, it was thought inexpedient to draw conclusions from them. The addition to the previous record of the complete data for the years 1899 and 1900 makes it possible to form some idea of the death rate due to lightning in the various States and Territories. It is obvious, remarks Professor Henry, that the number of fatalities must depend partly upon the frequency of lightning strokes per unit area, partly upon the density of population, and party upon the character of the thunderstorms which traverse the region. In the United States thunderstorms occur with considerable frequency over all the territory east of the 100th meridian, save a narrow strip along the northern border. West of the above-named meridian, except in the Rocky Mountain region, the frequency steadily diminishes, reaching practically zero along the immediate Pacific Coast. There are three regions of maximum thunderstorm frequency, viz., one in the southeast, with its crest over Florida; one in the middle Mississippi valley, and one in the middle Missouri valley. The average number of days with thunderstorms annually in the first-named region is forty-five; in the second, thirty-five, and in the last, thirty.

The greatest number of fatal cases occurred in the Middle Atlantic States, and the next greatest in the Ohio Valley and Tennessee, with the Middle and Upper Mississippi Valley a close third. The greatest number of deaths in any single State during the five years, 1896–1900, occurred in Pennsylvania—186—followed by Ohio, with 135, and Indiana, Illinois, and New York with 124 each. The greatest fatality from a single stroke occurred at Chicago, Ill., where eleven persons, huddled together in a zinc-lined shanty, met instant death by a single bolt.

Professor Henry points out that there is not in the different parts of the country that accordance between the number of lives lost by lightning stroke and the number of thunderstorms which might be expected. The low percentage of deaths in the Gulf States and Florida, where the average number of thunderstorms is higher than elsewhere, may possibly be ascribed to two causes: First, the smallness of the population; and, second, the less violent character of the thunderstorms which prevail in that region.

The nature and classification of thunderstorms, as well as advice with regard to position during their progress, are entered into.

The following rules are laid down with regard to an individual struck by lightning: (1) Make the subject breathe by artificially imitating the respiratory movements of the chest; (2) Keep body warm; (3) Send for a physician; and, in conclusion, it is noted that lightning frequently causes a temporary paralysis of the respiration and heart-beat, which, if left alone, will deepen into death, but if intelligently treated, will generally result in recovery.

Malaria Infection.

In the February issue of the *Bulletin* of the Johns Hopkins Hospital is a paper by Leonard K. Hirshberg and Gustavus C. Dohme giving the result of investigations made by them with regard to the distribution of the malaria-bearing mosquito in the neighborhood of Baltimore.

The conclusions at which these investigators arrived with respect to the extirpation of mosquitos do not altogether agree with those of others who have made a study of the matter.

They do not believe it possible to exterminate mosquitos by means of oil, and declare that the only antidote against contracting malaria is the mosquito net.

They are also of the opinion that malaria should be included among the infectious diseases, and that cases of malarial infection should be reported to the boards of health just as are contagious diseases; and thus enable precautions against the spread of malaria to be carried out under the proper supervision.

In concluding their paper these investigators say: "Of special importance is the careful screening of doors and windows by wire gauze or mosquito netting, as suggested by Celli. Where this cannot be done, fitting the beds with netting will offer security, insomuch as most anopheles bite at night. Again, persons already infected should be protected by screens to prevent infection of healthy mosquitos and thus spread the disease broadcast, inasmuch as a patient having been infected in one place may carry it to another and infect the mosquitos there."

The extirpation of mosquitos, or even their abolition from the vicinity of towns, will be a much harder task than many have thought—that is with the means now at disposal. The only safeguard against infection by the agency of mosquitos is to carefully protect oneself against being bitten.

Sewage Disposal.

The Manchester Rivers Department has recently issued its report, which is an exhaustive and complete account of the latest methods of sewage disposal.

Manchester has made a well-earned reputation for her successful and careful experiments in this matter.

With regard to bacterial treatment of sewage, the report says: (1) The Roscoe beds (composed mainly of coke and cinders) were chiefly used for tank effluent from lime and copperas treatment, but do not, as a rule, yield such a pure effluent as septic tanks and bacteria beds, and the cost is increased as compared with the last named, by reason of the chemicals used; (2) Storm water-beds may be cheaply and effectively constructed of well-burnt and sharp clinkers; (3) The open septic tank was on one occasion relieved of some of its accumulated sludge, and although the smell of this was not disagreeable, the gases evolved caused sleepiness, with, in some cases, nausea, showing the necessity for ensuring thorough ventilation of septic tanks and connected conduits at such times. Roughly, about 50 to 60 per cent. of the sludge was destroyed by bacterial action. Such a tank, it is advised, should be worked lightly at first. Its beneficial results are not confined to the destruction of a certain percentage of sludge, but it also produced an effluent of more equable composition for further treatment, and one capable of ready nitrification. The utilization of the gas evolved from it is of questionable advisability. After speaking of the success and economy of the subsequent treatment of the open septic tank, the report damns with faint praise continuous filtration.

News of the Week.

The New York Academy of Medicine.—A stated meeting will be held in Hosack Hall, Thursday evening, April 17, at eight o'clock. The following papers will be read: "The Symptoms and Course of Smallpox," by S. Dana Hubbard, M.D.; "The Diagnostic Feature of this Disease," by S. Pollitzer, M.D.; "Its Treatment" (with lantern-slide exhibition), by George H. Fox, M.D.; discussion by Drs. Blauvelt, Dillingham, Huddleston, and others.

The Canadian Association for the Prevention of Tuberculosis will hold its annual convention at Ottawa on Thursday, April 17, and Friday, April 18, 1902.

College of Physicians and Surgeons, Columbia University, N. Y.—Plan for Raising the Standard of Admission.—The forthcoming announcement of the College of Physicians and Surgeons, the medical department of Columbia University, will contain a detailed statement concerning the plan for raising the standard of admission, upon which the President and Faculty have been at work for some months past. This plan has received the assent of the trustees, and will go into operation at once.

Heretofore, admission to the first year class of the College of Physicians and Surgeons has been open to any student who complied with the minimum requirements for a medical student's certificate, as those requirements are defined by the laws of the State of New York. A medical student's certificate is issued by the Regents to any applicant who presents what are known as forty-eight academic counts, these forty-eight counts being chosen from any subjects of secondary school study. The law provides, moreover, that a student who has obtained thirty-six of these counts may enter upon the study of medicine having one year in which to make good the twelve remaining counts. A student entering with more than thirty-six but less than forty-eight counts, has been known as a conditioned student.

The first part of the new plan at the College of Physicians and Surgeons provides that on and after July 1, 1902, no conditioned students whatever will be admitted to the first-year class. That is to say, the students who present themselves for admission in September next must have completed by that time the entire forty-eight counts required by law for a medical student's certificate.

A much more radical change is announced to go into effect on July 1, 1903, which will apply to the classes entering in September, 1903, and thereafter. By the terms of this part of the plan, no student will be admitted to the College of Physicians and Surgeons who has not obtained a medical student's certificate in one of two ways:

(1) By having successfully completed at least one full year's course in a college or scientific school in the United States, or having pursued an equivalent course of study at some European institution, the question of the equivalence being determined by the Regents of the University of the State of New York;

(2) By passing an entrance examination, conducted in June of any year by the College Entrance Examination Board, or in September of any year by the Committee on Entrance Examinations of Columbia University, or in part by both of these, provided only that if a portion of the examination is taken in June of any year the entire examination must be completed not later than September of the year following.

In accordance with the plan prevailing at Columbia University, the candidate for admission to the Medical School must offer fifteen points. Of this number, ten points are prescribed as follows:

English	3
Elementary Mathematics	3
Elementary Latin	2
And either Elementary French or German	2

The remaining five points that are required may be chosen from any one of the following subjects:

Botany, Chemistry, Drawing, Elementary French (if not offered among the ten points required), Intermediate French, Advanced French, Elementary German (if not offered among the ten points required), Intermediate German, Advanced German, Elementary Greek, Advanced Greek, Elementary History, Advanced History, Advanced Latin, Advanced Mathematics, Elementary Physics, Advanced Physics, Physiography, Spanish, Zoology.

Candidates who receive a grade of C=Fair=60 to 75 per cent. in subjects amounting to not less than twelve of the fifteen points offered, will be admitted to the College of Physicians and Surgeons conditionally, but in every such case the conditions imposed at entrance must be removed before the student is admitted to the second year of the course.

In order to offer an inducement to candidates to present themselves for examination upon Physics and Chemistry, or either of them, it is provided that those who receive a grade of at least B=Good=75 to 90 per cent. in either Physics or Chemistry, or both, may be admitted to more advanced instruction in the subject or subjects in which such grade is obtained as a substitute for the required Physics or Chemistry during the first year of the college course.

While it is the expectation of the President and Faculty that these new entrance requirements will materially reduce the number of students of medicine at Columbia, it is confidently believed that the higher standards will result in attracting the very best class of medical students to Columbia, and will pave the way for raising the standard of admission still more in the near future.

Medical Society of the State of California.—The thirty-second annual session of the Medical Society of the State of California will be held in Golden

Gate Hall, 625 Sutter Street, San Francisco, on April 15, 16 and 17.

The Late Professor Paul F. Mundé.—The Medical Board of the New York Skin and Cancer Hospital, at a meeting held March 29, adopted the following resolutions:

Whereas, Dr. Paul F. Mundé, a member of the Consulting Board of our hospital, has been removed from us by death; be it

Resolved, That in the death of Dr. Mundé the board has lost one of its most eminent members; one whose professional attainments had given him a high reputation both at home and abroad, and whose noble character and conscientious life work had endeared him to his associates and friends;

Resolved, That our deepest sympathy is extended to his family in their great sorrow, and that a copy of these resolutions be sent to the medical journals for publication.

J. E. Janvrin, M.D.
L. Duncan Bulkley, M.D. } Committee.

An Opening for Internes in the State Hospitals.—Students about to graduate who are unable to secure positions in general hospitals, or young physicians whose terms are about to expire in general hospitals and who wish to enlarge their experience, are now offered an opportunity to enter the New York State hospitals as internes of clinical assistants. These positions provide lodging and board. Appointments are made for a year. Some twenty-eight positions will be opened in the fourteen State hospitals situated in the following places in New York State:

Utica, Ward's Island, N. Y. City (two hospitals), Buffalo, Gowanda (homeopathic), Rochester, Binghamton, Ogdensburg, Kings Park, L. I., Poughkeepsie, Flatbush, Brooklyn; Willard, Central Islip L. I.; Middletown (homeopathic). Although these are hospitals for the insane, yet they are so large that opportunities for experience in general medicine are abundant. Each hospital is well equipped with clinico-pathological laboratory and apparatus, operating rooms, trained nurses, hydrotherapeutic and electrical devices, and good medical libraries. The field for study in general medicine is excellent, and surgical operations of all kinds are frequently performed, either by resident or consulting surgeons. It is thought that many students who wish hospital experience and are unable to obtain it because of the relatively few places available in general hospitals, may be glad to learn that positions of this kind have been thrown open to them. It is believed that young physicians wishing hospital experience will profit by a year's residence in one of these hospitals, and such as desire to continue in special work would be eligible for appointments subsequently to salaried positions in the same service.

No examinations will be necessary, but application must be made in person, with good references, directly to the medical superintendent of any of the above-named hospitals, or to Dr. Frederick Peterson, President of the Commission in Lunacy, 4 West Fiftieth Street, New York City.

Army Medical School.—Twenty-three young medical officers were graduated at the recent closing exercises of the Army Medical School in Washington, the entire class having attained the general average of 70 per cent. necessary for graduation. The "honor graduates," who attained an average of 90 per cent. or higher, were Assistant Surgeons James M. Phalen, Conrad E. Koerper, Roderic P. O'Connor and Robert U. Patterson. Dr. Phalen was awarded the Hoff gold medal for having attained the highest average during the course. A large and distinguished audience was present at the closing exercises, including many of the notable men of Washington and neighboring cities.

The diplomas were presented by the Secretary of War after a short but excellent speech, in which he said that he regarded the highest privilege in life as being able to serve humanity, and the next highest privilege as being able to serve one's country. Few were fortunate enough to have the opportunity afforded the graduating class, he said, of at the same time serving both humanity and country. He paid a high compliment to the recent sanitary achievements of the Medical Department of the Army, and warned the members of the graduating class that only by earnest endeavor could they hope to maintain present standards.

Surgeon-General Sternberg's address, which, in view of his approaching retirement, was in the nature of a valedictory, was a summing up of what the Medical Department of the Army had accomplished since his entrance into the service forty-one years ago, and the great advance in medical science during that period. He stated that even as late as 1881, when he went to Johns Hopkins University to study bacteriology, there was not a bacteriological laboratory in the entire United States. Now every post hospital in the army had its bacteriological and chemical laboratory. He concluded with some excellent advice to the graduating class as to the purposes of the Army Medical Corps and the manner in which they, as members, were expected to comport themselves.

The exercises were concluded by an address by Lieutenant-General Miles, in which he welcomed the young medical officers into the military service. The Medical Department was the most popular branch of the military service, he said. In time of peace the society of its members was prized for their good-fellowship, education and gentlemanly conduct; in war they were looked to as the men through whom disease could alone be fought, and who shared in the dangers of battle to care for the helpless and assuage suffering.

Congress of the German Chirurgical Association.—The thirty-first congress of this association was held at Berlin on April 3. The discussion opened with the first treatment of wounded in battle as a subject. Professor Von Bruns, referring to the practice resulting from experiences in Cuba and South Africa, declared that antiseptic bandages were undoubtedly ideal for the battlefield.

Professor Trendelenburg introduced several patients, to illustrate the good effects of not probing or otherwise molesting wounds. He exhibited a remarkable case of a man who had attempted to commit suicide with a small caliber gun. The bullet penetrated the heart, but the wound healed quickly. Subsequently *x*-rays revealed the bullet lying in the right ventricle, moving with each beat. Eventually it became encased, and now moves ryhthmically with the heart, causing no inconvenience.

Cholera in the Philippines.—Cholera is slightly on the increase in and about Manila. Up to the present time there have been one hundred and eighteen cases and ninety-three deaths. Many of the deaths have occurred on ships in the harbor.

The natives and the Chinese are said to be panic-stricken, and, ignorant of sanitary and medical measures taken to stamp out the disease, evade vigorous quarantine restrictions of the Board of Health and escape into the country.

General Chaffee, in response to the request of Acting-Governor Wright, has detailed a number of army surgeons to supervise the provincial boards of health, and to regulate sanitary affairs. Detention camps will also be established for cholera patients and suspects.

Bill to Abolish Slavery in the Philippines.—Representative Patterson of Tennessee has introduced a bill to abolish slavery and involuntary servitude in the Philippine archipelago. The bill sets aside the treaty or agreement between General J. C. Bates and the Sultans of Sulu and Jolo, and prohibits the sale, purchase or gift of slaves in the archipelago.

Milk Bottles to Be Used for Milk Only.—The New York Health Board have just passed a resolution requiring milk inspectors to insist that milk bottles and cans be used for nothing but milk. An ordinance will shortly be introduced making it a misdemeanor for any person, milk dealer, retailer, grocer or housekeeper to use the bottles or cans for anything but milk.

Smallpox in Saranac.—Smallpox is reported to be present on a large scale in Saranac. The State Board of Health has been recently informed that the town of Saranac has one hundred and fifty cases of smallpox. This state of affairs was not reported until the last Friday in March. It is said that the health officer of the town reported that he had one hundred and fifty cases of a peculiar disease which was called Cuban itch in his country, but which, on investigation, turned out to be smallpox.

Anatomical Science in District of Columbia.—A resolution for the withdrawal from the President of a bill for the promotion of anatomical science in the District of Columbia has been introduced in the Senate. This action was taken in response to a letter from the Secretary of the Navy, who stated that the President had requested that the bill be withdrawn and amended so that its benefits might be extended to include the medical department of the Navy. There is no objection to the bill, but it is desired that the Navy as well as the Army—the beneficiary under the present bill—shall share in the advantages to be derived by securing subjects for anatomical study under this bill. The laws have been such in the past that sufficient cadavers for proper medical education in the District of Columbia have been secured only with much difficulty.

Plague and Cholera in India.—In Calcutta, during the period from December 22 to December 28, twenty-eight persons died of cholera, and during the same period there occurred twenty-eight plague cases and twenty-eight deaths.—*Public Health Reports.*

Cholera in Manila.—Recent reports from the Philippines state that the strenuous efforts of the Board of Health of Manila are having a marked effect in preventing the spread of cholera. So far the disease has been confined to the Filipinos and Chinese, and no cases have occurred in whites. The work of controlling and stamping out of the disease has been seriously interfered with by the scattering of the floating population of the part of the city in which the disease first appeared into other parts of Manila, and into the outlying districts. An unexpected obstacle has also appeared in the attitude of the friars, who are telling the Filipinos that the disease is not cholera, and that the Americans are taking the present sanitary precautions purely for the purpose of annoying the natives. This has provoked ill-feeling on the part of the Filipinos and excited an opposition to the execution of the sanitary regulations issued by the Board of Health. The latter has made a vigorous protest to the Archbishop of Manila, with regard to the attitude of the friars. One of the greatest difficulties in the way of carrying out sanitary reforms in the Philippines is found in the ignorance and superstition of the natives, their hostility to everything American, and their opposition to any change in the conditions of life to which they have been accustomed.

Sanitary Regulations in Yokohama, Japan.—The Sanitary supervision is vested in the Police Department of the Province of Keu. The city is divided into numerous precincts, in charge of a police officer and sanitary inspector. Daily reports are made to these concerning the sanitary condition of the precincts as well as the number of sick or dead. These are scrutinized, and if there is anything found of a suspicious nature, investigation is made immediately; in this way a perfect control is maintained over the entire city, particularly over the native population. The supervision over the foreign part is rather perfunctory, yet it is sufficient to guard against any serious infractions of the laws relating to the public health. It is remarkable how perfect the organization of the Police Department is and how well the native population is controlled.

Smallpox in Italy.—It is reported, February 17, that there were at Baselice, province of Benevento, 176 cases of smallpox in a population of 4,000 inhabitants. There is a large emigration from this province to the United States. All precautions, such as vaccination, careful physical examination, and disinfection of all effects, are being rigidly enforced.—*Public Health Reports.*

College of Physicians of Philadelphia.—At a stated meeting, held April 2, Dr. Wm. Osler read "A Memoir of the Late Dr. Alfred Stille." Dr. Frederick A. Packard read a paper entitled "On a Possible Cause of Intestinal Obstruction, with Remarks on the Use of Eserin in Atony of the Bowel." He related a case of new growth of the bowel, attended with frequent loose movements of the bowels and great abdominal distention, which it was thought was due to the formation of a loop in the bowel, in which fluid and solid matter collected, and acted like a plumber's trap, preventing the movement of intestinal contents until one or both arms of the loop were emptied. In this case, as in others, temporary relief was afforded by the hypodermic injection of eserin salicylate in doses of gr. 1-150. Dr. George Erety Shoemaker read a paper entitled "A Case of Typhoid Fever; Perforation and Operation." The patient was a girl, seventeen years old, in whom perforation of the bowel took place in the third week of a grave attack of typhoid fever. The abdomen was opened with little delay, the perforation sutured, and there was no further complication in this connection. The patient died, however, six days after the operation, apparently from the gravity of the primary disease. Drs. Chas. W. Burr and Wm. J. Taylor read a paper entitled "A Case of Jacksonian Epilepsy Caused by Tumor of the Brain Relieved by Operation; Hemiplegia and Muscular Atrophy; Death in Ten Months." The patient was an intelligent, well-educated man, about twenty-five years old, with a pronounced neurotic and psychotic family history, but with no distinctive personal history. For some six years he had, from time to time, been having attacks of focal epilepsy without headache and ocular symptoms. Finally, however, headache set in, together with choked discs, and then a diagnosis of tumor of the brain was made. Operation was undertaken and a portion of the motor cortex, supposed to be neoplastic, was removed. The patient was subsequently paralyzed on the opposite side of the body, and one convulsion followed the operation. He lived for ten months, but after death no autopsy could be secured. The opinion was expressed that a subcortical growth was present. The wasting in the one of the paralyzed members was attributed to some obscure change in the ganglion cells of the anterior horns of the spinal cord, possibly secondary to the cortical destruction.

Crusade Against Cancer in Germany.—The crusade against cancer is being actively pushed in Germany. The Government is about to establish two institutes for its treatment in Berlin, whilst £75,000 ($375,000) annually for three years has been contributed from private sources, for investigations to be carried out under the direction of Professor Ehrlich of Frankfort-on-the-Main Hospital.

A Light Institute for Vienna.—Under the protection of the Archduke Otto and the premier member of the Austrian House of Lords, Prince Max Egon Fürstenberg, a committee has been formed in Vienna for the foundation in that city of a special establishment for lupus cases, on the lines of Finsen's Light Institute at Copenhagen. The estimated cost is $300,000. At the head of the list of contributors is the name of his Majesty the Emperor Francis Joseph, who gives 10,000 crowns from his privy purse.—*British Medical Journal.*

Attendance at McGill University, Montreal.—The total number of students attending classes at McGill University during the present session is put down at 1,114, divided among the different faculties as follows: Law, 60; medicine, 490; arts, 294; applied science, 254; and veterinary science, 16. In 1901 the total number of degrees conferred was distributed as follows: Law, 17; medicine, 93; arts, 42; applied science, 51; and veterinary science, 3.—*Lancet.*

International Medical Congresses.—The Second International Congress for Electricity in Medicine and Radiography will be held at Berne from September 1st to the 6th, 1902, and the Second International Congress for the Prophylaxis of Syphilis and of Venereal Diseases will be held at Brussels between the same dates.

Obituary Notes.—Dr. Delavan Bloodgood, Medical Director in the United States Navy, died of heart disease March 31, after an illness of several months, at his home, No. 320 Clermont avenue, Brooklyn. He was born in Erie county, New York. seventy-two years ago, and was graduated from Madison University and the Jefferson Medical College. His first commission in the Navy was in 1857 as Assistant Surgeon. He was made Past Assistant Surgeon in 1861, a Surgeon in 1862, a Medical Inspector in 1875, and a Medical Director in 1884.

After serving with squadrons in Indian, European and Pacific waters, he was assigned to home duty in 1879. When he was retired, in 1893, he had charge of the naval laboratory.

Dr. William H. Clark of Bellingham, Mass., was struck by a locomotive at a grade crossing on the 15th inst., and was instantly killed. Dr. Clark was graduated from the New York University Medical College in 1882. He engaged in general practice at Tolland, Conn., his native town, and later at Ipswich, Mass. He was Medical Examiner for each of these towns and secured a lucrative practice. He removed to Bellingham two years ago. He was a member of the Baptist denomination, prominent in church affairs, and a man of sterling integrity. His age was fifty-one years.

Dr. Patrick Thorburn Manson, eldest son of the well-known authority on tropical diseases, met with his death by an accident at Christmas Island shortly after his arrival there. Dr. Manson was a young man of great promise, and his untimely death is a loss to his country and to science.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

MIDWIVES' BILL—DEBATE ON CANCER—THYROTOMY—GASTRIC ULCER—OBITUARY.

London, March 29, 1902.

The Midwives' Bill has been pushed through the standing committee on law, and has, therefore, a good chance of passing this year. Amendments of every kind were resisted by every artifice, and the worst bill ever brought forward is likely to be successful. It is a sad result of professional apathy in the face of organized encroachments. The single qualification, which it took so long to abolish, will thus be set up in a worse form than ever. Half-educated women with a three months' course of midwifery are to constitute the new inferior grade. The politicians who have engineered this movement at the dictation of a few women have done the parturient poor an evil turn, and the consulting obstetricians who have betrayed their poorer brethren deserve the utmost reprobation.

The annual debate of the Chelsea Clinical Society was this year devoted to cancer and furnished an occasion for a revision of our additions to the knowledge of the subject during the last decade. Dr. James Galloway opened the debate with a reference to the last great stimulus to investigation on the subject—the enunciation of the thesis of the parasitic origin of the disease—a hypothesis which he admitted has been gradually weakened, with, unfortunately, a corresponding diminution in the activity of research. Little had been added in support of Cohnheim's theory—that tumors were due to the abnormal and late development of embryonic tissue. Dr. Galloway found the accumulated evidence rather against this explanation. Epithelial cells transported into tissues of a different nature were capable of multiplication and of the formation of new epithelial masses, but this did not account for the new additional characteristic of malignancy when present. The dangerous attribute of the malignant tumor was not simply the power of multiplication possessed by its cells, but the fact that these cells invaded the neighboring tissues, where normally they ought not exist. Passing on to the parasitic hypothesis, Dr. Galloway said none of the structures described as parasites of protozoal nature had stood the test of criticism. Clinical experience gave but grudging support to the parasitic theory of cancer, but there was some evidence bearing upon it in prodromal morbid states sometimes preceding it—may be for years, *e.g.* Xerodermia and abnormal pigmentations.

Dr. Tatham, superintendent of statistics of the registrar-general's office, gave some information from the statistical aspect. During the last four years the deaths from malignant diseases averaged 25,000 a year. These diseases in the aggregate, *i.e.* without limitation as to the organs affected, were more fatal to women than to men. 975 per million as contrasted with 672. But the excess is caused by the tendency to attack the female reproductive organs. Subtracting the deaths from cancer of the ovaries, uterus and breast, leaves a remainder death rate below that of males. Thus in the four years 1897–1900 the death rate (less that due to the generative organs) was 645 per million for males and 568 for females. In recent years the mortality had increased very rapidly in both sexes. Although at the present time women suffer more than men from cancer, the disease during the last thirty years had increased among men much more rapidly than among women.

Dr. Beatson said that by cancer he understood a morbid process where epithelium was placed in the body, resulting in a structure made up of epithelioid cells which multiplied, invaded the surrounding tissues and travelled along the lymphatics. There was a link between malignant and benign tumors due to the common origin from epithelial cells. While differentiation masked the primitive epithelial form of all cells it was not likely that the form was completely eradicated unless in the very highly specialized tissues. The less highly specialized might revert to the primitive form, and this explained the fact of benign tumors becoming malignant. If a tissue highly specialized were attacked by the influences causing tumor growth, the result would be limited—that is, a benign tumor. If a tissue were only slightly differentiated there would be great proliferation and indefinite growth—a malignant tumor. Malignancy and benignancy thus depended on the proliferating power of the cells, and that power on their degree of specialization. Having referred to the similarity of cancerous to embryonic tissues and the relation of malformations to neoplasms, Dr. Beatson passed to the question whether cancer was a local disease or the local expression of a general disease. He held that in the initial stage it was purely local, commencing in an alteration of the cells of the part affected. The factors starting the proliferation were either from within or from without. Of the latter only parasites were considered. To the parasitic hypothesis he made three fatal objections: (1) Congenital tumors, (2) Secondary growths, and (3) Absence of toxins. He believed in one intrinsic cause that explained the commencement of local cell proliferation and based that belief on the results of oophorectomy in mammary cancer. After oophorectomy there was a disappearance of cancerous tissue. Various inadequate explanations of this had been offered. He thought the explanation was to be found in facts connected with the testes and ovaries. Both prepared cells to perpetuate the species. He considered a secretion of some kind was elaborated by all the tissues in the body under the stimulus of these organs, and that constituted a fructifying fluid giving them their procreative power. Such a fluid was likely to influence cells of great proliferating power, and, therefore, tumor formation.

Sir Mitchell Banks insisted again on the great increase in the prevalence of cancer and restated his conviction that the increase in the consumption of food, especially the eating of such large quantities of meat, had something to do with the causation of cancer. Vast numbers of people eat meat now daily who fifty years ago only ate it once a week, while the wealthier eat it two and three times a day.

Mr. Pearce Gould followed with some interesting remarks. As to cure there was such a long procession of fatal cases that there is a tendency to regard cancer as absolutely incurable, but he was sure it was not so. They could not introduce a new force into the body and only hope to cure any disease by observing how nature dealt with it. Cancer did sometimes undergo spontaneous cure. It was, indeed, a very rare occurrence, but it did occur, and he related a very remarkable case.

Mr. Shield felt the futility of advancing theories of parasites, peculiar fluids, the action of one cell on another, and so on. Such hypotheses were easy to concoct but not easy to sustain. As to remedial measures, free and extensive operation was the best at their command—and best was often bad. He thought the mysteries of tumor growth were bound up in those of cell proliferation, as seen in the result of the contact of the sperm cell with the ovarian cell.

Dr. Blacker demonstrated the treatment of superficial cancers by Finsen's method, with the brush discharge and with *x*-rays. He showed the various apparatus used in these methods, and thought there was an extensive field of research in this direction.

The debate was then once more adjourned.

Thyrotomy was brought before the Medical Society by Mr. Shield, who thought the operation had a great future, not merely in malignant disease, but in other cases that could not be dealt with by the intra-laryngeal plan. He related some cases. One was for syphilitic stenosis and the result unfavorable. Others were for neoplasms, upon the nature of which the microscopists did not agree. One was for a large foreign body.

Mr. Hutchinson, Jr., was glad Mr Shield mentioned the failure of relief in the syphilitic case, for he had had just such a case, and would not operate in future. Malignant cases should be dealt with in the incipient, pre-cancerous stage.

Mr. Spencer said some cases of syphilitic stenosis could be operated on with advantage. He referred to the sudden supervention of difficult breathing in some patients.

Dr. St. Clair Thompson thought there was a future for thyrotomy, although the suitable cases were few It was not suitable for syphilitic stenosis. Tracheotomy was preferable in these cases, and after that there was often rapid improvement under iodide. He had not found the steam tent any use after thyrotomy. It was best to get patients into the sitting position.

Mr. Moullin read a paper on gastric ulcer at the Medical Society. He had asked Dr. Wall, medical registrar, to tabulate the cases at the London Hospital from 1895 to 1899. There were 246 cases, 202 women and 44 men. There were only four deaths among the women, and three of these were over thirty years old; the mortality among women under thirty being less than 1 per cent., while in those above thirty it was 6 per cent. In men, taking all ages, the mortality from hæmatemesis was 14 per cent.

Surgeon-General Sir Wm. Guyer Hunter, K.C.M.G., M.D., died on the 14th inst., aged seventy-one years. He served in the Burmese campaign, 1852–3, and subsequently in various parts. He was at one time Principal of Grant Medical College and Vice-Chancellor of the Bombay University. He was awarded the K.C.M.G., as a recognition of his great services in the cholera epidemic in Egypt in 1883. After retirement from the service he took an active part in public affairs; was a member of Parliament from 1885 to 1892, and in 1886–8 a member of the London School Board.

Another Surgeon-General, John R. Theobalds, late of the Indian service, died on the 7th inst., in his eightieth year. He retired in 1880, after thirty-two years of distinguished service.

The deaths are also announced of Surgeon-Major Turnbull, I.M.S., aged eighty-two years; Dr. John Preston, aged eighty-two; Dr. Frederick Hetley, J.P., D.L., aged eighty-one; Mr. Athol Johnstone, F.R.C.S., aged eighty-one. Patrick T. Manson, M.B., Lond., eldest son of Dr. Manson, F.R.S., only twenty-four years old, lost his life through a gun accident on the 11th inst.

OUR PARIS LETTER.

(From Our Special Correspondent.)

CHLOROFORM AND DISEASES OF THE HEART—NEW SANITARY LAW—PROFESSOR RICHELOT'S NEW BOOK ON GYNECOLOGY—IBSEN'S PLAYS ANALYZED BY DR. ROBERT GEYER—LIGATION OF AN ANEURISM OF THE AORTA BY TUFFIER.

Paris, March 29, 1902.

At a recent meeting of the Academy of Medicine, the use of chloroform to produce narcosis in cardiac patients was discussed at great length. Professor Huchard, the well-known heart specialist, said he considered that chloroform could be used in all forms of heart disease. The only counterindications would be cases of asystolia, dyspnœa due to alimentary toxæmia and the premonitory stage of pulmonary œdema. Fatty degeneration is generally considered a counterindication, but it is often mistaken for sclerosis. The patient should have been subjected at first to a treatment by digitalis and theobromin.

Pericardial symphisis would seem to be a distinct counterindication, but it is rarely recognized before an operation. Special operations offer more danger, such as anal dilatation. Chloroform should be given in small doses, so as to avoid laryngeal or toxic syncope. Dr. Huchard said that accidents were chiefly due to the manner in which chloroform was given, and were seen more frequently in the hospitals than in one's private practice. There was no special school for teaching chloroformization in France as there was in America.

Professor Berger said he gave chloroform without fear to cardiac patients, provided there were no symptoms of cachexia. In England, where there are special men for giving chloroform, they have as many accidents as in France.

Professor Le Dentu remarked that physiologists did not agree as to the cause of accidents. The physician should watch the condition of the respiration, the pulse and the pupils. The question is to know how far one can go with patients suffering from heart disease. Some consider that one should stop when the pupil ceases to react to light, others think that one can give chloroform until the pupil dilates. The first opinion would be the safer.

Dr. Lucas-Championnière did not consider ether as good as chloroform; he believed in giving small doses of chloroform. Bromide of ethyl was dangerous, according to his view.

Professor Richelot prefers to use chloroform, but uses a little bromide of ethyl at first.

The new sanitary law has at last been passed, and as it was published on the 15th of February it will be called the law of the 15th of February, 1902. This law has been more or less discussed during the last twenty years, and, according to Dr. de Lavarenne, it is still far from perfect. The mayors of the different towns are required, within a year, to prepare a sanitary regulation of measures to be taken in case of contagious diseases, and also to modify the hygienic conditions of dwelling houses. The Academy of Medicine is to prepare, within six months, a list of contagious diseases which are to be declared as such by physicians.

Professor Richelot, the well-known gynecologist, has just published a work on the surgery of the uterus, the vagina and the vulva ("Chirurgie de l'uterus, du vagin et de la vulve," Paris, 1902, Octave Doin, Editeur.) This work is not exclusively surgical in its tenets, as ideas of general pathology are found here and there. Dr. Richelot develops his theory of primitive utero-ovarian sclerosis, but he does not seem to have much confidence in the theory of an internal ovarian secretion.

An interesting thesis by Dr. Robert Geyer has just been presented to the Faculty of Medicine: It refers to the pathological psychology of the characters in Ibsen's plays. There would seem to be a great number of degenerates and insane in his works, and Dr. Geyer has shown the various forms of mental degeneracy, such as obsessions, hysteria, moral idiocy, maniac excitation, melancholia, neurasthenia, senile dementia. Ibsen has taken care to show the various causes which have brought about these forms of mental perversion.

Dr. Tuffier, the well-known surgeon, has operated recently in a case of aneurism of the aorta. The patient was a woman, forty years old, who had never had syphilis. She showed symptoms of an aneurism of the ascending portion of the aorta, and a thorough examination, by means of auscultation, Röntgen rays, and sphygmography led Dr. Tuffier to consider that the sac communicated by a narrow opening with the aorta. Specific treatment had no effect upon the tumor, and as the tumor was increasing in size and causing discomfort, Dr. Tuffier operated at the patient's request. Dr. Tuffier was able to separate the adhesions, and tie the sac, but he made a grave error, as he admits, which was to leave it. Gangrene set in, and hemorrhage took place. Death took place very rapidly. Dr. Tuffier's description of the operation which his assistants carried out, and during which the patient died, is certainly very dramatic.

SEEDS IN THE APPENDIX.

To the Editor of the Medical Record:

Sir: Dr. Kennedy, in the Medical Record for April 5, seems to doubt the presence of seeds in the vermiform appendix. In 1883 I made a post-mortem examination of a man who died after an illness of five days. Several experienced surgeons diagnosed the case as acute peritonitis Around the vermiform appendix was a small abscess containing about two ounces of pus. In this pus was an apple or pear seed; in an opening into the vermiform appendix a second seed was found engaged, and a third seed was found in the cavity of the appendix, also a hardened fecal mass about one-fourth of an inch in diameter. All the seeds were similar. The openings through which the seeds escaped were as round and smooth as if cut with a hollow punch. The appendix was about three inches long.

Dr. Robson at the time related a case in which he found a watermelon seed in the appendix which caused death. This was before the days of appendicitis. I have seen several operations for acute appendicitis, but have not found any more seeds nor seen the appendicitis sought. On one occasion an operator removed an apparently healthy appendix. John W. Kales, M.D.

Franklinville, N. Y., April 7, 1902.

ANTISEPTIC MIDWIFERY.

To the Editor of the Medical Record:

Sir: I have been much interested in the article by Dr. Valentine Browne which appeared in last week's issue of the Record under the heading "Unnecessary Antiseptic Treatment in Midwifery." Would it be presumptious for a painfully recent graduate to point out a few—let us say infirmities—in the doctor's logic?

In the first place, the use of antiseptics in obstetrics is calculated to prevent, rather than to cure, puerperal sepsis. And what right had the doctor to hope that every case of labor could be rendered safe by the use of antiseptics? Do not our best writers tell us that these deplorable cases of puerperal sepsis *will* occur, carefully as we may guard against them? Was not the doctor a little too optimistic when he mounted his new hobby?

Now, let us suppose that a case has become septic. What are the conditions present in that woman's parturient canal? Is it not true that the uterus contains blood-clots and bits of placenta? Is it a fair test of the new treatment to allow a nurse to flush out the vagina of such a case with carbolic acid, and then cry with a loud voice that the treatment is not efficacious?

In the doctor's second case the patient's temperature ranges was from 102° to 105°. This lasted for six days, when the patient died I was not aware that the advocates of the antiseptic system counseled us to keep on douching a woman's uterus for six days. "Be not weary in well doing" is good advice—excellent. But, inasmuch as that woman's uterus obviously contained something which the bichloride douches were unable to remove, might it not have been well to complete the new treatment by a curettage? Is it fair to condemn a treatment as inadequate when it is only half used?

In the third case I observe, with a sigh of relief, that curettage was resorted to, and—the patient grew better. But, says the doctor, it was a slow recovery. Very likely. The uterus for the first few days following labor is a cavity of no mean proportions. When this cavity contains bits of blood-clot and placenta, swarming with bacteria of the most malignant varieties, it seems reasonable to suppose that, in spite of the protecting zone of leucocytes in the wall of the uterus, some of the toxic products of the growth of these bacteria must escape into the system. Else why the chills, the headache, the characteristic septic temperature? With a systemic disturbance of this severity, who has dared to lead the doctor to hope for a rapid and uneventful recovery?

Next the doctor attacks the arrangement of the ideal lying-in chamber. Nor does he spare the weekly urine examination. These things, says the doctor, are not practicable in poor practice. Is it fair, then, to conclude that they are absurd? I think Dr. Browne will grant me that codeine and heroine are excellent drugs to allay certain forms of cough. But because they are expensive, and the poor can ill afford them, are they any the less efficient in the cases in which it is possible to use them?

But the especial grievance of my friend seems to be the post-partum douche, which he scores unmercifully, forgetting, in his zeal, that it has been relegated to the past these ten years, in company with the quassia cup and the vernal dose of sulphur and molasses.

Might I add, in conclusion, that, with one or two sutures introduced with reasonable care as soon after labor as possible, it is almost impossible to keep a perineum from healing rapidly and completely.

Wm. H Woglam, M.D.

2133 Fifth Avenue.

Book Reviews.

A Guide to the Microscopic Examination of the Eye. By Professor R. Greeff, Surgeon to the Ophthalmic Department of the Royal Charité Hospital, Berlin. Translated from the Second German Edition by Hugh Walker, M.D., M.B., C.M., Assistant Surgeon and Pathologist to the Ophthalmic Department of the Glasgow Royal Infirmary. Philadelphia: P. Blakiston's Son & Co., 1902.

This little volume of 171 pages will be heartily welcomed by those who are anxious to become familiar with the technique of the microscopic.examination of the eye. In Part I. a discussion of the equipment necessary for such work precedes a consideration of the methods (employed in the microscopical examination of tissues) that are of service in the examination of the tissues of the eye. Part II. is devoted to a description of the *special* tissues of the eye and the methods best adapted for their examination. The descriptions are brief, sufficiently explicit and up to date. The name of the author is a sufficient guarantee of the excellence of the work.

The Practical Medicine Series of Year Books. Gustavus P. Head, Editor. Vol. III. The Eye, Ear, Nose, and Throat. Chicago: The Year Book Publishers, 1901.

In the present volume the chapter on the eye is written by Casey A. Wood, that on the ear by Albert H. Andrews, and that on the nose and throat by T. Melville Hardie, all of Chicago. This book has what is so often lacking in works of this class, a *good* index, for which the reader will return to the authors most cordial thanks. The chapters represent a careful gleaning of the literature of the year 1901. Frequent references to the original sources of information are a valuable feature. Several illustrations are scattered through the work. This is a year book, not a text-book. The treatment of topics is, therefore, necessarily somewhat fragmentary, but it seems well to illustrate the present view-point along the special lines of work indicated by the title. We congratulate the authors, and unhesitatingly commend the results of their labors.

Transactions of the American Surgical Association. Vol. XIX. Edited by Richard H. Harte, M.D. Printed for the Association. Philadelphia: W. J. Dornan, 1901.

This volume is the usual annual collection of papers read and discussed at the meeting of the American Surgical Association. Many of the papers have appeared in journals, but collected in one volume they offer valuable information upon many surgical problems. The volume is very well arranged, and will repay perusal.

On the Cure of the Morphia Habit Without Suffering (Physiological Demorphinization), with a Note on the Physiological Method of Relieving the Craving for Drink. By Oscar Jennings, M.D. (Paris), M.R.C.S. (Eng.). Second Edition, Revised and Enlarged. Wm. Wood &.Co., 1901.

This little book of 211 pages is written pleasantly and clearly. It can be put safely into the hands of the physicians called upon to cure morphia addiction, and of the victims of the habit. There is much encouragement for the latter, for the writer bases his discussion and his methods largely upon his personal experiences, and the successful result in his own case. The "physiological" method is based upon the recognition of the fact that the "want of morphia makes itself felt chiefly in three directions: (1) A condition of restlessness, and sometimes of pain, depending upon the want of an artificial stimulus to the brain cells . . . ; (2) By failure of the heart's action and a sluggishness of the circulation . . . ; (3) An excessive secretion of acid in the stomach." The author wisely adds that it is not only necessary to meet these conditions, but also to isolate the patients so as to protect them against "the irresistible impulse that prompts even the best-intentioned to succumb to its fascination." Jennings advocates the gradual reduction of the drug, the substitution of rectal injection for the hypodermatic syringe; the use of digitalis (other heart stimulants would surely be in order), bicarbonate of soda, and the hot-air bath. "By remedying functional depression . . . the hot-air bath is chiefly useful." There is much else in this book that is well worth knowing.

MOSQUITO BRIGADES, AND HOW TO ORGANIZE THEM. By Major RONALD ROSS, Indian Medical Service. New York: Longmans, Green & Co., 1902.

DR. ROSS, who was the first to demonstrate the passage of the malarial parasite from the stomach of the infected mosquito into the salivary gland, and to whom medical science is indebted for the identification of the species of the malaria-bearing mosquito, has recently been in charge of an experimental campaign against mosquitos in the reduction of malaria in West Africa, and speaks with authority on the subject of which he writes. As its title indicates, the purpose of the book is to show the most modern and efficient methods of waging war against mosquitos. The first section of the book is devoted to an enumeration and consideration of various facts in the life history of mosquitos, a knowledge of which may be applied to their destruction. Popular misconceptions with reference to these insects are corrected, and the character of the breeding places of Culex and Anopheles is described. In the second section of the book advice is given with regard to the raising of funds to prosecute the work, the organization and distribution of work of the Culex and Anopheles "gangs," and the destruction of larvæ and adults. To the latter, however, he believes little attention need be paid if the breeding-places are properly attacked. Dr. Ross does not by any means regard the extermination of mosquitos from any given locality as practicable, but he does believe that such great reduction may be accomplished in the number of these insects as to practically stamp out locally the diseases which they transmit. The proof of the truth of this idea has recently been furnished by the elimination of yellow fever from Havana by measures directed solely against the mosquito. In an appendix, Dr. Ross gives a summary of the results of the warfare against mosquitos as carried on, among other places, on Staten Island and in Havana. A note of sarcasm against popular ignorance, indifference, and inertia runs through the several pages, and it is easy to see that the writer's patience has been sorely tried by the slowness with which British officialdom grasps and acts upon new ideas. The book is well written in a popular style, is free from unnecessary material and diffuse generalities, and furnishes, in compact form, much information of which the municipal health officer, army surgeon, and, in fact, every one living in a mosquito-infected district, should be possessed.

PROGRESSIVE MEDICINE. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia, etc., assisted by H. R. M. LANDIS, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. Vol. IV., December, 1901.

THE closing volume of the year of this quarterly digest goes over the advances, discoveries, and improvements in the realms of digestion, genito-urinary matters, surgery of the extremities, orthopedics, kidney diseases, physiology, anæsthetics, fractures, dislocations, hygiene, and closes with seventy-five pages of "Practical Therapeutic Referendum," by E. G. Thornton.

The volume is in keeping with the others of the year, and with those of other years. There is an excellent résumé of all that pertains to diabetic gangrene.

Among the other contributors are Einhorn, Belfield, Bloodgood, Bradford, Brubaker, and Baker.

THE BABY, HIS CARE AND TRAINING. By MARIANNA WHEELER. 12mo. New York and London: Harper & Brothers, 1902.

THIS is a model book of its kind, and is filled with sensible suggestions regarding the care of the infant in all minor matters pertaining to its health and comfort. The young mother who may take upon herself the responsibilities of the nurse will find in this small volume an abundance of useful hints to guide her in all the little emergencies which may arise in the discharge of her multitudinous functions. The author shows great discretion in the selection and treatment of her subjects, and gives abundant evidence of her large and varied experience with babies in general.

Progress of Medical Science.

The Boston Medical and Surgical Journal, April 3, 1902.

Physiological Heart Murmurs Produced by the Electric-Light Bath.—Thomas Howell examined fifty-two persons with especial reference to the effects of the bath on the heart, and murmurs were heard in the heart or arteries, generally both, in nearly every case. In some instances these murmurs were both short and soft, while in others they were rough and long. As a rule, they were evanescent, but sometimes they persisted for twenty or thirty minutes, particularly in the vessels. Of these fifty-two persons only eight had organic heart disease, and only six had functional murmurs. Sansom holds that under nervous (vasomotor) disturbance the arteries may be unequally affected in their caliber, some lengths being contracted, others dilated or of normal size; so that the blood passes from narrower to wider channels. The author says that he has nothing additional to offer in explanation of the arterial murmurs produced by the electric-light bath.

Angina Cruris (Intermittent Claudication), and Allied Conditions, Including Painful Cramps, with Remarks on the Importance of Examining the Pedal Arteries.—G. L. Walton and W. E. Paul reach the following conclusions: (1) The occurrence of the paroxysmal pains of angina cruris with pulseless pedal arteries is too constant to be explained by coincidence; (2) The painful paroxysms are probably of vascular origin, and result from vascular spasm, coupled, perhaps, with increased blood pressure acting on vessels already partially occluded, whether from local or general disease, from senile changes, or from congenital tendency to angio-fibrosis; (3) Recurring painful cramps of constant seat probably represent a modified form of angina cruris; (4) It is important to examine the dorsalis pedis and posterior tibial, as well as the radial and temporal arteries, in all cases in which it is desirable to estimate the bearings of the vascular condition upon disease in the central nervous system or elsewhere.

Journal of the American Medical Association, April 5, 1902.

A Service View of Hernia.—E. F. Robinson gives his experience with hernia among the soldiers in the Philippines. He reaches the following conclusions: (1) Additional care should be exercised in the enlistment of men with absolutely sound abdominal walls, and they should not be over weight; (2) Regular exercise should be insisted upon with troops in the tropics, even during so-called "field service," that the general physique may remain above par. There is too great a tendency among officers and men in a tropical country to relax all form of physical exercise and to think, because they are in the field, such is not necessary; (3) The old abdominal cartridge belt should be replaced by some form of belt, if necessary, by which the weight is swung from the shoulders and the abdominal muscles are not restricted; (4) General attention should be given to hygiene, and the avoidance of the causes of disease in general is, of course, an important factor in preventing hernia; (5) Early operation is advised in all cases of inguinal and femoral hernia.

Hypnotics: Their Use and Abuse.—A. W. Rogers notes the necessity in this class of cases of natural measures and says that an occasional placebo is a helpful substitute. We are under the necessity of studying each individual case separately. One hypnotic will not be the best in every case. In paraldehyde we have a hypnotic speedy in its action, producing quite natural and refreshing sleep and accompanied by but few and slight after-effects. In fact, its only disadvantage lies in its disagreeable odor and taste, and the odor left on the breath. It will be taken quite readily when mixed with coffee, aromatic elixir, or made into an elixir according to the pharmacopeia. Trional is less prompt than paraldehyde, but produces a more prolonged sleep, is best given in hot milk after retiring. It is often of advantage to give small doses of sulphonal during the latter part of the day, and twelve grains of trional at bed-time. In doing this we usually secure for our patient six to eight hours' good sleep. Sulphonal is very slow in producing sleep and very prolonged in it effects. It is best given in five-grain doses, two hours apart, through the day, until twenty, and in exceptional cases thirty, grains have been taken. We can expect the patient to sleep that night and be drowsy the following day. In some cases depressing effects may be evident two and even four days after such dosage. Sulphonal is best used in cases of pronounced mental and motor excitement.

Philadelphia Medical Journal, April 5, 1902.

The Relation of the Tubercle Bacillus to Pseudoleukæmia (Sternberg's Disease).—Joseph Sailer believes that it is the prevailing opinion among pathologists at present that there are three forms of disease of the lymph glands that may give rise to the syndrome characteristic of pseudoleukæmia. These are lymphosarcomatosis, tuberculosis, and a peculiar infectious process, the cause of which has not yet been discovered, but which is regarded by some as the only true form of Hodgkin's disease. It is no longer questioned that the glands in many instances contain tubercle bacilli, which are capable of infecting susceptible animals. This last point has been proven. It has been shown that in many cases with the characteristic histological picture of lymphoma, tuberculosis exists and the bacilli may be numerous and virulent. But it does not necessarily follow that they are the cause of the pseudoleukæmia. They may exist as a secondary or as an associated infection. There is still work to be done on this subject before definite and positive conclusions can be reached.

The Treatment of Carcinomatous Growths by Röntgen Rays.—George G. Hopkins states that the use of this therapeutic agent in the treatment of inoperable cancer is marvelous. With proper care and judgment we have a safe and certain cure for a very large class of malignant diseases which have heretofore been considered incurable. The writer has been treating cases of inoperable uterine cancer with considerable success. In treating malignant disease of the internal parts, a hard tube should be used, and it should be brought as close to the surface of the body as is consistent with safety. The use of the Röntgen ray is now a well-established method of cure for carcinoma of the female breast. It has proved most satisfactory in the treatment of recurrent carcinoma after amputation of the breast. Carcinoma of the stomach requires the greatest amount of care and judgment in its treatment. Malignant disease of the face, in its various forms, is amenable to this agent, the odor disappearing with great rapidity. In cancer of the tongue the results have been wonderful.

New York Medical Journal, April 5, 1902.

The Differential Diagnosis between Disease of the Gall-Bladder and Disease of the Vermiform Appendix; with a Report of Two Cases.—The cases are reported by J. C. Kennedy, the first being that of a woman of fifty-six years. Diagnosis was doubtful, but pointed to appendicular abscess; abdominal pain was radiating, but most marked in the right iliac fossa; fever, constipation, vomiting, right iliac region hard and rigid. Section revealed an empyema of the gall-bladder, which contained an immense number of calculi. Recovery was without incident, except that a biliary fistula lasted several weeks before healing. The second case was that of a man, aged twenty-four years, who had had several attacks of biliary colic. In the present attack there was intense abdominal pain, constipation, no jaundice, continuous vomiting, fever, pain and tenderness over the lower border of the right lobe of the liver, where a well-defined swelling was noticeable. Diagnosis doubtful, possibly ileus or gall-stone. Section revealed an abdomen full of pus, due to inflammation starting in the appendix, in which was found a large enterolith. This patient also recovered. The author makes some remarks upon the differential diagnosis between the two conditions noted in the title.

Pulmonary Embolism after Operations on the Bladder and Prostate.—E. L. Keyes, Jr., says that embolism in general is divided into three classes, according as to whether death is instantaneous, or delayed, or whether recovery ensues. In the present instance he makes no such distinction, but gives a brief review of previously recorded cases of embolism after bladder and prostate operations and adds three personal cases. In the first case death resulted two weeks after suprapubic prostatectomy, probably from uremia and embolus; in the second case a perineal prostatectomy was done, and the patient died, suddenly, on the sixteenth day; in the third case after the suprapubic operation, death came suddenly on the evening of the second day. Keyes has been able to find but seven other cases recorded. In the entire ten but two came to autopsy, thus positively confirming the diagnosis. He says that, admitting that the pelvic veins by their large size, their sluggish circulation, and their absence of valves, are specially liable to thrombosis, no organ has the anatomical predisposition to thrombosis possessed by the prostate. Itself a vascular organ, it is placed at the bottom of the pelvis, surrounded and permeated by a plexis of large veins, whose circulation is so slow that they commonly contain phleboliths in later life. Any cutting, tearing, or burning of this organ must assuredly cause a certain amount of venous thrombosis with the associated inflammatory reaction, and when the sluggish state of the periprostatic circulation is considered, the wonder is not that thrombosis should be frequent, but that it should be rare. Add the shock of operation upon the vitality of an older man, add the inevitable uræmia for the first few days after operation, and the wonder grows that embolism should not more frequently result. Perhaps it does; perhaps many cases which have been attributed to uræmia or sepsis belong here.

American Medicine, April 5, 1902.

A Contribution to the Etiology of Appendicitis.—Arthur J. Patek summarizes his paper as follows: (1) Because of its anatomic characteristics and relations the appendix is an organ of lower vitality and less resistance than are other parts of the intestinal tract; (2) Microorganisms are normally present in the intestine, and await but an opportune moment when, in the presence of irritating secretions, they may excite an inflammatory reaction; (3) While appendical inflammation may undoubtedly originate *de loco*, there is no question but that (4) In many cases the appendical inflammation is a secondary infection, the primary focus being in the intestine proper, the result of an acute indigestion or a catarrhal inflammation; (5) Prophylaxis is the price of health. It may be possible to do much toward the prevention of attacks of appendicitis by careful regulation of diet and intestinal habit in health, as well as securing good intestinal drainage and antisepsis in the various gastro-intestinal illnesses.

The Surgical Uses of the Hairpin.—J. Torrance Rugh enumerates many uses of the ordinary sterilized hairpin in surgery. He has found about eleven varieties and he classifies their uses under three headings: (1) When used in its natural shape; (2) When straightened; (3) When bent or twisted into various shapes. Under the first class he mentions the following uses: (1) To hold the hair away from the shoulders or neck during an operation; (2) To pin on dressings or bandages; (3) To remove concretions or foreign bodies from any sinus, canal or opening; (4) As a dull curet; (5) As an esthesiometer; (6) To catheterize a female. This is easily done by inserting the rounded end through the urethra; (7) To run under a blood-vessel, when compression is to be made to arrest hemorrhage; (8) To close a wound; (9) As a calipers or compass. When straightened, it may be used: (1) As a probe; (2) As an applicator; (3) To wire the bones together in resections or fractures; (4) To rupture the membranes in labor; (5) Heated to cauterize parts; (6) As a hairlip pin; (7) To sound a child for stone in the bladder; (8) As a hook to extract foreign bodies from canals and sinuses; (9) As a tenaculum. When bent or twisted, it may be used: (1) As a nasal speculum; (2) As a retractor; (3) As an aneurysmal needle; (4) In lieu of a tracheotomy tube; (5) As a drainage tube; (6) To approximate the edges of a wound.

Medical News, April 5, 1902.

The Pneumatic Proctoscope.—James P. Tuttle describes this instrument as having the following advantages: (1) It does not require any uncomfortable position of the patient for its employment; (2) The lamp is outside of the main tube and thus does not obstruct the view in any manner; (3) The descent of fæces into the tube does not obstruct the light nor require its removal. The plug can be taken out and the tube cleansed by the introduction of small cotton wads, held in long dressing forceps, without any material delay in the examination; (4) The plug containing the eyepiece is easily and quickly adjusted through the ground joint.

Leucocytosis as a Point of Prognosis in Appendicitis.—H. M. Joy and F. T. Wright conclude that: (1) The leucocyte count is a valuable aid to prognosis in appendicitis; (2) This is distinct from its diagnostic value; (3) A high stationary, or an increasing, count indicates a morbid condition of increasing severity, which demands operation, no matter what the clinical symptoms may be; (4) A low stationary or decreasing count indicates that the severity of the case is abating and that operation may be safely postponed. Cases in which a falling count is accompanied by unmistakable signs of a generally bad condition form the rare exception to this second principle, and in them there is no chance of error; (5) No arbitrary set of prognostic values to be assigned to various degrees of leucocytosis can be constructed; (6) The count indicates when operation should be performed for the best interests of the patient; (7) Study of the blood-count enables it to be determined whether the operation for appendicitis can be postponed with safety.

The Lancet, March 29, 1902.

The Comprehensive Study of Thoracic Phthisis.—In the first Lumleian lecture F. T. Roberts makes the following classification of the causes of this malady: (1) Definite infection from without; (2) Infection from within —Auto-infection; (3) Personal inherent predisposition; (4) Causes acting on general system—Acquired personal predisposition; (5) External conditions and environment; (6) Special causes; (7) Local causes, acting more or less directly on respiratory apparatus; (9) Local predisposing morbid conditions; (9) General or remote predisposing diseases. The paper is an elaboration of the general subject of etiology according to the foregoing list.

A Case of Inoperable Cancer: Favorable Result from Oophorectomy and Thyroid Feeding.—The patient of W. Edmunds was a woman of thirty-six years, with cancer of the left breast. The gland and axillary contents were removed in 1894. Fifteen months later recurrence was noted in the scar, which was excised. Several subsequent deposits were removed under cocaine. In 1899 the disease appeared in the right breast, but progressed very slowly. In March, 1901, the ovaries were removed and thyroid feeding began. Two months later it was noted that the right breast had become much smaller and the patient's general condition had greatly improved. She has continued to do well up to the present time.

A Case of Appendicitis in Which the Appendix Was Lodged in, and Adherent to, the Femoral Canal.—J. H. Galton reports the case occurring in a woman of thirty-two years. Operation revealed the following conditions: The head of the colon was found to be adherent to the anterior abdominal wall just below the incision. It was extremely difficult to find the appendix, which was firmly bound down by a strong meso-appendix adherent throughout its length to the posterior wall of the abdomen and dipping down for a quarter of an inch into the femoral canal, to which it was adherent. A strong and old adhesion also bound it to the ileum. The meso-appendix was pierced at an inch from the cæcum, and a ligature which was passed round the appendix at this part gave control over the process during the operation. The adhesions of the appendix to the posterior wall were soft and separable by the nail, but in the process of doing this the soft and swollen appendix was torn in the middle, and both ends were at once secured with forceps and ligatures of carbolized silk. The separation was then continued till the tip of the appendix had been enucleated from the femoral canal. The strong adhesion to the ileum was then ligatured and tied with silk, and the meso-appendix was divided into four parts, each of which was separately ligatured. A portion of peritoneum was then dissected back from the appendix above the temporary ligature and a permanent ligature applied half an inch from the cæcum; the whole appendix was then cut off, a drop of strong carbolic acid was applied to the mucous membranes, and the deflected peritoneum was drawn over and secured by two fine silk ligatures. Recovery was uneventful.

Notes on the Treatment of Furunculosis, Sycosis, and Acne by the Inoculation of a Staphylococcus Vaccine.—A. E. Wright details his experiments along the line suggested by the title. His paper is illustrated by elaborate tables, which must be consulted in the original by those interested. He says that if we consider the matter rightly we shall see that the process of bacterial inoculation as applied to a patient who is the subject of a bacterial invasion is, in reality, a process of temporarily taking away from his power of resistance with a view to his receiving back that power with interest. It is, in short, a process of trading upon the patient's balance of resistance. When exploiting the method it will, then, be wise to inform ourselves beforehand concerning the resisting power of the patient. It will be wise, also, before adventuring, to learn what we can about the demands which will be made upon the patient's resisting power by the inoculation of that definite quantity of the bacterial vaccine which we propose to employ. The general results are expressed in a very conservative tone, for the writer says that in each case treated after an interval of three or four days, during which there was an improvement, symptoms of a certain amount of relapse manifested themselves both in the condition of the local infection and in the results of blood examinations. Wright states that after several further staphylococcus inoculations, which had been varied in time and with respect to dose, in accordance with the results of the daily blood examinations, the patient's condition was still that of a chronic staphylococcus invasion, associated in places with a certain amount of scabbing and infiltration. There would thus appear to be a very definite limit to the defensive reaction of the organism, a limit which comes into consideration also in the case of other inoculations.

British Medical Journal, March 29, 1902.

Intravenous Injection of Normal Saline Solution in a Severe Case of Hæmatemesis; Recovery.—H. E. Bruce-Porter gives an account of a case under his care. The patient was a woman of forty, and had had several slight hemorrhages. When the writer was called he found her extremely weak and blanched. A teaspoonful of extract of hammamelis with a little water was given every four hours. Nutrient enemata were ordered. Two days later there was another hemorrhage, immediately after which twenty minims of turpentine in water were given. A quart of normal saline solution was injected into the arm. For the first few days a hypodermic of ¼ gr. morphine was given. In a few days hæmatogen was begun, and in about two months from the time of the first hemorrhage noted the patient was able to go to the seaside.

A Short Note on the Surgical Use of Subcutaneous Injections of Carbohydrates in Exhausting Diseases.—Arthur E. Barker calls attention to the great value of the use of saccharosed subcutaneous infusion in the preliminary treatment, the operation, and after-treatment of exhausted patients. He uses a concentrated solution, which is sealed up in glass capsules, which can be diluted to the proper strength in a moment with the corresponding amount of boiled water. Such capsules can be carried about for every serious operation. The writer has so far never observed any sugar in the urine from the use of this method. He mentions the effect in septic cases of the increased secretion of urine induced by the free use of saline injections. The toxins are excreted in greater abundance and in greater dilution, which certainly helps the kidneys.

Remarks on Cases of Lymphangiectasis with Enormous Overgrowth of Cutaneous and Subcutaneous Structures.—Walter Whitehead reports several cases of this nature, one of which was a woman, aged forty. Her right leg was four times the thickness of the left. The patient was put to bed for entire rest. After ten days systematic massage was begun. In two days elastic pressure was applied from the toes to the knee. A porous, elastic bandage was used. A week later compression of the femoral artery was carried out by means of Skey's tourniquet. This was very gradual at first, but was increased until the circulation was nearly arrested. The tubercles were rubbed down with pumice stone, and induration and discoloration of the skin disappeared. The writer adds that the *rationale* of treatment is based on the following laws: (1) The lymphatics in the leg are divided into a superficial and deep set; the lymphatics of the same set anastomose freely with each other, but the two sets communicate only in the glands. This anatomical separation has much to do both with the etiology and also with the treatment of lymphatic disease; (2) The activity of tissue absorption, as a rule, is in an inverse proportion to that of circulation. When the force of circulation is weakened, the process of absorption is energetic; the serum of the blood passes through the walls of the capillaries in a more or less rapid stream in accordance with the blood pressure, irrigating the connective tissue and collecting in its interstices, and being drawn off by the efferent lymph vessels, in which the pressure is practically *nil.*

Münchener medicinische Wochenschrift, March 11 and 18, 1902.

Bactericidal Power of Röntgen Rays.—H. Rieder reports a continuation of the experiments begun by him in 1898 relative to this subject. The bactericidal power of the Röntgen rays was tested against the cholera spirillum, the bacillus prodigiosus and the colon bacillus. The microorganisms were inoculated into gelatine or agar and exposed to the action of the rays in Petri dishes, the covers being removed. After twenty to thirty minutes' continuous exposure to the rays many of the bacteria were killed, and multiplication ceased in nearly all. In every series of experiments, however, a few of the individual bacteria were not affected. Experiments have shown that the bactericidal power of the rays is not due to the fluorescent light, heat, ozone or electricity. So far as is known the culture media is not altered by the rays or made unsuitable for the growth of bacteria. Gelatine is never liquefied. It is not, however, to be assumed on the basis of the above experiments that the Röntgen rays possess any bactericidal action upon bacteria when present in the animal body. The evidence from animal experimentation is against such a supposition. As a rule, animals inoculated with pathogenic bacteria and exposed to the rays die sooner than similarly inoculated animals which are not thus exposed. It is not to be denied that in the human subject certain infectious diseases, particularly those of the skin, may be successfully treated by the Röntgen rays, but it does not seem probable, at the present time, that such success is due to bactericidal action.

Cutaneous Angioma in the Diagnosis of Carcinoma.—Albert Reizenstein writes in opposition to Leser's view that numerous cutaneous angiomas occurring in persons in young and middle life are suggestive or diagnostic of the presence of carcinoma. Such angiomas are to be considered as degenerative processes of the skin, which are commonly observed in elderly people, but which are frequently present in young individuals in whom no carcinomatous process can be demonstrated. Reizenstein has observed twenty cases of undoubted carcinoma and six cases in which the diagnosis was uncertain. Of the undoubted cases seven, aged, respectively, 27, 34, 44, 49, 56, 61 and 62 years, showed no cutaneous angiomas, while these tumors were present in five, aged, respectively, 39, 51, 54, 71 and 72 years. Of the doubtful cases three showed no cutaneous angiomas, in two one angioma was present, and in one they were very numerous. Two hundred and thirty persons suffering from various other diseases were examined for the presence of cutaneous angiomas. In fifty-three the result was positive, and in one hundred and seventy-seven negative. As a rule, those in whom these cutaneous tumors were found were over forty years of age.

Purpura Hæmorrhagica in Genital Tuberculosis.—Gossner reports a case of tuberculosis of the testicle, which developed subsequent to an injury, and which was accompanied by an extensive intermittent purpura hæmorrhagica, which disappeared after castration. Hæmorrhagic eruptions have been observed in connection with pulmonary tuberculosis, and have been regarded of grave import in that they denote the breaking up of tubercular deposits and the consequent flooding of the body with tubercular bacilli and toxins. In this case, however, no pulmonary tuberculosis was present, and nearly two years have elapsed since castration was performed without the development of other tubercular manifestations.

Complete Uterine Rupture; Removal of the Organ Through the Abdomen.—J. A. Amann, Jr., reports two cases of complete uterine rupture with extrusion of the fœtus into the peritoneal cavity which were successfully treated by abdominal extirpation. Three operative methods are available in the treatment of rupture of the pregnant uterus: (1) Suturing the rent; (2) Supra-vaginal amputation of the ruptured uterus; (3) Total extirpation. Complete ruptures can only be sutured by the means of abdominal incision. In incomplete rupture the extra-peritoneal method of suturing can be employed. The vaginal method of suturing is only available in cervical ruptures. Suturing methods, as a rule, give poor results. Satisfactory union is rarely obtained and the danger of infection is considerable. They are only to be recommended in superficial tears of the cervix. Supra-vaginal amputation can be accomplished by the extra or intra-peritoneal route. The first method (Porro's) is always to be preferred, as it is the more simple in execution, and the dangers of infection are decidedly less than when the intra-peritoneal method is employed. Total extirpation may be accomplished either through the abdomen or the vagina. Although the abdominal method has been employed hitherto in only a relatively small proportion of cases, it is certain that it is the one to be preferred. Rupture of the uterus presents itself for treatment under two clinical conditions: (1) Accompanied by immediate serious hemorrhage. If immediate operation under the circumstances is impossible, the uterus should be emptied in the ordinary manner, the rent, as far as possible, closed, and a compression bandage applied. Eventually, Porro's operation should be performed. If immediate operation is possible, total abdominal or vaginal extirpation should be done, but the former method should be given preference. (2) Accompanied by slight or no hemorrhage. Here the uterus should be emptied in the ordinary manner and the wound drained by iodoform gauze. If subsequent hemorrhage occurs, total abdominal extirpation should be done if circumstances permit; if not, Porro's operation or total vaginal extirpation. It should, however, be remembered that in all cases an early operation is followed by the best results.

Deutsche medicinische Wochenschrift, March 13, 1902.

Official Notification of Tuberculosis.—C. Fraenkel is strongly in favor of the official notification of tuberculosis. This is to be regarded as an essential link in the chain of defense against the spread of this disease. Disinfection and isolation are without material avail unless notification is compulsory. The advantages of official notification are amply illustrated in the statistics of those countries in which such notification has recently been made compulsory, as the United States, Italy, Saxony, Prussia, and Norway. A differentiation is desirable between those cases of tuberculosis which can give rise to contagion and those in which this is impossible. The latter, however, should be kept under observation, since they may at any time become sources of contamination to those with whom they come in contact.

Parasitic Origin of Carcinoma.—By the means of special technics, Feinberg has been able to demonstrate, histologically, the presence of protozoa in carcinomatous tissue, and he regards them as causative factors in the production of the same. It is evident that the first step in the demonstration of the parasitic origin of carcinoma must be the demonstration of the parasites in carcinomatous tissue and their identification. Unless this has been successfully accomplished, the inoculation of carcinomatous tissue into animals proves nothing, as has been conclusively shown by Ribbert and various other opponents of the parasitic nature of carcinoma. At the outset it is necessary to make as sharp a differentiation as possible between carcinomatous and non-carcinomatous tissue and limit all observations, at least in the beginning, to the first variety. Three forms are encountered in typical carcinoma: (1) Tumors, composed of cells of various size and number, lying in close proximity but without any intimate connection with each other. Such groups of cells are surrounded by a net-like stroma, but are not connected with it; (2) Alveolar tumors (Virchow); (3) Tumors in which types (1) and (2) are blended. Since the cells of carcinomatous tissue are especially prone to various forms of degeneration, all histological examinations for the detection of parasites must be made upon young tumors in which degeneration is absent. In such tumors, by the use of ordinary methods, are seen: (1) Polymorphonuclear cells and groups of cells of various sizes and forms; (2) Mitotic cells; (3) Round or oval vacuoles situated between the cells and having no connection with the same. The characteristics of these microorganisms thus brought out are: (1) A double-contoured enveloping membrane, which stains a deep gray with orange G; (2) A nucleus which stains with safranin or gentian-violet, and which is surrounded by a clear unstained zone; (3) A protoplasm which stains much brighter with orange G than does the protoplasm of tissue cells.

As the result of his observations Feinberg draws the following conclusions: (1) Parasites are present in carcinomatous tissue which are different in morphology and staining characteristics from all known tissue cells; (2) These parasites are causative factors in the production of carcinoma; (3) They are encysted, and their original and vegetative form is different from that here observed; (4) The demonstration of these parasites in doubtful cases establishes a diagnosis of carcinoma.

Berliner klinische Wochenschrift, March 17, 1902.

Muscular Rigidity of the Spine.—R. Cassirer says that rigidity of the spine, a condition to which various authors have given different names, is not a disease *sui generis*, but is only a portion of the symptom-complex of any one of several pathological processes. The author draws especial attention to that variety which is myogenous in character and cannot be differentiated from chronic muscular rheumatism. As a rule, the muscles of the thigh, back and shoulder are simultaneously affected. The clinical symptoms produced are very similar to those seen in more serious joint and bone lesions, but, by careful observation, the true nature of the affection can be easily ascertained. That there is no true joint or spinal ankylosis can be demonstrated by subjecting the patient to forced movements. The involved muscles are hard, tense and over-sensitive to mechanical irritation. They also frequently show muscular tremors. The muscular condition is plainly seen by using the Röntgen ray. In certain cases of long standing such muscles become atrophied, yet they show no qualitative changes to electrical stimulus. In a few cases the joints as well as the muscles are involved in the process. In such instances the joint lesions are plainly rheumatic. It should, however, be remembered that all cases of muscular spinal rigidity are not of rheumatic origin. Many are due to lesions of the central nervous system. Two cases are reported in detail as illustrative of the rheumatic variety. In such the use of baths, massage, electricity and the salicylates is often followed by marked improvement or cures.

Acute Myelogenous Leukæmia.—Hans Hirschfeld and Willy Alexander report a case of acute myelogenous leukæmia which ran a fatal course in fourteen days and was peculiar in the fact that the eosinophiles were not increased in number and no mast-cells were ever seen in the peripheral blood. The diagnosis was made upon the clinical symptoms and the post-mortem changes in the spleen, lymphatic glands and bone marrow. This case shows that Ehrlich's contention that an absolute increase of the eosinophilic leucocytes is necessary for a diagnosis of myelogenous leukæmia is erroneous. It is, however, true that such an increase is usually present, and, so far as known, this is the first instance it has been wanting. From the fact that a large quantity of Charcot-Leyden crystals were found in the bone marrow, it is probable that originally an increase of the eosinophiles took place in the bone marrow, but that for some unknown reason the power of these cells to multiply was suddenly checked. The rapid fatal course of the case might lead to the supposition that a complicating sepsis was responsible for the outcome. This, however, is negatived by the fact that the characteristic septic leucocytosis was never present. Myelocytes were always present in abundance. Peculiar non-granular polymorphonuclear cells were present in from 1.1 per cent. to 4.7 per cent. These are entirely similar to polymorphonuclear neutrophilic leucocytes, except that no neutrophilic granules are seen. Their presence in myelogenous leukæmia has been observed by others. The highest total leucocyte count was 64,000. The highest temperature was 39.4°C. The pulse varied between 120 and 150.

The American Journal of the Medical Sciences, March, 1902.

Causes of Salpingitis Other than Gonorrhœal.—John B. Deaver and Edward Kemp Moore speak of this subject as having two aspects—the surgical and sociological. The causes of salpingitis other than gonorrhœal, especially noticed by the writers, are post-puerperal infection, appendicitis, and tuberculosis, and as an existing cause of acute exacerbations, minor gynecological operations. A very important etiological factor is the "terrible douche habit." The indiscriminate and careless use of the douche is deplorable. When used constantly, the vagina is deprived of its natural protection against infection. Minor gynecological operations call for much experience in the operator. Intrauterine examinations or treatment should be avoided as much as possible.

The Sanitary Measures to be Adopted after Floods.—George A. Soper states that there is need of a strong sanitary organization with a responsible head, to avoid epidemic, by removing the conditions which favor the spread of infectious diseases and to watch for cases of such sicknesses in their beginning. There should be a set of sanitary regulations issued for the guidance of the people. The scene of the wreck may be divided into sections. The people should be taught to look after their own health. Whenever a case of infectious disease is discovered, the case should be isolated and the premises disinfected. The water supply and food for the sufferers and helpers should be systematically inspected. In damaged houses slime, mould, and silt should be removed. All household stuffs should be sun-dried. Cellars should be pumped out, ventilated, and whitewashed. The most useful disinfectants will be quicklime, chloride of lime, and carbolic acid. All decomposing or decomposable organic matters and condemned articles should be burned. Human remains should be buried deep—at least six feet below the surface. An appearance of order and neatness should be observed.

An Experimental Investigation of Puerperal Pyæmia.—F. W. Gaertner describes the technique for planting thrombi infected with streptococcus or staphylococcus in the vein of a test animal. The vena jugularis sinistra of all the test animals was laid open from the place of confluence of the facial and cranial veins to the thorax, where the vena jugularis was ligated permanently, while the place where the facial and cranial veins flow together was closed only temporarily by a hæmostat, the branches of which were protected by rubber tubes, to avoid injuring the blood-vessel walls. The artificial thrombus was placed one-half inch below the ligature. The results obtained showed that the intensity of infection depended, first, from the place where the employed cocci were found (staphylococci from carbuncle pus and streptococci from erysipelas proved the most poisonous ones, no matter how many passages of their cultivation they experienced); second, from the duration of the preservation of the completed artificial thrombi before their insertion in the vena jugularis externa (the longer staphylococci and streptococci were kept in a dry state the greater was the loss of virulence, no matter how virulent the cocci proved at their first examination.)

The Clinical Significance of a Chronic Urethral Discharge.—H. M. Christian points out the common error of considering all chronic urethral discharges as "gleet." He then speaks of the three different forms of chronic urethral discharge. The first is true gleet. In this affection the urine is generally clear, containing clap shreds in abundance, which rapidly fall to the bottom of the glass, and which are microscopically seen to be composed of pus-cells, rarely containing gonococci, epithelium, mucus, and fibroid shreds. The second form is known as prostatorrhœa. The urine in all cases is clear, free from clap shreds, but is apt to contain numbers of comma-shaped, fine, hooklike shreds, which do not fall to the bottom of the glass, but float in the urine. The third form is urethrorrhœa. In this the urine is clear, invariably. A "smear," which is often impossible to obtain, consists almost entirely of cylindrical epithelium and mucus. The treatment in each of these varieties of chronic urethral discharge differs materially, so that a correct diagnosis is essential. To determine this point, the history of the case should be investigated; the macroscopical and microscopical appearance of the discharge; the effect upon the discharge of indulgence in sexual intercourse or alcohol (no effect being observed from sexual indulgence in the last two forms, while the discharge is increased in the first by this cause); and the character of the urine. The writer gives a table showing these points at a glance.

Scarlatinous Empyema of the Anterior Superior Squamomastoid Cells.—Charles H. Burnett reports the case of a girl of thirteen years, who, at the end of the fourth week of an attack of scarlatina, was brought to him on account of trouble with the left ear that had begun almost at the onset of the disease. The writer thinks the cause of the trouble lay chiefly in the treatment of the ear. It had been freely syringed with hydrogen peroxide, and the meatus firmly stopped with cotton. The mastoid region at the time of admission to the hospital was entirely devoid of any symptoms. There was a slight discharge from the auditory canal, the membrana tympani was red and macerated, and there was a slight perforation in its postero-inferior quadrant. The hearing was only slightly impaired. Just above and a little behind the upper wall of the bony auditory canal there was a prominent, pinkish fluctuating point. This was frozen by means of ethyl chloride and incised. About three ounces of creamy, odorless pus escaped, and was followed by some thinner, bloody pus. The pus had burrowed between the masseter and the buccinator. The wound was drained and irrigated for several days, but the patient's condition was not satisfactory. So a second operation was undertaken. A curved incision was made from the temporal artery, running from above and behind the auricle to the tip of the mastoid process. There was discovered an opening in the surface of the squamomastoid region slightly above and behind the bony external auditory canal, but the rest of the mastoid bone was normal. A curette was passed forward beneath the zygoma, and granulation tissue, slough, and thick, bloody pus were scraped out. A grooved director was passed from the anterior limit of the incision above the auricle down into the pus cavity on the cheek, and an incision was made from the outside at this point. The pus cavity healed from the bottom, and the aural discharge ceased entirely. Within about five weeks from her entrance into the hospital the patient was entirely well.

Archives of Pediatrics, February, 1902.

Multiple Arthritis in a Child Two Years Old Suffering from Gonorrhœal Vulvovaginitis.—George N. Acker describes a case in a child of two years, well developed and unusually intelligent. Both knees and ankles were swollen and painful, the patient crying whenever disturbed. The teeth and gums were in good condition, the tongue was coated, the heart, liver, lungs, and spleen were normal. The child was weak and exhausted, complained of pains in the head and limbs, and was sleepless and irritable when disturbed. There was a free purulent vaginal discharge. Treatment consisted of a liquid diet, 5 grains of salicylate of sodium every four hours, vaginal douches of warm saturated solution of boric acid every three hours, and the application twice daily of ichthyol ointment to the joints, followed by wrapping them in cotton. In less than a month a cure was effected.

A Contribution to the Symptomatology of Cretinism and Other Forms of Idiocy.—Henry Koplik and Jacob Lichtenstein call attention to a peculiarity in the hands of cretins, consisting in a prominence in the region of the antithenar eminence and over the situation of the pisiform bone. It is immediately adjacent to the groove which separates the palm of the hand from the forearm, and viewed from the side, rises abruptly from the above groove, giving a bayonet-like appearance. It is apparently an over-development or hypertrophy of the small muscles of the inner border of the hand, attached to the os pisiformis, as well, perhaps, as an enlarged condition of this bone itself. It is evidently not a hypertrophy caused by crawling on the floor, for it has been observed in a cretin only three months old. This stigma has been found not only in cretins but in other degenerate individuals. The authors have found it in idiots, cretins, microcephalic idiots, and children who were congenitally deficient, but not in Mongolian idiots. It was found in all cases of cretinism.

General Subcutaneous Emphysema Complicating Pneumonia.—Samuel Pierson and Walter Lester Carr report a case of this rare condition. The patient was four years and five months old, and was on the road to recovery from double pneumonia when, after a coughing attack, a swelling was noticed on the right side of the neck and face; this swelling increased until it involved all of the neck, head, trunk, and upper extremities. The child's condition became serious; he sat upright in bed, breathing rapidly, respiration, 60; pulse, 135; rectal temperature, 101°. The cough was severe and paroxysmal. The sputum was found to contain encapsulated, lance-shaped diplococci, staphylococci, and many bacilli, but no tubercle bacilli. The emphysema remained at its height for five days, during which time both lungs cleared up. The swelling gradually decreased during the next three weeks, and the boy was discharged cured just one month after the onset of the emphysema, and six weeks after that of the pneumonia. The treatment, stimulation with strychnine, nitroglycerin, and whiskey was directed more to the primary disease than to the emphysema.

The Edinburgh Medical Journal, February, 1902.

Diabetes and Pregnancy.—G. Ernest Herman reports on a fatal case. The complication is a rare one, but grave when it does occur. The few cases that have been reported go to show that in intermittent cases coming on during pregnancy the prognosis is better than in cases in which diabetic women have become pregnant. Premature delivery, due to intra-uterine death of the child, has occurred in about two-thirds of the published cases. Hydramnios has been observed. Some patients have died from collapse and coma within a few hours or days of delivery. The author holds that there are strong reasons for expecting that the early termination of pregnancy will prove the best treatment for a pregnant diabetic. The child is likely to die anyway. It is possible that when the pregnancy is over the diabetis may get well, and this is more likely to take place the earlier the pregnancy ends. Moreover, the farther pregnancy be advanced, and the longer the disease has lasted, the more likelihood will there be that the patient will die from collapse and coma soon after delivery.

Membranous Colitis.—Michael G. Foster applies this name to the condition in which membranes or complete casts of the bowel are at varying times passed per annum. The main features of the disease are, the passage of mucus in the form of glairy fluid, shreds or membrane, irregularity of the bowels, and abdominal pains of greater or less intensity and frequency. Most of the patients suffer from neurasthenia. There may be slight fever in each attack. In treatment, the first aim should be the treatment of the neurasthenia, by exercise and rest, plain and digestible diet, and regulation of the bowels. For the intestinal pains, bael, in drachm doses of the confection opium, during the attacks only, perhaps aromatic sulphuric acid in 20 m. to ½ dr. doses. Many patients derive great benefit from a course of treatment at the Baths of Plombières in the Vosges; the value of the waters probably consisting more in the method of employment than in their chemical composition. Warm water baths, ascending douches, and warm abdominal douches while the patient is under water, are the main points in the treatment. In more hopeless cases a right-sided colotomy may have to be performed.

Annals of Surgery, March, 1902.

Misapplied Mechanical Support to Weak Ankles of Children.—H. Augustus Wilson calls attention to the mechanical imperfections of much of the apparatus sold in the market by various makers without proper surgical supervision. He says that the natural human foot best performs its functions when it is freest from restraint. It can be quickly crippled into inefficiency by high-counters, corset-shoes, arch-raisers, wedges, and elastic anklets. When burdened by misapplied mechanics, it is rendered weak, and therefore susceptible of sustaining injury, such as sprains and the formation of bunions, flat feet, wabble joints, etc. In a constitutionally weak or rachitic child it may demand mechanical aids specially adapted to the individual requirements and peculiarities of the case. Finally, it is the duty of the medical profession to discourage the indiscriminate use of high-counters, corset-shoes, elastic anklets, arch-raisers, and sole wedging, which are known to be injurious, unmechanical, and productive of permanent loss of function.

Traumatic Rupture of the Mesenteric Arteries.—A case of this nature is reported by C. J. Aldrich and is believed to be the first of its kind on record. A man fell on the sidewalk striking on the buttock and fractured both bones of the leg. During the next week he presented the symptoms of a slowly progressing internal hemorrhage, the source and location of which it was impossible to determine. Death took place on the evening of the seventh day. Autopsy showed the fracture to be in excellent condition. Abdominal section revealed a quantity of blood, the source of which was found to be from the ruptured walls of several of the mesenteric arteries. The mesentery contained an enormous amount of fat; and it is not hard to understand that the tremendous tug exerted upon this structure by the violent fall upon the buttocks was sufficient to lacerate the mesentery and produce hemorrhage. The slow development of the symptoms resulting in death one week after the injury is most remarkable, and the tardy development is to be ascribed to the slow hemorrhage and rapid absortion of the blood by the peritoneum. It is also quite certain that the vessel walls were not in normal condition, else the natural processes of nature would have closed their ruptured walls and recovery would have ensued.

Elbow Fractures in Children.—F. J. Cotton summarizes his paper in the following propositions: (1) The usual classification hardly expresses the conditions of lesion as they actually exist. (2) The lesions frequently met with are (*a*) external condylar fractures; (*b*) supracondylar fractures; (*c*) epitrochlear separations; (*d*) separations of the whole epiphysis in the above order of frequency. (3) These forms have well marked special forms of deformity associated with them. (*a*) External condylar fractures frequently show the described "spur" formation with or without displacement of the condyle itself; (*b*) Supracondylar fractures frequently show gun-stock deformity as well as backward displacement of the lower fragment; (*c*) Epitrochlear separations show displacement of the fragment down and forward. (4) As to loss of motion: (*a*) The loss of motion from external condylar fracture is rarely considerable, and is a loss of extension; (*b* and *d*) Supracondylar fractures and separations of the epiphysis may show a loss of motion due to bony displacement, usually a loss of flexion from backward displacement. (*c*) Epitrochlear separations may show a loss of extension apparently due to muscular shortening. (5) Ankylosis or extreme loss of motion is rare in children, is practically independent of massage or passive motion, is due to displacement of fragments and their union in displaced position. (6) Position in treatment is important only as it affects reduction and retention. (7) Treatment is to be varied to fit the lesion and displacement found, as indicated above.

Suture of the Abdominal Wall.—C. Davison believes that the ideal suture is one that can be sterilized in boiling water, will remain sterile while in the tissues, and will cease to exist when healing is finished. He says that in his abdominal work the wounds are closed by suturing each layer with a continuous silkworm-gut suture, the ends of which are left out at the angles of the wound to be removed by traction when healing is complete. The suture in the strongest layer is tied in position at each end in the layer with knots that can be unlocked by traction on the exposed end when the stitch is to be removed. He then describes in detail the various steps in suturing the abdominal wall for various purposes, accompanying his text with several excellent illustrations, and states that in general the advantages of his method are: (1) Certainty that all suture or ligature material placed in the wound has been made sterile by boiling in water; (2) Accurate layer approximation of tissue; (3) Removal of the buried sutures when healing is complete; (4) Capillary drainage from each layer; (5) Safety of intestines from injury during the application of the sutures; (6) Rapidity of application; (7) Minimum line of irritation on the peritoneal surface and consequent adhesions to the viscera; (8) Slight scar in the skin, there being no perforation of the skin by sutures; (9) All the advantages of a permanent buried suture without the danger of future irritation and extrusion of the knot; (10) The advantages of an absorbable suture without the danger of sepsis from the suture, and without producing a nidus for septic germs from the blood current during absorption.

The Journal of Tropical Medicine, March 15, 1902.

Duration of the Latency of Malaria after Primary Infection as Proved by Tertian or Quartan Periodicity or Demonstration of the Parasite in the Blood.—John T. Moore describes at length his methods of investigation, and says that the period of latency in his cases has varied from a few days to one and a half years. In a general way the latency depends upon the following, viz.: (1) It may be that, owing to a lack of development of the parasite in sufficient numbers, there is not enough toxin liberated at a time to cause symptoms; (2) The parasites may become attenuated to such a degree that they do not produce the amount and the kind of toxins to manifest symptoms of their presence, though they may be present in large numbers; (3) The individual may have acquired a certain immunity, so that he prevents a sufficient development of the parasites to enable them to liberate enough toxins to cause symptoms, or else his organism is resistent to large amounts of toxin; (4) The attenuation, lack of development or partial immunity may cause the symptoms to develop atypically, or some intercurrent disease may so modify the symptoms of malaria that they become atypical. This should be called masked rather than latent malaria.

Society Reports.

TRI-STATE MEDICAL SOCIETY (IOWA, ILLINOIS AND MISSOURI).

Tenth Annual Meeting, Held in Chicago, April 3 and 4, 1902.

The Society convened at the Great Northern Hotel, under the presidency of Dr. John C. Murphy of St. Louis, Mo.

Ligation of Arteries; Cocaine Anæsthesia was the title of a paper by Dr. B. Merrill Ricketts of Cincinnati, Ohio. The author made a plea for a more general use of cocaine for local anæsthesia, especially in operations upon the head, neck and extremities. It was more efficacious, more desirable, and less dangerous than general anæsthesia. It had a wide scope of usefulness, although as yet it had been restricted in its application. Reference was made to its application to operations of any character on the extremities, and especially to its application of those involving the blood-vessels. Cocaine anæsthesia would not only permit of the ligation of the more important blood-vessels, but celiotomy, for various purposes, as well. The removal of various neoplasms, malignant and benign; plastic operations upon nerves, cutaneous, muscular, and bony structures in a healthy or pathological state; removal of foreign bodies, or amputation of any part of the upper or lower extremities, were advised by it. Amputation at the shoulder joint, with cocaine as a local anæsthetic, had been successfully accomplished by Crile, and while there was no recorded case for demonstration, there was no reason why amputation at the hip joint should not now be accomplished in this manner.

The use of cocaine for operations was especially indicated in pulmonary, cardiac, and renal diseases; also in case of exhaustion from any cause. During unconsciousness, emergency work might be accomplished by blocking the nerve trunk; in this way further shock might be prevented, and much time saved.

The constitutional effects of a given amount injected into the head, face, and neck were more marked than when injected in other parts of the body or extremities. This was due to two causes—more rapid absorption, and its proximity to the brain. For this reason less cocaine should be used and the blood-vessels avoided.

Laryngotomy, laryngectomy, and amputation of the breast could and should be more frequently performed with the subcutaneous use of cocaine. Resection of one or more ribs could be accomplished with ease, and should be resorted to with cocaine in many conditions of the chest requiring surgical intervention.

A ½ to 1½ per cent. solution of the best cocaine should be secured, and the operator should know how to use it. An amount of solution containing from ½ to 1½ gr. of cocaine need not be exceeded in performing any operation. Subcutaneous injections alone for operations would require more of the drug than where the injections were confined to the nerve trunks. The amount of cocaine necessary for the incision to reach a nerve trunk was but a trifle more than the amount necessary for injecting one or more nerves. If subcutaneous injections alone were resorted to for operations involving more than the cutaneous structures, besides making deep primary injections, it would be necessary, now and then, to inject sensitive fascia or muscle, or both.

Dr. H. A. Leipziger of Burlington, Iowa, said that his experience in the use of cocaine for surgical procedures of importance was limited. He felt encouraged, however, from the paper to resort to local anæsthesia more frequently than he had done in the past, although his experience with it in so-called minor procedures had not been as favorable as one was led to suppose was universally the case. He had seen quite a little discomfort following the use of cocaine locally, particularly in those cases where he could not circumscribe the absorption of the drug. He thought this might have been the experience of others. The discomfort following its use might have been due to faulty administration of the drug, or to its impurity. He had seen constitutional disturbances follow the use of cocaine as a local anæsthetic.

Dr. Flavel B. Tiffany of Kansas City, Mo., had had some experience in the use of cocaine hypodermically, more especially in practising ophthalmology. He uses it in nearly all operations on the eyelid, and employs a little stronger solution than the essayist referred to. He uses about 1 per cent., as a rule, sometimes less. He almost always adds adrenalin to this, and then he gets no hemorrhage whatever. In operating for entropion, for instance, when he uses the ligature cautery, he employs cocaine hypodermically, without pain. He had never had bad results from its use in this way. He had seen more disturbance from its use when he had employed it on mucous membranes. He had enucleated eyes several times by injecting a solution of cocaine into the orbital tissue back of the eye, and sometimes he had injected the drug into the body of the eye itself with scarcely any pain.

Dr. Harold N. Moyer of Chicago said that the question of cocaine as a local anæsthetic was still *sub-judice*. He thought it would need more than the *ex-cathedra dictum* of Dr. Ricketts to settle it. Personally, he would prefer to take his chances with chloroform or ether in the hands of a good anæsthetist, rather than have cocaine injected into his spinal cord. He thought the infiltration method of Schleich had been disappointing in many respects. This disappointment was, in part, due to difficulties in sterilization, and suppuration was a common factor. In the last year or two, however, solutions of cocaine could be obtained that were sterile. One should rely on good manufacturers of the drug. Cocaine could not be sterilized by heat without destroying its efficiency. The cocaine upon the market was subject to a great many impurities, and he did not know, to-day, where to obtain absolutely pure hydrochlorate of cocaine in Chicago. Many of the untoward results of spinal anæsthesia and the local use of cocaine were due to the impurities of the drug, as well as to the difficulty of sterilization.

Dr. Ricketts, in closing the discussion, condemned spinal anæsthesia, saying that he had never had the courage to resort to it. The experimental work of Crile had shown degeneration of the cord, which was sufficient to condemn it. As to the use of adrenalin, there were some advantages to be obtained from combining it with cocaine. He had amputated the thigh, the leg, the forearm, the breast; had done herniotomies; had ligated the femoral in Hunter's canal, with cocaine, in the manner described in the paper.

The Technique and Possibilities of Endo-Vesical Operative Procedures.—Dr. Louis E. Schmidt of Chicago read a paper on this subject. He mentioned the important points in connection with operative cystoscopes, and showed their differences.

1. Nitze operative cystoscope. Here the lamp, prism and window are on the concave surface of the beak. In front of the space, between the lamp and the window, the operative appliances are placed. The operative appliance carries in its hollow shaft the optical apparatus. The latter is moveable, so that the operative appliance can be brought to different distances and positions from the cystoscope part. These mechanical appliances are the galvano-caustic snare, cautery, small forceps and lithotriptic forceps.

2. The Casper operative cystoscope differs from the Nitze instrument in that the lamp, window, and prism are on the same plane, so that the whole optical apparatus is straight. The operative part is practically similar to the Nitze. Both of these cystoscopes compel the operator to work under indirect vision.

3. With the Kolischer operative cystoscope the operator works under direct vision. The lamp and window are situated on the convexity of the beak. A canal is attached to the under part of the cystoscope, through which the

different instruments are introduced into the viscus. Their working end appears just below and in front of the window.

Considering the merits and demerits of these types, the beak of the Nitze instrument is somewhat bulky and clumsy, because in the beak the operative appliance and lamp are in contact, and must be introduced together. The Kolischer cystoscope has the advantage of direct view, and in consequence of its construction the working ends of the mechanical appliances do not interfere with the clear view of the field of operation.

Most of the endo-vesical operations can be done under a carefully given local anæsthetic. There is great danger of cocainization of the bladder. As a local anæsthetic a highly concentrated antipyrin solution is to be recommended. It requires ten minutes or more before antipyrin gives the desired effect. The urethra should be anæsthetized by cocainization.

Previous to any operative step, it is advisable to have the bladder in as good a condition as possible, so that the usual irrigations, instillations, and internal medication can be employed. This procedure not only makes the bladder less sensitive, but also brings the localized centers of the pathological changes into prominence. One of the most frequent indications for this method of treatment is stubborn cystitis. Under this are comprised not only the inflammation of large areas, but also small localized inflammations, as fissures, ulcerations, remnants of cystitis, where the adjacent parts are free from pathological changes. Fissures, if located at the neck of the bladder, can be healed with a single treatment, consisting of cauterization. Ulcer of the bladder, following gonorrheal cystitis, can be successfully treated by the aid of cystoscopy. The coating and granulations which cover the ulcer must be thoroughly curetted, and prompt cure follows. Nodular varicosities of the superficial veins, which give rise occasionally to severe hemorrhages, are easily removed by cauterization with the galvano-cautery. Foreign bodies of considerable size in the bladder should not be removed by means of the operating cystoscope, on account of the unnecessary traumatism. The operative cystoscope plays an important rôle in the after-control of litholapaxy.

Prenatal Syphilis. — Dr. OHMANN-DUMESNIL of St. Louis, Mo., detailed a case of prenatal syphilis. He condemned the use of the word hereditary or congenital syphilis. He preferred to use the word prenatal, believing that it is more comprehensive, and more clearly defines the condition which exists.

Sporadic Infantile Myxœdema Resulting in a Cretinoid Condition.—Dr. JAMES FREDERICK CLARKE of Fairfield, Iowa, reported a case of this disease. The patient was twenty years of age, when first seen, and a marked imbecile of typical cretinoid condition. The family history was negative. The degeneration began at the end of the first year, and was shown by a series of photographs taken every few years through life. Thyroid feeding for the nine months to date showed an increase of two and three-quarter inches in height and a marked transformation as to intelligence and physiognomy. This was illustrated by a series of photographs, taken every two months during treatment. The patient has been taking thyroid tablets, equal to sixty grains of fresh gland, every day.

Dr. FRANK P. NORBURY of Jacksonville, Ill., said he saw a boy, nine years of age, in consultation in 1895. The child was fed on thyroidin. The result was satisfactory and pleasing. He said the results of thyroid feeding had been satisfactory in the treatment of such cases.

Pathological Specimens.—Dr. ISAAC A. ABT of Chicago exhibited some interesting pathological specimens, and among them a specimen of diaphragmatic hernia from an infant; aglioma of the cerebellum of the right side from a child, six years of age; intussusception from a baby, twenty-one months old; a picture of the brain and spinal cord from a case of epidemic cerebellar spinal meningitis; odenoma of the liver from a twenty-one months old baby, and a photograph showing the location of a spina bifida during life.

Cholecystectomy Versus Removal of the Mucous Membrane of the Gall-Bladder.—Dr. EMIL RIES of Chicago presented a paper with this title. The author confined his remarks principally to two methods, cholecystostomy and cholecystectomy, the former a method practised by Kehr and Mayo, consisting of stitching a rubber tube into the contracted gall-bladder, making the opening in the gall-bladder water-tight by applying a suture around the rubber tube. This operation afforded drainage of the gall-bladder, and through it the bile tract, for a considerable time, but it was not without objections, and Mayo, in a paper on the removal of the mucous membrane of the gall-bladder, mentions the main objection to this method. As an emergency operation, cholecystostomy was satisfactory, but as an ideal method it was not. A second operation which he considered in comparison with cholecystectomy was Mayo's operation of removal of the entire mucous membrane of the gall-bladder without removing the entire gall-bladder. While this operation seemed very reasonable, and it had been performed by Mayo and others with success, the author stated that, according to some recent observations in surgical pathology of the gall-bladder which he had made, the operation was open to serious objections. He then reported a case which he operated upon three months ago. The patient was a woman, forty-five years of age, who had passed gallstones several times in her life, first when she was eighteen years of age, then two years ago, and within six months before he operated quite frequently. She had never been jaundiced. The stones varied in size. She had not been free from pain for the last two years. The liver was not enlarged; the region of the gall-bladder was painful on pressure. Operation showed a very small, contracted, adherent gall-bladder. There were adhesions between the gall-bladder and the upper end of the duodenum, gall-bladder and omentum, gall-bladder and colon. The gall-bladder was found to contain gallstones. He peeled off the gall-bladder from the liver, after cutting through the peritoneal coat down to the common duct, removed the gall-bladder with the cystic duct, and closed the stump with catgut sutures. He sewed the muscular coat of the cystic duct together, took a long piece of omentum, stitched it over the suture in the cystic duct, to serve as a dressing, and then passed a strip of gauze down to the stump. This completed the operation. The patient recovered.

The glands of the mucous membrane of the gall-bladder were tortuous and hypertrophied. They did not show normal epithelium throughout. Most of the cells of the glands were of a high cylindrical type, with nuclei about the center of the cells. There were areas of round-cell infiltration throughout the mucous membrane. The most important observation was this: Elongated glands passed right through the muscular coat clear down into the connective tissue in numerous places. He had examined 150 sections from various parts of the gall-bladder, and had found this condition in numerous places. The thought struck him that if anybody attempted to remove the mucous membrane of the gall-bladder alone, he would doubtless fail. He had never been able to learn whether Mayo had ever had the mucous membrane of the gall-bladder, which he had peeled off, examined microscopically or not. He thought it was impossible to remove the mucous membrane of the gall-bladder alone. His recent pathological research work had convinced him that the operation of peeling out the mucous membrane of the gall-bladder was a step in the wrong direction, and that it was liable to be followed by more trouble. He, therefore, advised strongly in favor of cholecystectomy rather than stripping off of the mucous membrane of the gall-bladder.

Plastic Surgery in Ophthalmology.—Dr. F. B. TIFFANY of Kansas City, Mo., read a paper with this title. He spoke of the use of large skin grafts to restore destroyed lids by lupus, burns, cancer, etc., taken from remote parts without a pedicle. These grafts embrace the entire skin, and they are transplanted directly without being passed through any medium, and put upon a granular surface, where they grow without sloughing.

In cases of distichiasis and trichiasis that have been previously operated on, and there is no integument to spare, von Milligan's operation is recommended, which consists in splitting the edge of the lid at the mucous line and transplanting a strip of mucous membrane from the lip of the patient, vagina, or from the conjunctiva of a rabbit's eye. In ordinary cases of entropion he uses the electro-cautery, incising the integument near the margin of the lid from one canthus to the other, two or three millimeters distant from the margin of the lid; then, from cicatrization the margin of the lid is turned away, correcting the entropion. For ectropion he makes a similar operation, cutting with the electro-cautery the conjunctiva from near the punctum of the outer canthus at a distance of two or three millimeters from the margin of the lid. Sometimes he makes two or three longitudinal incisions. If more than one or two, a third is made at the retrotarsal fold or culdesac. Probably 95 per cent. of all cases that have come to his clinic and private practice of entropion and ectropion within the last three years have been corrected by electro-cautery treatment.

For congenital ptosis, where there is absence of the levator palpebræ superioris, he makes Panas' operation, which gives better results than any other operation that has ever been made up to the present time. The steps of this operation were described.

Pictures were presented of the case of a boy, ten years of age, with complete congenital ptosis, in whom there was the absence of the levator palpebræ superioris of each lid. The result was excellent, as shown by the photograph taken subsequent to the operation.

Differential Diagnosis of Smallpox.—In a paper on this subject, Dr. J. C. SULLIVAN of Cairo, Ill., impressed the point that whenever we have a patient complaining of severe and persistent backache, followed by fever and a pustular eruption, affecting the palms of the hands and the soles of the feet, protruding from beneath the outer skin, we have a case of smallpox to deal with, no matter how insignificant or mild it may appear, and a case of confluent or even hemorrhagic smallpox may be contracted from it. Hence the necessity of immediate vaccination of all parties exposed, and of strict quarantine or isolation in each case. There were but two diseases that produced this phenomena, namely, syphilis and smallpox. The former should not be confounded with the latter, as a history of chancre would suffice for the differentiation. From measles it may be differentiated by Koplik's sign, when found, which consists in the appearance of little white pearly bodies on the inside of each cheek before the faucial redness of early measles. The typical lobster rash, strawberry tongue, and persistent white line of that most eccentric of all diseases, proclaimed scarlet fever; a multiform punctated and individual crescentic rash, that of rotheln; the successive crops of vesicles affecting the shoulder-blade, probably chickenpox. A pustule stuck on the surface of the skin, impetigo, lichen planus, and papular eczema may be at first confounded with smallpox; but the pustular eruption of the palms of the hands and soles of the feet makes the diagnosis of smallpox positive. The essayist did not believe there was such a disease as Cuban or Porto Rican itch. The adherents of the theory of a third or intermediate disease similar to rotheln, measles, and scarlet fever, have strongly fought the idea that modified smallpox could be a true disease, still, by repeated examinations and diagnoses the most eminent specialists have named it smallpox. Many admit its contagiousness, but fail to quarantine. In this respect they err, for when a disease, no matter what its name or nature, is contagious, and before it becomes endemic or epidemic, it is the duty of every physician to report it to the health authorities, and work in concert with them to see that it is at once quarantined until all danger of its communication to others shall have passed.

Conglomerated Cystic Kidney.—Dr. J. F. HERRICK of Ottumwa, Ia., read a paper on this subject. The patient was a clergyman, forty-five years of age; Irish nativity; of good habits. Always well, except for a fall from a street car in April, 1899. Taken January 20, 1901, with an attack of unconsciousness. Was up and about in three days. Urine, eight pints in twenty-four hours; specific gravity, 1005; small amount of albumin; few hyaline casts; no pus. Diagnosis, contracted kidney. On April 1, 1901, a nodular tumor was found in region of each kidney. Under treatment and milk diet, urine, four pints; specific gravity, 1010; some albumin; few hyaline casts. Diagnosis changed to conglomerated cysts of kidneys. August 12, 1901, was taken with diarrhœa. August 19, he became stupid. August 21, comatose, and died on August 22. Large nodular tumor in region of either kidney. Autopsy revealed mass of cysts, weighing about four pounds, in place of normal kidney. Cysts ranged in size from millet seed to crow's egg. Suprarenal glands enlarged. No normal kidney substance could be seen. No other abnormalities discovered.

Ligation of Common Iliac or of External and Internal Iliacs Preliminary to Amputation of Lower Extremity at Hip Joint.—Dr. AUGUSTUS C. BERNAYS of St. Louis, Mo., presented a paper with this title. He said that in many cases Senn's and Wyeth's methods left much to be desired, if it seemed necessary to save the patient from even a small loss of blood. He reported an operation and presented photographs of a case of myxosarcoma of the thigh, reaching above Poupart's ligament, in which the ligation of the common iliac enabled him to perform an almost absolutely bloodless operation. The ligation was done through a small abdominal incision, made exactly over the brim of the pelvis on the affected side. Dr. Bernays claimed that the aseptic ligation of the iliacs could in no way add to, but would not likely lower, the percentage of mortality in those cases in which the ablation of the lower extremity was indicated. He strongly recommended the method in suitable cases. His patient recovered in a few weeks.

Hemorrhage After Tonsillotomy.—This paper was read by Dr. H. A. LEIPZIGER of Burlington, Iowa.

Tonsillotomy is one of the so-called minor operations, which becomes a very formidable one in case of hemorrhage. Even if there is no fatality, the apparent danger, continuance of bleeding, and frequently the inability of the surgeon to arrest the same create a degree of anxiety for doctor and patient, and a liability to censure and reproach for the doctor alone, which should stimulate all surgeons to cease regarding the operation as minor. The patient should be informed of the dangers, and examined at least as carefully before operation as before a life insurance examination, which never involves more than a limited amount of money. Authors refer to fatal cases, but the writer could find no reports of a fatal case in the *American Journal of the Medical Sciences* from 1827 to 1902, nor in other literature at his disposal. Bosworth could not find a case reported which he would consider authentic. Very recently an abstract appeared (*Journal of the American Medical Association*, March 29, 1902), making reference to five fatal cases recorded, two of which were children. The operation should never be done in the doctor's office, but by preference in a well-appointed hospital. Bleeding will follow a tonsillitome as well as a knife. The common advised styptics and methods of arresting the bleeding do so when the bleeding is insignificant; when it is severe they all fail; even tying the common carotid has failed. There seems to be underlying the parenchymatous oozing some nervous or vaso-motor influence which is excluded by syncope or unconsciousness

The latter is obtained by hypodermics of morphine, which were used in the writer's case with sufficient effect to make him believe it arrested the bleeding when all other means had failed.

Psychology as Applied to Modern Medicine.—A paper with this title was read by Dr. G. H. EISKEMP of Washington Ia. He referred to the delusions under which a large number of people were laboring. The sudden rise and rapid spread of the religious vagaries and scientific absurdities taught by Mrs. Eddy, Dowie, Schlatter, Schweinfurth, and others, afforded abundant evidence of this fact. The whole history of Christian Science, Dowieism, Spiritualism, and Osteopathism formed curious chapters in the mental history of our age.

How to counteract these modern unwholesome tendencies was the question. Criticism would not do it. Ridicule would not suffice. Such movements were strengthened by denunciation. They fattened on persecution. He thought the deathblow to all such scientific, philosophic, and religious vagaries was struck when the truth was shown concealed behind the fallacy. It was at this point that medicine had failed in the performance of her duty. While Christian Science had swung to one extreme, medicine had swung to the other. If the followers of Mrs. Eddy had laid sole emphasis on the psychical, ignoring the physical, the physician, on the other hand, was tempted to confine himself to the physical, leaving out of account the mental. Had physicians studied the psychic side of life, as they ought to have done, applying psychological principles to the treatment of disease, there could be no reasonable doubt that much could have been done to counteract those delusions which were to-day spreading with such alarming rapidity. Why should the physician leave this interesting and important field to the untrained quack, that he might make of it a matter of merchandise? That many human ailments were of mental origin, and could be healed by purely psychological means, there could be no question. Into many others the psychical entered as a very important element. This being so, in order to successfully treat the human body, one must know something of the human mind, its laws, and methods of working. Without this knowledge, accurate diagnosis of disease, in some instances, was impossible. When carefully diagnosed it might turn out that the patient needed the good offices of a clergyman a psychologist, or neurologist. At all events, the physician must be able to make the diagnosis, whoever effects the cure.

Man was something more than a bundle of nerve cells, bones, blood-vessels, and various kinds of tissue. Therefore, the successful practitioner must interest himself in something besides physical symptoms and matters of organic function. So long as man is made of body and mind, so long as these continue to influence one another, just so long would the study of the psychical side of human nature be a valuable part of the equipment of him who ministered successfully to its physical side. That a new emphasis would be put upon the psychological element in the future, the author had every reason to believe. It was his firm conviction, arising from a conception of the profound need of such investigation, that the time was ripe for a forward move in this direction.

Acute Delirium.—By Dr. FRANK P. NORBURY of Jacksonville, Ill.

He said that acute delirium was an etiological problem; one upon which the leading authorities do not agree. It might not be regarded as an entity, but a combination of pathological conditions, chief of which was an encephalitis, more or less intense, and almost invariably fatal. The tendency of late was to regard the disease as an infection, but as yet no pathogenic bacteria family group had been isolated. The Russian school, following the lead of the Italians, had made reports, conclusive in their deductions, endorsing the infection theory. From a clinical study of three cases, one of which came to autopsy, Dr. Norbury endorsed the infection theory, and said the disease was comparable in its clinical history to other of the severe infections. The question of differential diagnosis was aided by laboratory methods.

Diagnosis of Cancer of the Breast.—Dr. ALFRED ROULET of St. Louis, Mo., read a paper with this title. He said there was no doubt that in its early stages every cancer of the breast was a strictly localized condition and that its successful treatment depended entirely upon early diagnosis, and immediate radical extirpation of the malignant focus. In advanced cases the diagnosis was easily made, but in the early stages it was often exceedingly difficult to distinguish cancer from abscess, syphilis, tuberculosis, sarcoma, cysts, and the benign tumors. Text-book distinctions do not hold in practice. The diagnosis can only be made after most thorough physical examination and a searching investigation of the case history. While the microscope is a valuable aid to diagnosis, it occupies a place of secondary importance.

The differentiation of the various tumors of the breast was briefly discussed.

Multiple Neuritis.—In a paper on this subject, Dr. DANIEL R. BROWER of Chicago said that the diagnosis of multiple neuritis in its classical form was very simple, but at the bedside there were but few classical cases, so that errors in diagnosis were not infrequent, and as the prognosis of multiple neuritis was usually favorable under proper treatment, and the prognosis of the diseases with which it was usually confounded was very bad, a correct diagnosis was of great importance. The disease was the result of some kind of poison, and while the action of this agent might be limited to the peripheral portion of the neurons, yet there were cases in which the cell body was as well impaired, and this also created confusion in diagnosis. The principal poisons producing a multiple peripheral neuritis were alcohol, lead, arsenic, and the toxins of the various microorganisms, especially those that produce diphtheria, influenza, typhoid fever, gonorrhœa, syphilis, leprosy, and beriberi.

In the typical cases of multiple neuritis there was symmetrical localization of motor, sensory, and vaso-motor symptoms. In the earlier stages the symptoms were the result of irritation of the nerve; while the later symptoms were those of destruction. In the beginning there were muscular cramps and spasms, shooting pains, and paresthesia. Later on, paralysis and anæsthesia.

The diagnosis of alcoholic neuritis was based upon the evidences of chronic alcoholic poisoning, found in the digestive, circulatory, and nervous systems. The onset was usually insidious, weeks or months being necessary for its full development. The earlier symptoms were numbness, tingling, muscular cramps, tremors, and vasomotor disturbances, such as cold or clammy hands or feet, or a hot and burning sensation in the same extremities. In a few cases there was marked psychic disturbance.

Arsenical neuritis very much resembled alcoholic neuritis. The differentiation from alcoholic neuritis was made in the few cases he had seen by the absence of any evidences of alcoholism, by the œdema of the eyelids, pigmentation, epigastric pain, and nausea. These cases were the result of the continued use of large doses of Fowler's solution, and the tremors were more marked than in alcoholic neuritis. The knee-jerks and typical reflexes were present. Some cases were the result of the combined action of alcohol and arsenic, as evidenced by the remarkable epidemic that occurred in Manchester, England, in 1900, from beer. The source of arsenic was traced to sugar used in brewing. Recent investigation by Ross would seem to indicate that arsenic may be the principal etiological factor, although hitherto it has been regarded as microbic. The treatment of the several forms of neuritis had, in common rest, the relief of pain and insomnia; also in the early stages the constant galvanic current of low amperage, applied daily to the nerve trunks involved, was of use, together with and attention to elimination by skin, bowels, and kidneys. The alcoholic patients required the bromides, with codeine in such doses as was necessary to secure a reasonable degree of comfort, also the use of nerve tonics, of which strychnia was the most serviceable. In alcoholic neuritis it was very essential to withdraw at once, and entirely, alcoholic stimulants. In the treatment of beriberi, it was the opinion of physicians who had had much experience with the disease that the patient must be moved from the locality where the disease was contracted, must have absolute rest in bed, mild laxatives, diuretics, tonics, and anodynes. When cardiac failure seemed imminent, strychnia and nitroglycerine had given the best results. After the acute stage of the several forms of multiple neuritis had passed, the patients required vigorous restorative treatment.

The diet throughout must be carefully regulated to suit the digestive condition of the patient. As soon as the acute pain had disappeared, the use of the galvanic current of a proper amperage, interrupted, so as to produce muscular contraction, was indicated. The seances should be short; not more than three or four contractions of each group of muscles should be made daily with a current of the least possible amperage. Gentle massage should be commenced at the same time the electrical exercise of the muscles began, and the severity of this treatment should be increased as muscular soreness subsided. This exercise of the atrophied muscles would ordinarily result in their slow redevelopment, and after a time they would respond to the faradic current, and then it should be substituted. Much benefit may be had by the hypodermic use of strychnia, a daily injection, beginning with 1-60, and gradually increasing it to a full physiological dose. If the case did not yield, hypodermic injections of the chloride of gold and sodium, gr. 1-24, might be added to the daily treatment. As soon as possible, the patient should be encouraged to make voluntary muscular movements frequently. In the beginning of treatment many cases of multiple neuritis were discouraging, and the physician was apt to consider them hopeless too soon. Some of the most satisfactory results he had obtained were in cases of long-standing neuritis, which had been abandoned by physicians as incurable.

Intemperance and Life Insurance.—Dr. C. F. Wahrer of Fort Madison, Ia., contributed a paper with this title. He said that insurance companies had made careful estimates of the factors entering into the product of life insurance. They excluded the intemperate, the vicious, the debauched, persons suffering from chronic diseases liable to terminate fatally, those engaged in hazardous occupations, and the extremes of age. Some companies had created a department of sub-standard risks, whom they insured conditionally, such as those dying within a given period pay higher premiums, and forfeit a portion of their policies, but if they live beyond the stipulated time, their policies become standard. Other companies protected themselves by stipulating that if the insured died on account of these faults already mentioned, he forfeited his policy.

The author held that despite many conflicting opinions, as regards the use of alcohol, one thing was certain, and all scientists agreed that even its moderate use was not beneficial and might easily be harmful, and that all insurance companies regarded drinkers as belonging to the class of hazardous risks.

Drinkers easily fell victims to such diseases as nephritis, heart disease, pneumonia, typhoid fever, and cirrhosis of the liver, and since intemperance was most frequently found among the lewd and vicious, they were particularly liable to gonorrhœa and syphilis. Once attacked, their chances for recovery were greatly lessened by the life they had led. Men following hazardous occupations were liable to injuries, and if intemperate they stood operations poorly, and their chances for recovery were relatively small.

Since intemperance played such an important rôle in life insurance, it was well to note the fact that the children of drinkers were poorer risks than those whose ancestors had led pure and temperate lives. There were two kinds of risks: The standard, embracing those who passed a satisfactory examination and received an unmodified policy at usual rates; and the sub-standard, who, on account of an unsatisfactory examination, were given a modified policy.

The author suggested the establishment of a new class, the super-standard class, in which, beside possessing the good qualifications of the standard risk, the applicant must be a *teetotaler*. He thought it just that these should not pay for the shortcomings of others, and that there was a sufficient number of them to justify the creation of a separate class to whom policies should be issued at reduced rates.

Treatment of Malignant Tumors by the X-Ray.—Dr. Wm. Allen Pusey of Chicago read a paper on this subject, illustrated by stereopticon. This paper attracted more than ordinary interest. Excepting a few epitheliomas, the whole list represented cases which had baffled as skillful men as the country possesses, or had been passed upon as hopeless by masters of the profession. A more unpromising group of cases could hardly be imagined. The cases were presented for what they were worth, that each one would give them whatever weight he considered they were entitled to. The author stated that the *x*-rays had a destructive effect upon tissues of low vitality, and that this effect can be utilized under suitable conditions to cause the destruction of such tissues without destroying the involved healthy tissue. His sections showed that the *x*-rays cause a degeneration of some sort of carcinomatous tissue and a disappearance of it presumably by absorption. This disappearance of carcinomatous tissue was followed by the formation of firm healthy scar tissue. A simple process presumably occurred in the disappearance of diseased tissue in tuberculosis, sarcoma, and pseudo-leukemia. The advantages of the *x*-ray method were that it was painless; it destroyed diseased tissue, but left the healthy tissue in its place. It left small scars, and it could be used in cases in which the surrounding healthy tissue could not be sacrificed. It was available for cases in which ordinary methods involve extensive operation and serious subsequent disfigurement, as, for example, about the eye and nose. It was available in cases in which ordinary methods were impossible, because of the amount of destruction of tissue which complete removal would require. It was applicable to many inoperable cases. It often relieved pain. The use of *x*-rays should, in his opinion, be limited to those cases which, for any reason it is inadvisable or impossible to treat by ordinary methods. He does not advise the use of *x*-rays as a substitute for operations in operable malignant growths. As regards cutaneous carcinomas, he believed no strong objection was to be found to the use of *x*-rays as a primary method of treatment, and some advantages were to be urged for it. All other malignant neoplasms should have the advantage of operation where it was practicable. With the present evidence of the effect of *x*-rays upon malignant neoplasms, he believed he was justified in maintaining the following propostions: First, in all cases of malignant disease which had been operated upon there was reason to urge the subsequent use of *x*-rays as a prophylactic measure. Second, in all inoperable cases of malignant disease the use of *x*-rays should be tried. Third, in all such cases there was a probability of relieving pain and a possibility of inhibiting the progress of the disease.

Medical Education.—This was the subject of the President's address, which was delivered by Dr. John C. Murphy of St. Louis, Mo. The vital factors in medical education, he said, were the teacher, the student, and the college. A man who aspired to teach others should himself have a thorough understanding of what he attempts to teach, and should be chosen on account of his specia knowledge of some particular subject, and not on account of his ability to buy stock in the college. He had known instances where a professor would start the school year as a teacher of chemistry or histology, and end it as a full-fledged professor of gynecology or abdominal surgery. It was seldom that nature endows one individual with such versatile talents as to make him equally successful along all lines. Intellectual development was of slow growth, and could not be accomplished by any short cut or instantaneous process. It is only by concentration in some particular channel that one can hope to become a peer among his fellows, and rise above mediocrity.

The medical teacher should have a proper preliminary training. No man can hope to turn out a finished product unless he himself is finished. If his work is well done, as he approaches the end of his career, and takes a retrospective glance down the vista of his life, he sees here and there young intellectual giants of his own creation, ready to continue the work he has so well begun, to perpetuate his name, and enjoy and transmit the heritage of his genius.

"The medical student is the very center of the arch; the keystone of the structure, without which all must fall. This age abounds with many opportunities for the earnest worker along the various avenues of science, but there are none which offer greater opportunities for renown than the science of the saving of human life. Men should be famous for the good they do to others. There are more heroes in the medical profession than in all the armies of the world; men who every day risk their lives amidst scenes of pestilence and disease that others may live. The man who goes forth to wage war on disease is a greater hero than Alexander the Great or Julius Cæsar."

He would say to the prospective medical student: "Let him think well of what he is about to undertake; before he begins to dissect others, let him, metaphorically, dissect himself, and see if he possesses the moral and intellectual attributes necessary to success. A proper preliminary education is as requisite to the student of medicine as is a fertilizer to the soil."

This country could boast of some of the greatest medical centers in the world, but, unfortunately, it possessed some of the poorest. It was not necessary for the welfare of humanity that every village and hamlet should have a medical college. In the speaker's mind, the medical college should not exist as a separate and distinct institution, but should be a department of a university for general education. The science of medicine and surgery, while it had almost reached a perfect stage, still had many hidden mysteries yet to be revealed.

"The course of four years in college is to the student what the period of prenatal existence is to the infant, a time of development and preparation for an independent life. What does the term Alma Mater signify but loving mother? If we would have our children do us credit, we must have a care as to the kind of material we select for their making. We must not be like the fishermen who let down their drag-nets and gather in all that are caught in their meshes. Unfortunately, too many colleges pursue this method, and cast their nets in the form of enticing literature to tempt the smith from his forge, and the husbandman from his plow, where nature intended them to remain. They come, they see, but they conquer not. Their cherished hopes are blasted; their desires unsatisfied; their time wasted. All they have to show for their endeavors is a worthless piece of parchment bestowing a worthless title. The great percentage of them must go back to the forge and the plow or starve."

Cataract Operation in the Very Old.—Dr. A. B. Hale of Chicago read a paper on this subject. He spoke of trying to overcome the prejudice among the laity against cataract operation in the very old. The eye was more amenable to surgical interference in these cases than other organs of the body.

His conclusions were: "(1) Tissues in the old are apt to be friable and the cataract over-ripe; (2) Vision need not necessarily be impaired; (3) Patients stand the operation surprisingly well, and with little reaction; (4) Every case of cataract in the very old, if the retina and nerve seem to functionate well, should be given the chance of operation; (5) Emergencies should be anticipated and met at once as they arise; (6) Repair proceeds slowly, but as securely as at an earlier age."

Splanchnoptosis.—Dr. Fred Byron Robinson of Chicago made a few remarks on this subject, which were illustrated by beautiful charts.

Tetanilla.—Dr. J. W. Hanna of Winfield, Ia., detailed a case of tetanilla which came under his observation. He said that this name was applied to a peculiar neurosis, characterized principally by paroxysmal tonic convulsions of certain groups of muscles. The disease attacked by preference children and young adults, varying in age from fifteen to thirty, yet he was inclined to believe that the disease attacked persons of any age. The cause or causes producing this affection were not well understood. His patient was a farmer, fifty-five years of age.

The Hygiene of the Pregnant and Puerperal State.—A paper with this title was read by Dr. C. E. Paddock of Chicago. During the puerperium no arbitrary rule could be established regarding the time the patient might get up. The character of the lochia should be the guide. As involution advances, the lochia changes, and when all color had ceased, and the lochia but scanty, or none at all, the patient can begin to get up slowly. This change might occur in a week, or several weeks. The patient was neglected during pregnancy, and the puerperium by the busy general practitioner. The physician who carried out a systematic treatment of his cases had fewer mortalities and fewer conditions of morbidity.

Dr. Florence Patrick of Burlington, Ia., followed with a paper in which she covered essentially the same ground as that outlined in the paper of Dr. Paddock.

Infections of the Puerperal State and Their Surgical Treatment.—The author of this paper was Dr. Emory Lanphear of St. Louis, Mo., who said that the fatality from cases of puerperal infection attended by midwives was appalling. The mortality arose from several things. First, non-familiarity with the various causes of puerperal infection. Second, inappreciation of asepsis. Third, gross carelessness. Fourth, meddlesome interference with natural processes. Fifth, the spread of venereal diseases.

He dealt largely with non-familiarity with the causes of puerperal infections. The normal vulva constantly contained myriads of bacteria, pathogenic as well as innocent, which might be introduced into wounds of the genital tract by careless methods. The normal vagina of the pregnant woman did not contain any pathogenic microorganisms, hence auto-infection is not a possibility in natural labor. The vagina contained innumerable forms of non-infective bacteria, but these disappear at the cervix, no microbes ever being found in the cavity of the uterus under natural conditions. The secretions of the cervix uteri, as well as, to a less degree, those of the vagina, possess mildly antiseptic powers, so that, unless an unusually large number of virulent organisms be introduced, infection is not apt to occur.

He spoke of ten varieties of infection, and reported several cases illustrating the different types of infection. He had been disappointed in the use of Marmorek's serum in the treatment of puerperal infections. Women in labor should be treated upon the same principles and rules of antisepsis and asepsis as governed surgeons in the most extensive operations.

The Pathological Status of Retroverted Uteri.—Dr. Wm. A. Tichenor of Chicago read a paper on this subject. The author thought there were certain grave pathological conditions found in the uterus and adnexæ, in which the first step was backward displacement. Among the more grave is prolapsus. Practically all cases of prolapsed uteri were first displaced backward, for it was practically impossible for a uterus to slide down the vaginal canal if the cervix was well back toward the sacrum, and the fundus well up against the pubes. In this position the organ was across the axis of the vaginal outlet, and would not prolapse; but when the fundus was in the hollow of the sacrum the organ was in the most favorable position for gravitating toward the vaginal outlet. The retroverted position militated against the expulsion of menstrual and other secretions. This position retarded venous circulation, thereby favoring the growth of any pathogenic bacteria that might find lodgment. It lessened the woman's ability to bear children by decreasing the chances of conception, and increasing the chances of abortion. He thought about one-third of all gravid uteri abort. The retrodisplaced uterus was a prominent etiological factor in prolapsed ovaries. Retroverted uteri and prolapsed ovaries were in the most favorable position to be irritated and injured by the passage of hard fæces and during the act of coitus.

He did not attribute that importance to an uncomplicated case of retroversion without pelvic symptoms in a young unmarried woman that had generally been given to it in the past few years. If the subject was a young unmarried woman, and without symptoms, he would advise against local treatment, looking after the general health, and suggesting the assumption of the knee-chest posture night and morning. But if the patient showed decided symptoms that were distressing and referable to the pelvis, he would advise mechanical and medicinal measures.

To correct malposition of the uterus, he would first endeavor to relieve congestion and tenderness, if present, by boroglyceride tampons and hot vaginal douches After this he would replace the uterus by careful bimanual manipulation. To attempt to replace a uterus by a sound or other intrauterine instrument was reprehensible; it might possibly require several seances before the organ was completely restored to its normal position. When this was accomplished he would try to retain the uterus in anteversion by a well-fitting pessary. Before attempting to use a pessary to retain the uterus in anteversion the organ should be freely movable, not sensitive to the touch, and the ovaries should not be where a pessary will press upon them. With due consideration of these points, and using a pessary of proper shape and size in each case, the use of the pessary would prove very satisfactory.

The author then considered cases of retroposed uteri accompanied with other pelvic troubles, and discussed the Alexander operation, also the comparatively recent operations devised by Dr. Alexander Hugh Ferguson, and Dr. J. Clarence Webster of Chicago.

Dr. Frank P. Norbury submitted a revised report of the Constitution and By-Laws in conformity with the plan of reorganization of the American Medical Association, which was adopted.

Dr. Fenton B. Turck of Chicago offered a resolution, that dietetics, hydrotherapy, and mechanical physical therapeutics be taught by practical methods in the medical schools of the United States, which was adopted,

Officers for the Ensuing Year.—*President*, Dr. Alexander Hugh Ferguson, Chicago; *First Vice-President*, Dr. Flavel B. Tiffany, Kansas City, Mo.; *Second Vice-President*, Dr. J. C. Sullivan, Cairo, Ill.; *Secretary*, Dr. W. B. La Force, Ottumwa, I.a; *Treasurer*, Dr. Emory Lanphear, St. Louis, Mo. Place of meeting, Hannibal, Mo.

Curious Cigarettes.—Coffee cigarettes are the latest form of smoking. They are supposed to cure a person of the smoking habit. The cigarette is made of the leaf of the tree, not a compound of the ground bean. Coffee-leaf smoking is said to possess the property of imparting to smokers an intense dislike for the flavor of tobacco.

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

Ophthalmic Myology. By G. C. Savage, M.D. 12mo. 589 pages. Illustrated. Gospel Advocate Publishing Co., Nashville, Tenn.

Fourteenth Annual Report of the State Board of Health of Ohio, 1899. 8vo., 844 pages. Fred J. Heer, State Printer, Columbus, Ohio.

Twelfth Report of State Board of Health of Vermont, 1898 and 1899. 8vo., 416 pages. The Turtle Co., Rutland, Vt.

Twelfth Annual Report of State Board of Health of Florida. 8vo., 127 pages. The Garrett Printing Co., Jacksonville, Fla.

Psychic Research and Gospel Miracles. 12mo., 396 pages. By Rev. E. Duff and Dr. T. G. Allen. Thomas Whittaker, New York. Price, $1.50 net.

Annual Report of the State Board of Charities, 1901. 160 pages. J. B. Lyon Company, Albany, N. Y.

State of New York, State Board of Charities from 39th Report. 22 pages.

Biennial Report of the Board of Health of Louisiana, 1898 and 1899. 291 pages, 8vo. Baton Rouge Publishing Co., Baton Rouge, La.

Biennial Report of Board of Health of State of Mississippi, 1899 and 1901. 8vo., 43 pages. Clarion-Ledger Print, Jackson, Miss.

Smallpox: Its Diagnosis, Treatment, Restriction and Prevention. By Louis LeRoy, M.D., 8vo., 40 pages. Illustrated. Tennessee State Board of Health.

Fifth Report of the Colorado State Board of Health. 8vo., 223 pages. 1894 and 1900. The Smith-Brooks Printing Co., Denver, Col.

Thirty-second Annual Report of the State Board of Health of Massachusetts. 8vo., 891 pages. Wright & Potter Printing Co., Boston, Mass.

Fifth and Sixth Biennial Reports on Vital Statistics of State of Minnesota, 1894 and 1897. The Pioneer Press Co., St. Paul, Minn.

Sixteenth Annual Report of the State Board of Health and Vital Statistics of Pennsylvania. Vol. I. and Vol. II. Wm. Stanley Ray, State Printer.

Text-book of Anatomy and Physiology for Nurses. By D. C. Kimber. 8vo, 276 pages, illustrated. The Macmillan Company, New York. Price, $2.50.

The Röntgen Rays in Medical Work. By David Walsh, M.D. Edinburgh. Third edition, 8vo, 316 pages, illustrated. Wm. Wood & Co., New York. Price, extra muslin, $2.50 net.

A Practical Manual of Insanity. By Daniel R. Brower. 8vo, 426 pages, illustrated. W. B. Saunders & Co., Philadelphia, Pa. Price, cloth, $3.00 net.

Morphinism and Narcomanias from Other Drugs. By T. D. Crothers, M.D. 8vo, 351 pages. W. B. Saunders & Co., Philadelphia, Pa. Price, cloth, $2.00 net.

Burdett's Hospital and Charities, 1902. By Sir Henry Burdett. 1086 pages, 12mo. The Scientific Press, Ltd., London.

The International Medical Annual 12mo, 688 pages. 1902. Illustrated. E. B. Treat & Co., New York. Price, $3.00.

Sewage and the Bacterial Purification of Sewage. By Samuel Rideal. 8vo, 308 pages, illustrated edition. John Wiley & Sons, New York. Price, cloth, $3.50.

Progressive Medicine, Vol. 1, March, 1902. By Hobart Amory Hare, M.D. 8vo, 462 pages. Lea Brothers & Co., Philadelphia. Price, $2.50.

A Study of the Nervous Complications and Sequelæ of Pneumonia.—Charles J. Aldrich says that the neural element of pneumonia is written large. Pneumonia often follows injury to the pneumogastric nerve, or affections of the basal ganglia of the brain, and is a common termination of meningitis, brain tumor, and apoplexy. Neuralgia has been observed preceding and accompanying pneumonia. Among the other nervous complications and sequelæ of the disease are herpes zoster and ophthalmicus, convulsions in children, hiccough, chorea, tetanus, and trismus, color blindness, aphasia, priapism, affections of the sympathetic, and paralyses. The paralysis may be cerebral, spinal, or neural.—*Bulletin of the Cleveland General Hospital.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending April 5, 1902:

	Cases.	Deaths.
Measles	614	22
Diphtheria and croup	357	52
Scarlet fever	380	28
Smallpox	75	20
Varicella	92	..
Tuberculosis	262	150
Typhoid fever	16	2
Cerebro-spinal meningitis	..	2

The Candy Habit.—The tobacco, the opium, the tea, the coffee, the alcohol habits are constantly being referred to, but it is seldom that the candy habit is spoken of. It is well known, of course, that a large number of American women consume portentous quantities of sweet meats, that is unless the fair sex are belied in this respect, but that men also indulge to an exorbitant extent in the toothsome candy, is a fact which has not as yet been widely disseminated. However, when a journal of such unblemished repute for veracity as the New York *Evening Post* stands sponsor for the statement, it e'en must be credited. The journal in question says: "That candy has become the basis of a bad habit—like tea, tobacco, alcohol, or ice-water—has long been admitted by medical men; that its worst victims are not women, however, is not so well known, except to the owners of candy-shops. The fact that one man bought and devoured 400 pounds of the richest chocolates in one summer, and that this gastronomic feat was not looked upon as anything unusual by the candy clerks, will give some idea of the slavery to which the habitual candy-eaters are committed. The man who consumed "confectionery" by the hundred weight is young, and sound in mind and body. He generally yields to temptation immediately after luncheon—although the craving sometimes becomes unendurable at an earlier hour. He estimates that the candy he has bought for personal consumption cost him $250 last summer. He has been an unwilling victim for years, and has frequently "sworn off"—or attempted to. The last time was for three months, and when the self-imposed embargo was raised he bought two pounds of mixed chocolates and ate them between lunch and dinner."

Report of the Ladies' Committee on the Concentration Camps.—The report of the Ladies' Committee on the Concentration Camps in South Africa is, we need scarcely say, very much what might have been anticipated by all "level-headed" people. Great care was exercised in the selection of the members of the Committee. It was not to be expected that they would find everything perfect everywhere they went, but their report is very satisfactory, nevertheless. There is no doubt that a large amount of sickness, attended with a heavy mortality, occurred in these camps, more especially among the Boer children; but, however, much as this may be deplored, it was inevitable under the circumstances. The Boers deserted their families in order to fight against us, and the British authorities in the field out of humanity undertook the care of them rather than allow them to perish on the veldt. The Boers neglect the most elementary principles of hygiene and their notions of treating the diseases of childhood are worse than antiquated. The responsibility and difficulty of undertaking the care of their families were immense under the circumstances. All the stories about the Camp hospitals are simply untrue. It will be curious to see how those who raised a protest against, as they allege, the wholesale murder of women and children will deal with this report of the Ladies' Committee.—*Lancet.*

The Pope's Mode of Life.—Dr. Lapponi, physician to the Pope, gives an account of the routine of the Pope's life. The venerable Pontiff rises at about 9 o'clock, and after celebrating Mass drinks some coffee. From 9:30 to 1 o'clock he receives visitors. He partakes of dinner at 2, which consists of a little soup, a little white meat, a little fruit, and a little claret and water, except on fast days, when fish and green vegetables are substituted for the flesh. After dinner the Pope reads the papers—or, rather, the cuttings made from them for him by his secretary. From 4 till 8 he writes letters and attends to business. At 9 he sups off a bowl of soup and a boiled egg, and at about 11 he retires.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended April 5, 1902:

SMALLPOX—UNITED STATES

		CASES	DEATHS
California, Los Angeles	Mar. 15–22	4	
San Francisco	Mar. 16–23	4	
Colorado, Denver	Mar. 15–22	9	
Florida, Jacksonville	Mar. 22–29	3	
Illinois, Belleville	Mar 22–29	1	
Chicago	Mar 22–29	14	
Joliet	Mar. 15–22	1	
Indiana Evansville	Mar. 22–29	3	
Indianapolis	Mar. 14–21	21	
Kansas, Wichita	Mar. 22–29	1	
Kentucky, Covington	Mar. 23–30	13	
Maine, Portland	Mar. 22–29	3	
Massachusetts, Boston	Mar. 22–29	15	4
Cambridge	Mar 22–29	3	1
Lawrence	Mar 22–29	1	
Medford	Mar. 22–29	1	
Newburyport	Mar. 15–22	2	
Taunton	Mar 22–29	1	
Michigan, Detroit	Mar. 22–29	15	
Grand Rapids	Mar. 22–29	1	
Ludington	Mar. 22–29	9	
Minnesota, Minneapolis	Mar 15–29	31	
Montana, Butte	Mar. 23–30	2	
Nebraska, Omaha	Mar. 22–29	29	1
New Jersey, Camden	Mar. 22–29	2	
Hudson County	Mar. 23–30	38	7
Jersey City	Mar. 23–30	25	
Newark	Mar. 22–29	11	9
Passaic	Mar. 1–15	2	
New York, New York	Mar. 22–29	69	4
Yonkers	Mar. 21–28	2	
Ohio Chillicothe	Mar. 22–29	2	
Cincinnati	Mar. 21–28	18	
Cleveland	Mar. 22–29	1	
Dayton	Mar. 22–29	1	
Toledo	Mar 22–29	1	
Pennsylvania, Lancaster	Mar. 1–29	3	
Philadelphia	Mar. 22–29	38	3
Pittsburg	Mar. 22–29	5	
Rhode Island, Providence	Mar. 22–29	2	
Warwick	Mar. 24–Apr. 1	10	
South Dakota, Sioux Falls	Mar. 22–29	1	
Tennessee, Memphis	Mar. 22–29	5	
Utah, Salt Lake City	Mar. 15–22	1	
Washington, Tacoma	Mar. 16–23	4	
Wisconsin, Green Bay	Mar. 23–30	8	
Manitowoc	Mar. 1–31	20	
Milwaukee	Mar. 22–29	3	

SMALLPOX—FOREIGN.

Austria, Prague	Mar. 8–15	8	
Belgium, Antwerp	Mar. 8–15	13	4
Liege	Mar. 8–15	Present.	1
Brazil, Rio de Janeiro	Feb. 9–16		6
Canada, Halifax	Mar. 23–39	1	1
Hamilton	Mar. 1–31	1	
Quebec	Mar. 23–29	11	1
Colombia, Cartagena	Mar. 10–16		1
France, Paris	Mar. 8–15		7
Rheims,	Jan. 5–12	12	8
Great Britain, Cardiff	Jan. 25–Mar. 8	1	
Dundee	Mar. 8–22	2	
Glasgow	Mar. 15–22	53	7
Liverpool	Mar. 8–22	23	1
London	Mar. 8–15	450	81
Plymouth	Mar. 15–22	1	
Sheffield	Mar. 1–15	6	
Southampton	Mar. 8–15	1	
India, Bombay	Feb. 24–Mar. 4		7
Calcutta	Feb. 22–Mar. 1		7
Karachi	Feb. 23–Mar. 2	8	1
Madras	Feb. 15–28		4
Italy. Naples	Mar. 1–15	16	3
Mexico, Mexico	Mar 9–16	3	
Russia, Moscow	Feb. 27–Mar. 6	18	5
Odessa	Mar. 8–15	1	
St. Petersburg	Mar. 1–15	15	3
Straits settlements, Singapore	Feb. 1–15		1

YELLOW FEVER.

Brazil, Rio de Janeiro	Feb 9–16		17

CHOLERA

China, Canton	Mar. 29	Almost disap'red.	
Sheshing	Mar. 29	Sporadic.	
Tung Mun	Mar. 29	Sporadic.	
India, Bombay	Feb. 24–Mar. 4		3
Calcutta	Feb. 22–Mar. 1		158
Strait settlements, Singapore	Feb. 1–15		7

PLAGUE.

China, Tsang Shing	Mar. 29		20
India, Bombay	Feb. 24–Mar. 4		856
Calcutta	Feb. 22–Mar. 1		347
Karachi	Feb 23–Mar. 2	84	62

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Original Articles.

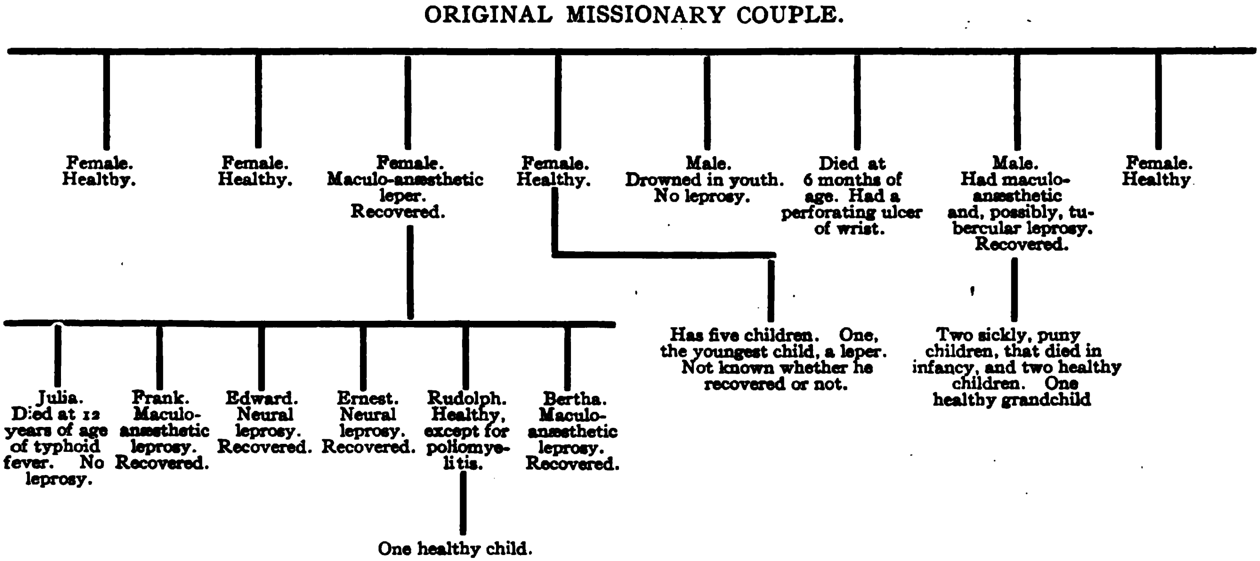
INSTANCES OF SPONTANEOUS CURE IN A LEPER FAMILY.*

By DOUGLASS W. MONTGOMERY, M.D.,
PROFESSOR OF DISEASES OF THE SKIN, UNIVERSITY OF CALIFORNIA.

A SHORT time ago leprosy in all its forms was looked upon as an incurable disease, but now a number of writers, such as Hansen,[1] Ehlers,[2] Blaschko,[3] and Hutchinson,[4] regard cure as the natural termination of the anæsthetic form. And even in tubercular leprosy, where slowly advancing but certain death is generally considered to be the almost invariable result, observers are reporting instances of cure.[5]

In support of the view that patients frequently recover from maculo-anæsthetic leprosy, I submit the following interesting family history:

In 1837 a missionary and his wife, both born in New England, settled in the Hawaiian Islands.


ORIGINAL MISSIONARY COUPLE.
Female. Healtby.
Female. Healthy.
Female. Maculo-anæsthetic leper. Recovered.
Female. Healthy.
Male. Drowned in youth. No leprosy.
Died at 6 months of age. Had a perforating ulcer of wrist.
Male. Had maculo-anæsthetic and, possibly, tubercular leprosy. Recovered.
Female. Healthy.
Has five children. One, the youngest child, a leper. Not known whether he recovered or not.
Two sickly, puny children, that died in infancy, and two healthy children. One healthy grandchild
Julia. Died at 12 years of age of typhoid fever. No leprosy.
Frank. Maculo-anæsthetic leprosy. Recovered.
Edward. Neural leprosy. Recovered.
Ernest. Neural leprosy. Recovered.
Rudolph. Healthy, except for poliomyelitis.
Bertha. Maculo-anæsthetic leprosy. Recovered.
One healthy child.

The missionary is said to have been a thin man, of nervous, excitable temperament. His peculiarities developed to such an extent that the Missionary Board sent him home, but this did not effect any permanent improvement. At one time in his life, while in Hawaii, sores broke out all over his body. The nature of this disease is not known, but it was called erysipelas. He was an ardent conchologist, and while on a visit to the South Seas died of a fever, caught, it was thought, from a large number of putrifying half-cleaned sea shells kept in the cabin of his small vessel. As it is wished to bring out the markedly neurotic tendency of the family, it may be mentioned that a sister of this missionary was said to have become permanently insane through a disappointment in love.

Nothing is known of any disease tendency in the missionary's wife, or in her family. She bore her husband eight children, and died a short time ago, aged eighty-three years.

The first child of the missionary couple, a female, has always been hypochondriacal, but otherwise has enjoyed good health. Although married, she never bore children. She is yet alive, and is said never to have shown any symptoms of leprosy.

The second child, also a female, taught school, and is said by one of her acquaintances to be an estimable, even-tempered woman; another acquaintance characterizes her as irritable and excitable. She is yet alive, is unmarried, and has never had any children. It does not appear that she ever had leprosy.

The third child, a female, married a German, a native of Hamburg. This German is yet alive, has never had leprosy, nor is there any history of leprosy in his family. This couple had six children. Two weeks after the birth of her third child the mother became insane (erotic mania), and was confined for one year in a lunatic asylum where the discipline was said to be bad. After leaving the asylum the other three children were born. After the birth of the sixth child the mother again became insane, and from then till her death had several attacks of insanity. While on a visit to San Francisco in 1884, she was found to have an erythematous lepride of the face. She hurried back to Honolulu, where she was examined by the Board of Health, who confirmed the diagnosis. The lepride disappeared in a short time, and she died four or five years ago in an insane asylum in Honolulu with no history of her leprosy having returned. The board also at the same time examined her five living children and pronounced two of them (Frank and Ernest) lepers, while the case of a third child (Edward) was declared doubtful.

The fourth child of the original missionary couple, a female, is still alive. When I saw her several years ago she was a tall, thin woman, with deep-set eyes and an intense look. She married a Scotchman, by whom she had five children. Neither she nor her husband, nor any of her children, with but one single exception, seem to have shown any symptoms of leprosy. Her one leprous son was under my care for quite a long time suffering from maculo-anæsthetic leprosy of the right palm and of the back. The probable origin of the leprosy in this boy will be discussed when we come to the consideration of the origin of the leprosy of his cousins Frank, Edward, Ernest, and Bertha.

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*Read before the Alumni Association of the University of California, October 29, 1901.

The fifth child of the original missionary couple was a boy, and was drowned in his youth; no further history.

The sixth child, a twin, died when six months old. Dr. Fitch, to whom I owe a great deal of my information about this family, told me that before death it developed a perforating ulcer of the wrist, that bored clear through the carpus.

The seventh child, a twin, developed leprosy. His case is reported by Dr. J. V. Shoemaker of Philadelphia in the *Medical Bulletin*, March, 1883. As reported by Dr. Shoemaker, this man presented the features of anæsthetic leprosy, such as contraction of the fingers, bullæ, anæsthetisias and erythematous patches. There had been a red elevation on the forehead, which had disappeared, leaving an anæsthetic patch. This elevation may, of course, have been a macular lepride. Dr. Shoemaker, however, distinctly describes one tubercle situated in an erythematous anæsthetic area on the back of the left hand, and, furthermore, says that the man was suffering from tubercular as well as anæsthetic leprosy, and Dr. Geo. L. Fitch also remembers this man as suffering from tubercular leprosy. This man will be referred to again in speaking of the spontaneous cure of leprosy. He is at present living in this country, and, I understand, is, to all appearances, cured of his leprosy without treatment. Neither of his wives, for he has married twice, nor any of his children, of whom he has had four in vinculo matrimonii, developed leprosy. His first wife, whom he married six months after noticing the first symptoms of anæsthetic leprosy, bore him—within a year, a sickly, puny, child that lived but a short time. He later on married again—a widow, who is now dead, and by whom he had three children. The eldest was a sickly, puny, creature, that died at three months of age; the next, a girl, carried off the prize in a baby show, and later married her first cousin Rudolph, a son of the woman previously mentioned as having married a German. She is now about nineteen years of age. I understand that she has recently become the mother of a fine, healthy child.

As to this leper's third child, it is supposed to be healthy, but I have no definite information regarding it.

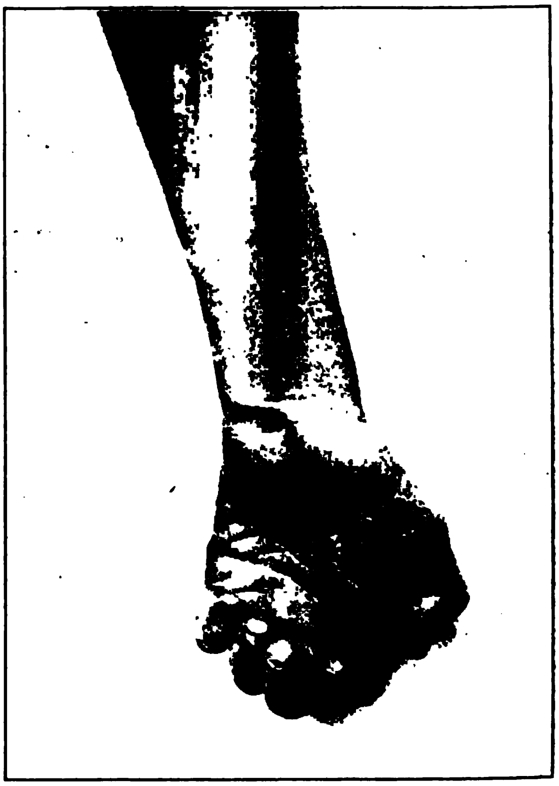
The eighth child of the original missionary couple is still living. She is said to be eccentric, and has remained unmarried. It does not appear that she has ever had leprosy.

We now come to the consideration of the children of the third child of the original missionary couple, some of whom have been casually mentioned as having leprosy. It will be remembered that she married a German, and had by him six children—Julia, Frank, Edward, Ernest, Rudolph, and Bertha.

The eldest of these six children, Julia, died in 1879, of typhoid fever, aged twelve years, and I have no further history of her, other than that she seems never to have had any symptoms of leprosy.

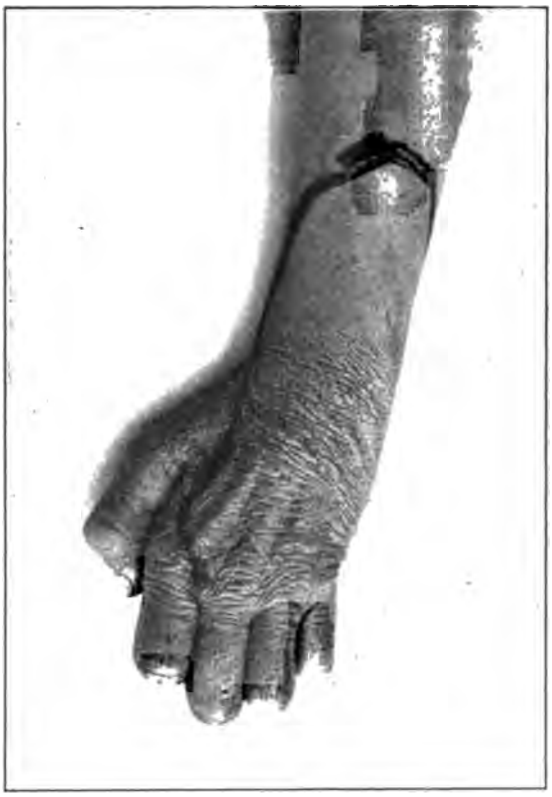
Of Frank, who was in the San Francisco Pest-House, I have a fairly complete history. The reason of this completeness is that he wished to be allowed to leave the hospital, and permitted an examination in order to be regularly dismissed. His brother Ernest did not submit to examination before leaving, but as he presented a parallel case to Frank, the board of health granted him a regular dismissal. Both of them were very sensitive about being examined. My final examination of Frank was made October 29, 1898. He was then twenty-nine years of age. He had come to the United States at the age of fifteen, and had remained in this country up to the time of this examination. He had entered the San Francisco Pest-House, August 12, 1886, twelve years before this examination. He said the disease had first appeared about fifteen or sixteen years before, at thirteen or fourteen years of age; that is, one or two years before being officially declared a leper by the Honolulu Board of Health. He further said that when he was thirteen years of age there was a macular spot on one of his thighs, and loss of sensation in the middle finger of the right hand. Two years later macular blotches appeared all over the body, which disappeared in about two or three years. During the first five or six years of the disease the present anæsthesia and the present deformities occurred, and for the past ten years no active symptoms had been observed. The patient denied ever having had any venereal disease, and stated further that he never had been exposed to contagion, as far as Kanaka women were concerned. The symptoms that he showed October 29, 1898, were:

Thickening of the left supraorbital nerve; paralysis of the left orbicularis palpebrarum, and an area of anæsthesia, which began as the apex of a wedge near the left side of the nose, and ran outwards, then outwards and upwards, then inwards around the orbit, and ended on the forehead at a vertical line drawn through the supraorbital notch. At the nose, as before mentioned, it began as the sharp apex of a wedge, and gradually broadened until, at its base on the forehead, it was about one inch in breadth.



Frank's left hand. The loss of the sensations of pain, heat and cold in the entire skin to the ulnar side of the black line.

The concave border of this sickle-shaped area of anæsthesia ran near the edge of the orbit below, but gradually departed from it until, on the forehead, it was fully an inch above it. In this anæsthetic area the sensations of pain, heat, and cold were absent, but that of touch was retained. In every other respect the scalp, face and neck were normal.



Frank's left hand. The loss of the sensations of pain, heat and cold in the entire skin to the ulnar side of the black line.

There was a red patch, with slightly irregular borders situated on the right side of the abdomen near the arch of the ribs. This patch was on the same level as the surrounding skin, being neither elevated nor depressed, and the sensations in it were perfectly normal. There was an indication of buff color with the red, and the red color faded on pressure. He said the patch had always been there, and was a birthmark, which was probably correct, The skin of the trunk was beautifully soft and white, perfectly healthy looking, and free from any pigmented or erythematous lepra areas or spots. The patient was well built, both in regard to skeleton and muscles, excepting the atrophy of the muscles of the hands, which will be mentioned further on.

The thenar and the hypothenar eminences and the ulnar borders of both hands were flattened, and all the digits were clawed. He could flex all the digits fairly well, but could extend them only very slightly. The right index and middle fingers had lost their terminal phalanges eleven years before, the patient said. The nails of these fingers were diminutive and misshapen, but all the other finger nails were good. Both the right and left first metacarpal spaces were sunken, and the skin of the back of the hands was deeply wrinkled and thin.

In the right upper extremity there was loss of the sensations of pain, heat, and cold in the entire skin to the distal side of the black line, as shown in the photograph; in the left upper extremity these sensations were lost on the back of the lower part of the forearm, and on the anterior and posterior surfaces of the hand and fingers to the ulnar side of the black line. In these anæsthetic areas the sense of touch was retained, but was dull, and during the examination he was frequently unable to designate the locality where he was touched. He often remarked that a dull instrument was more distinctly felt than a sharp one, which, of course, was owing to the greater number of nerves touched by the broader surface of a blunt instrument.

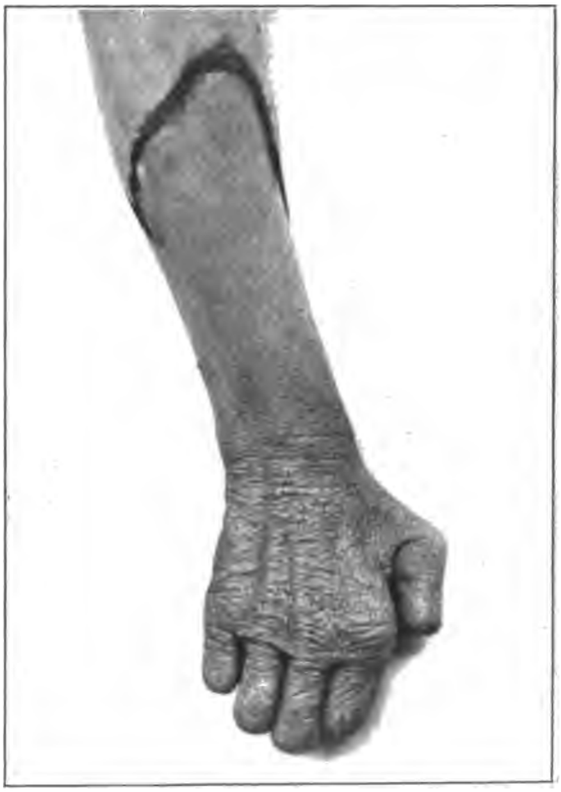
The patient felt that the sensations in the right foot and extending up on the leg for a couple of inches above the ankle were not normal, but they were very little affected, except in the "big toe." The sensations of pain, heat, and cold were wanting in the big toe, but touch with a blunt instrument was felt.

There was loss of the terminal phalanges of the big and the long toes; the other toes were clubbed, and their nails were pegged. The left big toe nail was an irregular mass of horn. The sensations of pain, heat, and cold were absent in the left foot and lower half of the left leg, and over this entire surface he could not feel a sharp point, but he could appreciate a dull one. Because of callosities on the soles of both feet the patient wore two pairs of socks to relieve the pressure. There was a circular patch, about the size of a dollar, on the anterior surface of the lower third of the left thigh, where the sensations of pain, heat, and cold were absent. Touch was felt in this area, and in all other respects the skin appeared to be normal. The patient said he had noticed this patch for the past twelve or thirteen years.

The general intelligence of the patient, as well as his general health, were absolutely unaffected.

The patient's blood was examined for lepra bacilli, but none was found.

The next child, Edward, it will be remembered, was examined, together with his brothers Frank and Ernest, by the Honolulu Board of Health for symptoms of leprosy, and his case was declared doubtful. This was in 1884. He afterwards entered the San Francisco Pest-House, May 12, 1886, with a well-marked maculo-anæsthetic lepride over the left



Frank's right hand. The loss of the sensations of pain, heat and cold in the entire skin to the distal side of the black line.

malar prominence, paralysis of the left orbicularis palpebrarum muscle, ectropion of the left lower lid, and a hard, knotted cord, about the size of a whip cord, running down the left side of his neck. Dr. Geo. L. Fitch injected ichthyol into the anæsthetic patch on the cheek, and it suppurated, leaving a deep scar. This boy soon grew tired of the lazy, eventless life of the pest-house and ran away. He has had no symptoms of his disease since 1887 or 1888, and is remarkably robust, industrious, and of good intelligence. He constantly dreads a return of the disease, and takes strychnia and creolin, thinking to ward off a possible attack. He has been twice at Kusatsu Springs in Japan, with, of course, no result, as there were no active symptoms of leprosy to control.

Ernest entered the San Francisco Pest-House, August 28, 1886, at fifteen years of age. He was born in Hawaii, and said he first noticed the disease, as an anæsthetic patch, on the dorsum of the right foot near the toes. in 1884, when thirteen years of age. In 1888 Dr. Geo. F. Shiels and Dr. J. H. Barbat removed about one inch of the left radial nerve, which I examined for lepra bacilli, but found none. I only found a decrease in the number of nerve fibers, and an increase in the connective tissue, with the formation of cicatricial tissue. When I took his history in 1893 both hands were clawed, and were typical, shrivelled leper hands. The skin of the hands, except for loss of sensation, was normal. There was no shortening of the phalanges, and the nails were in good condition. The loss of sensation on the right upper extremity was irregular; for instance, sensation was normal on the back of the right thumb, but loss of sensation extended up as high as the junction of the middle with the upper third of the upper arm; unfortunately, my notes do not state the limits of the loss of sensation in the left upper extremity. Some of the joints of the fingers had been injured, and the synovia had run out. The thenar and hypothenar eminences of the ulnar side of both hands were flattened. He could not abduct either little finger, and the pucker caused by the action of the palmaris brevis muscle was absent from both hands. Both first metacarpal spaces were decidedly sunken. The others were not so much so. The epitrochlear lymphatic nodules in each arm were enlarged. Both radial arteries were thickened, but not hard. Both ulnar nerves were thickened and irregular as they ran along the epitrochlear groove. His condition never changed during all the time I observed him, and I had frequently seen him during a number of years—at least five—previous to 1893. In all other respects he enjoyed good health.

Rudolph, the fifth child of the third child of the original missionary couple, now lives in Hawaii, and is married to his full cousin, the daughter of the leper examined by Dr. Shoemaker. Dr. Fitch says that Rudolph had an attack of poliomyelitis at two years of age, which left a deformity of his right lower extremity. He has, however, never shown any symptoms of leprosy.

Bertha, the sixth child of the third child of the original missionary couple, was pronounced a leper, September, 1884, when about twelve years of age, by Dr. Geo. L. Fitch, on account of a copper-colored, anæsthetic ringed patch on the right side of the face. She recovered without any deformity, and still lives in Hawaii, and occupies a responsible position, where she earns a fair salary.

In regard to the cures: Of the seven leprous descendants of the missionary couple five are still alive and have recovered. Of the other two, one, the third daughter, who died in a lunatic asylum, it will be remembered, was pronounced a leper by a doctor in San Francisco, which diagnosis was confirmed by the Honolulu Board of Health in 1884. The erythematous lepride from which she suffered, it is said, disappeared in about one year, leaving no trace, and she died four or five years ago in a lunatic asylum, showing no return of the disease. Granting these facts to be true, she remained free of leprosy for about ten or eleven years. Unfortunately, exact dates could not be obtained. The other of these two, the grandchild of the original missionary couple by the fourth daughter, whom I reported before the American Dermatological Association in 1899 as having an erythematous lepride of the palm, has been lost sight of for some years, and therefore I cannot say how his malady is progressing.

Of the five descendants who are still alive and have recovered, four—the four grandchildren by the third daughter—have long since passed the probationary ten years without active symptoms, and I have good reason to believe the seventh son, whom it will be remembered was examined as a leper by Drs. Fitch and Shoemaker, has been equally fortunate, although he is said to have had tubercular leprosy. It, however, must be said that a perfectly honest doubt could be entertained of his disease being of the tubercular type at all. This does not reflect on the diagnostic ability of either Dr. Shoemaker or Dr. Fitch, who has had great experience in leprosy. A short time ago, for instance, there was a maculo-anæsthetic leper in the University of California Clinic, who showed in the center of some of the diseased patches an infiltration so marked as to constitute a tubercle. These were not the tubercles of tubercular leprosy, however, for on staining some of the juice squeezed from the infiltrations no lepra bacilli were found, while if they had been the tubercles of tubercular leprosy, bacilli would have been found in large numbers. Years ago, when Drs. Fitch and Shoemaker examined their patient, this differential point was not available.

For a long time I looked upon this family as furnishing an excellent example of heredity in leprosy, and one can easily see why. I first became acquainted with the three grandchildren of the original missionary couple, who were in the San Francisco Pest-House. Afterwards I learned that a sister of these three grandchildren had been found a leper, and that their mother had also had leprosy. Some time subsequently I became aware of the fact that one brother of the mother of the four leper children had been found a leper of the neural and tubercular type, and that another brother had had a perforating ulcer of the wrist. It was while these facts were fresh in my mind that a strong hearty boy of fourteen years of age was sent to me from one of the interior towns as a leper suspect. I was easily able to confirm this suspicion as correct, and shortly afterwards was astonished to find he was a full cousin of the three inmates of the San Francisco Pest-House, and a grandchild of the original missionary couple. At this stage I naturally drew the conclusion that the facts, as a whole, made a strong case of heredity in leprosy. It was while I was of this mind that the structure I had so laboriously built up was shaken. While conversing with the late Dr. J. K. Smith of Honolulu about the family, he told me that the two families of the grandchildren of the original missionary couple, both those by the daughter who had married the German and those of the daughter who had married the Scotchman, used to play with some Kanaka children who lived in a cottage close by, and who were obviously afflicted with leprosy.

In going over the facts as they now stand it must be said that the probability of heredity in transmitting the disease becomes more and more remote. There is no evidence that the original missionary couple suffered from leprosy, except that one child had had perforating ulcer of the wrist. Of their children the third and seventh were undoubtedly lepers, but they both had abundant opportunity of acquiring it, the one by detention in a badly-regulated insane asylum in Honolulu, while suffering from erotic insanity, and the other through his unrestrained life among the Hawaiian natives. This son had two puny, sickly children that died in infancy, but it is just as probable that they died of syphilis as of leprosy.

For a long time I considered the hereditary nature of the disease where four of the children were affected as being particularly well established. I thought the mother might have caught the affection in the lunatic asylum, and might have transmitted it subsequently to her children. A defect in this reasoning lay in the fact that the mother did not show symptoms of leprosy till long after the birth of all her children. In fact, her leprosy was found at the same time as that of her children, in 1884, and may have been acquired from the same source; or her children may have acquired leprosy from the above-mentioned Kanaka children, and have transmitted it to their mother. Another fact strongly against heredity was the robust health of the children. If the children had been affected by leprosy *ab ovo*, one would imagine their general health ought to suffer.

The failure of the disease to cause deterioration of the general health is, indeed, in itself an interesting feature, considering at what an early age, in many of these instances, the disease must have been acquired. It seems likely that the four leper children of the third daughter, and the one leper child of the fourth daughter of the original missionary couple, all acquired their leprosy at the same time. If so they must have contracted the disease before the sixteenth, fifteenth, thirteenth, eleventh, and fifth years of age respectively, as these are the estimated ages of Frank, Edward, Ernest, Bertha, and their cousin Claud in 1884.

Another matter of interest is the fact that two of them remained so long in the San Francisco Pest-House and did not acquire the disease again from the other lepers there. These two entered the pest-house in May, 1886, and remained until October, 1898—over twelve years. During that time they were constantly in the company of lepers. I suppose that there was an average of fifteen lepers in the pest-house all that time, many of whom were in the last stages of the disease. The hygienic conditions were of the worst. During the wet, cold weather in the winter they all used to huddle together in a small, dirty room, which was overheated and badly ventilated. Here they all played cards and gossiped throughout the long, weary, lazy days. One would think it a particularly favorable place to catch the disease, yet not alone did these patients not reacquire the disease there, but not one of the patients who were not lepers, nor the nurses or superintendents of the institution, who mingled freely with the lepers, have ever been known to acquire the disease in the San Francisco Pest-House. This failure to transmit the disease in lazarettos is not peculiar to the San Francisco Pest-House, but has been frequently noticed in other institutions where lepers are confined. It seems to show that some unknown conditions must be favorable or the disease cannot be transferred, and therefore no inferences as to the personal immunity of the individuals not attacked can be deduced.

I long thought that the neurotic tendency of the family, so well shown in the preceding history, had a determining influence in the predominence of the neural type of leprosy in its members. This also will not stand before criticism, for the tendency of leprosy to attack the nerves is so marked that one always expects to find implication of the nerves in either macular or tubercular leprosy. Therefore the striking feature of this family is not the implication of the nerves which is common to all lepers, but in their comparative freedom from tubercular leprosy, there being but one of them with the tubercular type, and even he possibly, as above explained, may have had the maculo-anæsthetic type with marked central infiltration.

Of the two forms of the disease, macular and tubercular, the macular form is generally conceded to be the milder. Why this family was attacked by the milder form of the disease so predominantly, and why it ran such a particularly mild course, is not known. Armauer Hansen states that climate has a modifying influence; that in the low, damp bays in Norway, the tubercular or severer form of leprosy prevails, while on the high, dry promontories the maculo-anæsthetic variety predominates. Hawaii has a climate that is moist, hot and debilitating, while the part of California to which five of the afflicted members of this family afterwards moved is dry, temperate and bracing, and is therefore inferentially favorable to the cure of leprosy. It must be said, however, that both of the lepers of this family who remained in Hawaii had the disease in the mild maculo-anæsthetic form, and in both the symptoms disappeared in a very short time. The influence of climate in modifying any disease can only be determined by statistics, but incidentally I may remark that two of the worst instances of tubercular leprosy I have ever seen not alone ran their course on this Coast, but acquired their disease here.

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1. "Die Lepra vom klinischen und pathologisch-anatomischen Standpunkt." Bibliotheca medica D. II., Heft. II., 1894, S. 26. Cited by Ehlers, vide infra.
2. "Sur le Problème de la Curabilité de la Lepre." "Lèpra," Vol. I., Fasc. 4, fol. 159.
3. "Encyclopædie der Haut und Geschlechtskrankheiten." Von Prof. Dr. E. Lesser, S. 288.
4. "On Cases of Recovery from Leprosy." "Lèpra," Vol. II., Fasc. 2, fol. 53.
5. For example, two such cases have been reported in *La Lèpre* en Crète par les drs. Ehlers (Copenhague) et Cahnheim (Dresde), "Lèpra," Vol II., Fasc. 3, fol. 151. Geo. Thinn has recently reported two cases where patients recovered from nerve leprosy, but he attributed the cures to the drugs used.—*British Medical Journal*, May 4, 1901.

Compensatory Functional Hypertrophy between the Parotid Gland and the Pancreas.—F. E. Italia describes a number of experiments conducted on animals with a view to ascertaining whether there is any compensatory functional hypertrophy between the parotid and the pancreatic glands. These experiments consisted in the production of atrophy or necrosis of the pancreas, its injection with tubercle bacilli, and enucleation of the parotid. Hypertrophy of the uninjured gland followed in each case, with cellular neoformation and increased secretion. The cause for this is found in the medulla oblongata, in which are situated the reflex secretory centers of both parotid and pancreatic glands. If one center is rendered inactive through the impaired powers of one of the glands, the other attempts to compensate by hyperactivity, and the gland is forced to secrete more abundantly. The cells of the gland require more nourishment in consequence of their increased activity, and this more abundant nourishment is the chief factor in the neoformation of cells.—*Il Policlinico.*

A CONTRIBUTION TO THE STUDY OF PERITONSILLAR ABSCESS.

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THE tonsils are described by Hodenpyl[1] as "Two in number, situated upon either side of the mouth, between the anterior and posterior pillars of the fauces. . . . Their long axis, when the mouth is widely opened, is nearly vertical; with the mouth shut, nearly horizontal. They are separated from the internal carotid artery by the superior constrictor muscle. . . . In structure the tonsils consist of an aggregation of lymph nodules, bound together by very fine but extremely tough fibrous connective tissue. The nodules are arranged about a series of depressions, from eight to fifteen in number, known as crypts. These crypts are lined with epithelium, and they secrete a viscid mucus, containing a few leucocytes."

The tonsils first appear in the fourth month of intra-uterine life, as a bunch of round cells, lying in a furrow between the palato-glossal and palato-pharyngeal arches of the embryo (Paterson[2]). This furrow is, in early fœtal life, continuous with what later becomes the fossa of Rosenmüller. The soft palate, starting as a bud on the posterior surface of the superior maxilla, grows backward, joining itself to the palato-glossal and palato-pharyngeal arches, which thus form the pillars of the fauces. Between these the tonsils appear. They are fully formed at birth.

The fully-formed tonsil does not completely fill the interval between the pillars. There remains a space, which was first described by His in 1885, and named by him the supratonsillar recess. This recess varies in shape and size, is usually situated in front of and above the tonsil, and may extend for a varying distance outward and downward toward the alveolar process of the superior maxilla, or upward and inward toward the median raphe of the soft palate. It is lined partly with mucous membrane, continuous with that of the mouth, and partly with irregular patches of lymphoid tissue, these representing supplementary tonsils. The opening of the recess is above the tonsil, and points inward. It is bounded above and outside by the soft palate, posteriorly by the posterior faucial pillar and by the tonsil, and anteriorly by the anterior pillar, and a prolongation thereof, which is called by His the "plica triangularis."

The plica triangularis is a thin fold of mucous membrane growing forward and inward from the anterior pillar. It hangs in front of the tonsil, to which it is usually more or less adherent. Its form and extent vary considerably. In children it usually covers the anterior aspect of the tonsil, giving a smooth and shining appearance. In adult life, as the tonsils atrophy, it gradually folds backward over the shrinking gland.

The upper part of the tonsil is in direct relation with the supratonsillar recess, and the upper crypts empty into it. The tonsillar structure, at this point, is much looser and more open than elsewhere. The crypts, three or more in number, are wide and deep, and sometimes communicate beneath the surface with each other, or with those in the central zone of the gland. The greater the development of the upper part of the tonsil, the smaller the opening of the recess, and correspondingly the better chance of its becoming a closed cavity.

The function of the tonsils cannot be stated with any certainty. Many suggestions have been made by different writers. Labbé[3] thinks that they take part in the formation of blood, by transforming lymphocytes into mononuclear leucocytes. Masini[4] reports some experiments which seem to have convinced him that the tonsils have an internal secretion, analogous to that of the suprarenal bodies. The conclusion seems to be based upon insufficient evidence. Philipp Storck[5] describes a flow of leucocytes from the follicles through gaps between the epithelial cells, and suggests that the tonsil is the chief source of salivary corpuscles. Packard[6] says that, as the tonsil is found only among the higher animals, we may exclude the idea that it is a relic of evolution. He regards it as of the nature of a lymph-node, and maintains that we should assign to it a function similar to that of lymphoid tissue in other parts of the body; namely, protection of the body against invading germs, by filtration, attenuation, and delay, as a skirmish line holds the enemy in check, while the main army prepares for defence.

This view of Packard appears reasonable. It seems fairly certain that the so-called "Ring of Waldeyer" has a function, and its position, at the double gateway of the digestive and respiratory tracts, is the one that nature would most probably choose for a military outpost. Furthermore, experiments by many observers—Pirera,[7] Hodenpyl, and others, seem to show that while foreign matter may, under certain conditions, be absorbed into the tissue of the gland, living germs cannot pass through the tonsillar substance to enter the general circulation.

The bearing of this fact, if fact it be, upon the pathology and treatment of inflammatory and suppurative conditions in and around the tonsils, is very important. If we grant to the tonsils a conservative action, we are bound to hesitate before urging their complete removal. Yet, on the other hand, we are no less bound to give to our patients such relief as surgery may afford, from the discomfort and danger which diseased tonsils inflict.

Probably the most distressing disease of the tonsils in adult life is recurrent peritonsillar abscess, or so-called "quinsy." This disease is common and obstinate, and often the recurrences are so frequent that a patient may be incapacitated from work during several months in every year. And it may well be doubted if there be any clinical picture known to medical science which is more painful and distressing than that of a patient with an active quinsy. It seems to the writer that the true nature of this disease is imperfectly understood. The real trouble appears to lie in the supratonsillar recess, and not, strictly speaking, in the tonsil itself.

Let us view the history of a typical case. The tonsil is contracted and partly atrophied. The upper zone is in close contact with the roof of the soft palate, and a cotton-wrapped probe, bent at a right angle, can be introduced for about half an inch into the supratonsillar recess, and withdrawn, covered with cheesy, foul-smelling material. This is the condition usually found between attacks. Now, let some irritant be introduced, living or non-living, from outside or inside the body, and inflammation follows in the shrunken tonsil. As a result, we have congestion and slight swelling of the entire gland. The upper zone, being, as said above, looser in structure than the rest, swells more extensively, and thus shuts the only opening of the supratonsillar recess, making it a closed cavity. Then the bacteria, which live there, go actively to work, and we have the resultant abscess, which points, in 90 per cent. of all cases (Coakley[8]), through the anterior pillar, or, in other words, over the most common site of the supratonsillar recess.

Commonly, after the attack is over, some effort is made to remove the tonsil. These efforts are usually ineffective as regards the prevention of a recurrence.

The writer wishes to draw attention to a plan of treatment used by him in ten of these cases during the past two years, which has given good results thus far, although the list of cases is a short one, and several of the patients treated have drifted out of sight. All the patients had had at least two attacks of peritonsillar abscess, and one of them had had no less than eight. The results are as follows: Two of the patients have had complete immunity for two years, one for a year, one for six months, one failed absolutely—the operation was incomplete—and five drifted out of sight too soon to afford any opportunity to judge of results.

The object of the treatment is, briefly, to open up the supratonsillar recess so widely that it will drain itself freely, repair its diseased mucous membrane, and cease to be a catch-all for germs and débris. This result is accomplished as follows: A 4 per cent. solution of cocaine is injected from a hypodermic syringe into the body of the tonsil and into the peritonsillar region, through several points in the anterior pillar. This gives a degree of anæsthesia quite sufficient for the operation. Then, with a bistoury, a curved incision is made from above downward, dividing the plica triangularis at its base from the anterior pillar. Next, with a Myles' tonsil punch, the entire upper part of the tonsil is removed piecemeal, together with a part or the whole of the plica triangularis. If the instrument be sharp and in good order, the operation is entirely painless. A dull instrument, however, pulls like a dull pair of barber's scissors, and this is exquisitely painful. The earlier part of the operation is quite easy. Toward the end, however, it becomes necessary to burrow quite deeply between the pillars, and there is danger, on the one hand, of failure to accomplish the desired end; on the other hand, of wounding one of the pillars and causing hemorrhage. If, however, the tongue be smartly depressed, the patient, in gagging, turns the stump of the tonsil forward toward the operator, and the operation can be finished, step by step, under his eye.

When neatly and carefully done, the operation is quite painless, and the resulting sore throat very trifling. It is not always possible to avoid wounding the pillars of the fauces, and when this happens there is always soreness, and there may be hemorhage. Dr. R. C. Myles has shown that hemorrhage after tonsillotomy is very rare, except when the pillars are wounded, for the tonsillar arteries are small, terminal twigs, and there is no vessel which passes through the tonsil to supply other structures.

Only very rarely, and with an unusually restless patient, is it necessary to divide the operation into two sittings. The usual time consumed is less than fifteen minutes, and most patients bear the strain without much trouble. Should it, however, be necessary to remove both tonsils, it is better not to attempt both on the same day.

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MIND AND BODY.

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The methods and promises of psychiatry and experimental psychology in general have led many into the misconception that everything that is of worth in man is to be found in the physical organism, and that all phenomena can be explained on the basis of physiology and physics. Men so little advanced in the knowledge of psychology and physiology that they still speak of the "*five* special senses" of man, thrust upon us the tenet that "mind is not an entity, but an exhibition of force resulting from the collective functions of grey nerve tissue, not only of the brain but of the entire nervous system."

In a former article I have entered an appeal for the entity of mind, however strange it may seem that such an appeal should be necessary. The aim of the present article will be to call attention to the nature of the external world in its relation to the psychic aspect of man.

Things are not ready-made objects, which are recognized by being stamped upon the mind in some inexplicable way, but only through conscious activity, *i. e.* by a process of sensation, perception, apperception, etc., are ontological entities transformed into the cosmological realities, which we conceive and describe in terms of space and time. Neither is mind to be looked upon as a sort of thing independent of and separated from all other reality, carrying on an existence exclusive and self-sufficient, any more than things which are dependent upon consciousness for their existence *as things*, *i. e.* as objects in space, and having all those qualities, such as length, breadth, weight, color, etc., which can only be furnished from consciousness. The fact that things derive their existence *as things* from consciousness does not in the least detract from their reality and existence, but only adds the qualities and attributes which make of them objects to be dealt with in terms of physics. Men justly demand the tangible and perceptible. Why? Because in that form alone can realities be manipulated and experimented upon, and because we are limited by certain categories of thought which bind us to the spatial and temporal. Space is but a means by which consciousness delineates reality. We think in terms of space because space is a method or mode of mind's activity, but space no more belongs to the thing as such than pain belongs to the amputated limb, although located there by the patient. We say that dimension belongs to things as such, and yet when the conscious process is analyzed by which we build our sense experiences into objects it is found that space is but a necessary mode of mind's activity in dealing with that which is other than self. By a process of eccentric projection we posit in space objective things, many elements of which are supplied by consciousness. This conception does not reduce things to subjective realities, but only helps us in understanding that by the action of the "other than me" upon me, I react to it and clothe this "other than me" in physical qualities derived from my own activity—consciousness.

If there is anything real to man it is pain, and yet have we in any way detracted from the reality of the pain by dirempting it from the body or nervous system, or have we in any way curtailed the possibilities of the body or nervous system when we declare them incapable of pain as *things?* Such a conception gives both mind and things—to the latter of which the body belongs—a reality referable to a unitary basis which science calls nature. It does away with that dreaded antagonism between so-called matter and mind. Things dirempted of their spatial elements added by consciousness fall back into one reality where mind and matter mingle with an intimacy which defies analysis. To be sure, to take away these activities of the thing which cause us to respond in terms of length, breadth, color, weight, etc., would be to take away the thing itself, but in order that these activities may be interpreted or built up into the said qualities and attributes, consciousness is absolutely indispensable. This conception thus resolves mind and matter into an action and interaction of entities, which go to make up one great throbbing reality which different scientists have seen fit to designate by different names. To explain the relation of mind and body is, then, the same problem as to explain our relation to each other, or to explain the relation of things one to the other. Ontologically, it is inexplicable. To explain in terms of physics is simply to explain that which is physical, *i. e.* the qualities with which things are invested or the visible and tangible manifestations which express themselves chronologically before us. Explanation, therefore, cannot dip down into ontology, but must of necessity be confined to the cosmological aspect of reality.

That the relation I hold to my body is more intimate than my relation to other bodies or things goes without saying, but the fact (?) that my consciousness changes synchronously with the changes in my nervous system is no proof that I am a result or product of nervous matter. The application of the law of causation to this relation would, in consistency, demand that the same order of events be universally maintained, but the opposite is, at least, tacitly admitted by all, viz., the effect of mind on body as well as the effect of body on mind. The fact is we start with consciousness, and we are conscious by and through our experience with that which is other than ourselves. Among those entities which are "other than me" is to be found that complex and delicate organism, my body, to which I maintain a peculiarly intimate relation. Yet, here the line is hard to draw, for one's personality is so thoroughly permeated by that which is personal possession that we often conceive ourselves to be not only what we are, but what we are plus that which we have, giving us, according to Professor James' conception, a number of selves differing according to the aspect from which they are viewed. Thus a man's self increases and decreases, in a sense, in proportion to the extent of his influence and breadth of comprehension. The broad-minded man is given precedence not by the size of his mind, so to speak, but by the scope of facts which go to make up his consciousness, or by the variety of things he is able to take up within himself and make a part of himself. Just so, in dealing with objects which are classified as inanimate. Before we can know them we must in some sense take them up into ourselves and vivify them with our own existence, as it were. This is the process of all communication between fellowmen and things. For example, when I say "sun shines" there is not some sort of an idea already whittled out and shaped ready for absorption by some other mind. On the contrary, the mind realizing that sentence-conception must live over that which has been experienced in saying "sun shines." However rapidly the process of forming the sentence and the conception involved therein may be consummated, the process is still there, and the words have been taken up in consciousness and given a meaning which, by the similarity of activity of minds and nervous systems, has resulted in a mutual understanding. The thought must not be lost sight of, however, that each person builds up his own conception of what is passing. How else can mistakes occur? Mistakes and misunderstandings are the result of the difference in the personal equations of the individuals concerned. In knowing any object we stamp upon it our own personality. We "mind" it, as it were, with our own conscious activity, adding to it elements of our own conscious life.

Is the step a long one when we try to explain all objects or things on the same basis as we have explained the verbal expression "sun shines?" This has depended upon hearing. Let us carry it for a moment over into sight. That which is "other than me" has acted upon me and I react by seeing, as we say, the visible object "desk" instead of hearing the clause "sun shines." Just as we synthetically put together "sun" and "shines," each of which was primarily built up from simpler elements, and from them draw the concept of the process of light shining, just so we synthetically join together the impression pigeon-hole, drawer, top, color, etc., all of which were primarily built up from simpler elements and draw out of them the concept "desk." Experiment in psychology is but little more than an attempt to analyze that complex process by which we build up our percepts and concepts into more far-reaching generalities. Before we can have any concept corresponding to "desk" we must, from its activity upon us through our various senses, build up that entity which is commonly designated a desk. In that sense it has not derived its reality from me any more than I mine from it, for at the time being we are both, *i. e.* "desk" and "I," dependent the one upon the other for our existence, inasmuch as the existence of each is but its activity at the time. Just so all nature is one great acting and reacting reality, in which individual units gain themselves only by manifesting themselves according to their individual natures. Mind and body must be looked upon as such individual units. Thus each thing is what it is in virtue of its own activity, and my conception of what it is is the resultant of my activity upon it and its reaction upon me, or *vice versa.* We, as persons, act and react in terms of consciousness, and to us things only have meaning in terms of consciousness. To prove that that which is "other than me" also reacts in terms of consciousness would be difficult, if not impossible, but leaves us at least with the conviction that the "other than me" in some way carries on an existence comparable to our own.

In the final analysis, to explain the relation of mind and body is the same problem as to explain the relation of one mind or thing to another. We judge mind by its manifestations through the physical organism, and it is futile to hope to explain how one causes the other, or even how one is related to the other. We can do nothing more than note, compare, and make deductions from the data derivable from each. All explanation begins and ends in the unexplained. Because the relation between mind and body cannot be thoroughly explained, physicists, neurologists, and physiologists attempt to surmount the obstacle by making mind a product of nerve tissue, but in spite of themselves, they at times refer to the effect of mind upon body even though they have denied the entity of the former. To be unable to explain thoroughly the relation of mind and body is no disgrace, for it is, as stated above, the same problem as to explain the relation of any two objects or any two persons, or any object and person. The fact that there is relation, *i. e.* action and reaction, between body and mind brings both within the realm of the same sort of activity, and inasmuch as man has within himself elements which stamp him as moral, one cannot help carrying similar elements over into that which is "other than me," even though absolute proof may be wanting.

ON THE PENETRATION OF THE HUMAN BODY BY ORDINARY ACTINIC LIGHT.

By WILLIAM S. GOTTHEIL, M.D., and MILTON W. FRANKLIN, M.D.

In the present state of our knowledge concerning light, the following assertions may be made:

1. That the tissues of the human body, like all other substances, are penetrable to varying degrees by the wave vibrations of light; and that these vibrations form an essential part of the stimuli that determine the life activity of the cells, with effects that may be beneficial or injurious.
2. That the light vibrations affect bacterial life, and are, in general, injurious or fatal to it.
3. That of the various components of ordinary white light, the rays in the more refrangible end of the spectrum, the blue, violet, and ultra-violet have far greater chemotaxic and actinic effect than those of the red end.
4. That these so-called actinic rays are comparatively more abundant in the electric arc than in sunlight.
5. That the action of light upon the tissues depends upon the rays absorbed, not upon those transmitted; but that when several superimposed layers are to be acted upon, the effect upon the deeper ones depends upon the actinic transparency of the superficial strata.

The two opposite properties of actinic transmission and actinic absorption, or transparency and opacity to the light waves, are possessed in varying degrees by all the tissues. The ordinary phenomena of transillumination show the perviousness of thin layers, as in the ear or cheek, to the visual rays; and Gadneff's and Soluchat's well-known experiments, in which sensitive silver salts, in sealed capillary tubes, introduced under the skin and into the tissues, and then exposed to sun and electric light, with reduction, show actinic penetration. Freund has recently made exact spectroscopic determinations, showing that chemically active, as well as visual rays, pass freely through epidermic tissues of considerable thickness.

That actinic absorption occurs in the tissues is evident from the fact that the body is opaque, both optically and chemically, to light under ordinary circumstances. In estimating the value of any special source of light for the purpose of influencing the deeper tissues of the body, it is necessary to prove the efficient penetration only of the actinic or chemical rays; for the portion reflected from the surface is small, and all the rest, save that which passes through the tissues, is absorbed and effective. The question is an important one, for on its answer depends the entire applicability of the method for treating affections of the internal organs.

For the purpose of determining it, a series of experiments were made, the results of which are here given. The source of light was an electric arc in the condensation apparatus or actinolyte, operated at sixty amperes, and with condensers of an angular aperture of sixty-seven degrees. The rays were arranged nearly parallel in a pencil, being just sufficiently convergent to form a circle large enough to cover the plate employed.

Ordinary photographic plates were used as sensitometers, since they react more especially to the actinic or chemical rays of the violet end of the spectrum, which are the very ones which we desire to employ therapeutically. The subject of the experiments was a mechanic, aged twenty-three years, with good, firm tissues.

Developed negatives of average density were selected, and to the face of each the film side of a sensitive plate was applied. The edges of the plates were bound with black lantern slide strips, and the back of each set covered with thick opaque paper. By this means the plates were so protected that light could reach them only through the negative.

The prepared sets of plates were applied, with the negative next to the skin of the body of the subject in the dark room, and the whole covered with adhesive strips and black cloth so thoroughly that no light could possibly affect the plate without first passing through the body. When all was ready the subject was seated in front of the arc and the light passed through various portions of his body on to the sensitive plates.

The time employed for each exposure was determined by experiment, since there were no data available for the purpose; and even if there had been the differences in the densities and thickness of the tissues in different individuals would prevent their being of much use. Several series of similar experiments were made, to prevent error. The subjoined, with the result attained, will serve as an example:

Plate 1.—Light on the anterior surface of the forearm, plate on the back. Thickness of transilluminated tissues, 8 cm. Time of exposure, ten minutes. The plate shows the image of the negative, together with the shadows of the radius and ulna.

Plate 2.—Taken through the shoulder. Light upon the anterior upper portion of the thorax, plate upon the scapula. Thickness of tissue about 16 cm. Time of exposure, twenty minutes. This plate showed a fairly even deposit, save where the great differences of density of the various parts of the scapula affect the result.

Plate 3.—Taken through the left abdominal region. Light upon the left umbilical region, plate on the left lumbar. Depth of tissue, about 19 cm. Time, thirty minutes. This plate showed a very even and perfect exposure, save where the disc of light, not quite accurately directed, failed to cover the entire plate.

Necessarily the amount of actinic light transmitted through tissues of such thickness and varying consistency is relatively small; in addition to which the red color of the blood further hinders its passage. If the contrary were the case, and the tissues were very transparent to the light, but little effect could be expected; for it is the absorbed light that is changed into other forms of energy, and is efficacious. Hence, therefore, the exposures were prolonged.

The problem before us was to ascertain if, with the most powerful means of artificial light at our disposal, the actinic vibration could be made to traverse two layers of skin, and the varying thicknesses of subcutaneous fat, muscle, bone, and organs, the whole permeated in every part with a moving red fluid, to such an extent that the portion of it passing through would affect a sensitized plate. This has been abundantly proved for thinner layers, but not, so far as we can ascertain, for the entire thickness of the body. Yet a light must be able to do this, if the organs of the interior of the body are to be influenced by it.

Conclusions.—1. Light, in proper concentration from a source of sufficient actinic power, can be made to penetrate the entire thickness of the human body, including both surfaces of the skin; hence all the internal organs are accessible to its influence.

2. Since no portion of the interior of the body, however, can be more than half the thickness of the frame from a cutaneous surface, and much of it is much closer, the time required for efficient actinic penetration to any depth is only a fraction of that employed in the experiments; and, conversely, if the time employed is equal, the chemotaxic effect will be far greater.

3. The proof of the penetration of actinic light to and through the internal organs apparently opens a field for its successful employment as a therapeutic agent in internal maladies, in view of its admitted efficacy in a number of external affections.

SUPRAPUBIC CYSTOSCOPY.

By DONALD KENNEDY, M.D.,
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In relating this case of suprapubic cystoscopy, which is, as far as I have been able to learn, the first ever made, I shall touch on the cases which led up to this procedure, in order to give credit to the man whose work suggested the feasibility of it. In 1894 Wishard of Indianapolis proposed to relieve prostatic retention in the following manner: A medium-sized trocar-canula is selected, and with it the bladder is punctured above the pubes; the trocar is then withdrawn and a catheter introduced through the canula, which is then withdrawn, leaving the catheter *in situ*. When the congestion of the prostate has subsided, and the urine is passed by the urethra, the catheter is removed from the suprapubic wound, which readily heals. This method appealed to me as a rational one, and, knowing the ability of the author, I determined to try it. I followed his technique in two cases, and the results were ideal. It then occurred to me that if at the time of puncture I could get a view of intravesical conditions, I might gather information which would aid me in the selection of an operation. By it I hoped to be able to determine the size and contour of the prostatic lobes; the general condition of the bladder walls, and also to determine, as sometimes occurs, if there might be a stone in the postprostatic pouch. With this end in view, I had a trocar made to fit a No. 21 Otis Endoscope, and proposed to use this instrument, to which I could attach the light, instead of the ordinary trocar-canula. On July 16, 1901, I was called to see M. J. Laborer, sixty-seven years old. He had been suffering from prostatic hypertrophy for several years, and for the past eighteen months had depended upon the catheter to empty his bladder. On arising he attempted to pass the catheter as he had been accustomed to do, but found it impossible. I attempted to pass a Mercier coudè and bicoudè instrument, but failed. The bladder was then tapped with the trocar-endoscope, and about nine ounces of urine withdrawn; the tube was plugged and a tape passed around the body over the disc of the tube to hold it in place. In three hours the plug was removed and three ounces of urine withdrawn; this was repeated every two hours until the bladder was empty. The few drams of urine remaining were "sucked up" by means of a bulb attached to a catheter. The bladder being empty, I attached the lamp to the tube and attempted to get a view of the interior of the viscus. My anticipations were only partially realized. The general condition of the bladder was plainly visible; areas of greater or less inflammation were readily made out; the mouths of the ureters were easily detected, and had stone been present in the prostatic pouch it would have been revealed. I was not able to learn as much of the size and contour of the prostatic lobes as I had hoped. This failure, I take it, was due to the fact that with reflected light the distal end of the tube had to be almost in contact with the bladder wall in order to illuminate it, thus giving a very limited area under observation. In order to determine the size of the lobes it will be necessary to have under observation a larger area than I was able to obtain with this tube. Experiments are now being made by the writer to determine what sized tubes can be used with safety. At the suggestion of Dr. Valentine, I shall use one of his short urethroscopic tubes, with light introduced through it and bent at an angle so as not to be in the line of vision. With this tube and light, the distal end can be withdrawn further from the object under observation; thus giving a view of a larger area. Here I will say that in the case reported the urine passed by the urethra within seventy-two hours, the catheter was withdrawn and the wound soon closed. It may be asked, of what practical importance will this operation be? If we wish to do the best prostatic surgery, we *must* know the intravesical conditions. Routine operations will not do, and only after a careful study can the surgeon select the operation for each particular case. Occasionally we meet cases in which it is impossible to introduce a cystoscope, stone searcher, or other diagnostic instrument; I believe that in these cases, it is better to attempt to cystoscope the bladder by the method outlined than to choose an operation regardless of intravesical conditions. For instance, if by this method we discover encysted stone, or stone in the postprostatic culdesac, we would hardly select the Bottini operation, although other conditions were favorable for it. So much for its use in prostatic disease. If upon examination by the ordinary cystoscope I should find small polypi, I should attempt their removal through the suprapubic tube. feeling confident that it could be successfully done, and that the patient would be well much sooner than if cystotomy were performed. Since performing the operation reported here, I find that Fenwick has suggested the use of a trocar-pointed cystoscope to find if there be a stone in the postprostatic pouch; whether he has carried the plan into execution I am unable to say. This case, with observations, is offered as a preliminary report of work being done, and with the hope that some genius may give us an instrument with a wider range of usefulness than the one here proposed.

The Etiological Conditions of Acute Rheumatism.—Kr. Thue does not believe that this disease is due to pyogenous bacteria nor to the diplostreptococcus described by Leyden, Wassermann, and Meyer. He holds that acute rheumatism is an infectious disease *sui generis*, the infective agent of which has not as yet been discovered. Many cases of pseudo-rheumatism of pyæmic basis may greatly resemble rheumatism, but special characteristics, especially in connection with the temperature, will be found by careful investigation. Moreover, acute rheumatism may be complicated by a secondary pyæmic infection. He reports in this connection the case of a young man who was recovering from a typical attack of acute articular rheumatism, when streptococcal angina appeared, with infection of the organism. Streptococci were found in the blood a day or two after the appearance of the angina. The disease, accompanied by irregular fever, lasted for about a month, but complete recovery followed.—*Norsk Magazin for Laegevidenskaben.*

ASEPSIS IN DENTAL SURGERY.

By WILLIAM J. LEDERER, D.D.S.,
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THE writer was prompted to publish this paper through a remark passed by a noted New York surgeon, who, at a discussion of the various causes of osteomyelitis, said, "There is no dentist in New York who operates aseptically." This is, indeed, a rather broad statement to make, and, if true, would cast an ugly slur on the whole dental profession, for every dental chair would be a spreader of disease and a menace to public health. To enlighten the doctor and those who believe what he said, I will state, in short, how asepsis is obtained and maintained in dental practice; and, after reading the account or seeing the actual operation in a dental office, I do not think the speaker would then feel justified in repeating his remark.

As far as the cleansing of the hands is concerned, first, hot water and green soap are used with a brush, the nails carefully cleaned, and then hands rinsed. After that, carbolic soap is employed, and then the hands are rinsed in a cold bichloride of mercury solution. If a patient turns up who is suspected to be a "specific," I make it a practice to use finger cots, which are sterilized by boiling before and after using. This treatment of the hands is about the same as practised by the hospital surgeon, and so there cannot be any complaint as to lack of asepsis.

Now, as far as the sterilization of instruments is concerned, the method employed is as follows: Forceps and all larger instruments are sterilized by boiling in a solution of formaldehyde (¼ to ½ per cent.), before and after use. Hypodermic needles, nerve broaches, and engine drills are passed through alcohol and burned off; then, before being introduced, are dipped into carbolic acid, full strength. For syphilitics a separate set of instruments is employed. So much for the care of the hands and instruments. The technique of aseptic dental operations is as follows: To illustrate it in as few words as possible, and still do justice to the subject, I will quote four cases occurring daily in dental practice and the method of treatment:

1. *A Case of Extraction.*—The patient is requested to rinse mouth with a solution of chlorinated soda; then the tooth is examined by means of a mirror and probe. The mirror is taken from a solution of formaldehyde, 2 per cent., wherein it is always kept, except when in use, as the heat of the sterilizer would destroy it. The forceps has been placed in the sterilizer, and the temperature raised to the boiling point. After the attachment and direction of the roots have been ascertained, as nearly as possible, the tooth is extracted, and the patient is given distilled water with which to rinse the mouth. Forceps and probe are returned to the sterilizer, and the mirror to the formaldehyde solution. If the hemorrhage is of the ordinary type, it subsides soon, and the alveolus is flushed out with formaldehyde solution, and then packed with sterilized cotton, dipped into a carbolic-acid preparation, and the patient is instructed not to remove the same till retiring, as the plug will keep out foreign matter, such as particles of food, etc. The patient is instructed to return the next day, and the alveolus is again washed out, and the patient dismissed.

2. *Caries of a Tooth Which Is to Be Filled.*—First, the carious cavity is wiped out with a pledget of cotton, dipped into a carbolic-acid preparation, then the débris and broken-down dentine are removed by excavators, which have been burned off in alcohol flame, and the cavity is packed with cotton dipped in oil of eucalyptus. Then the cavity is shaped with engine burrs (sterilized), the soft dentine is removed, and the filling material is introduced. Special care is taken to keep the cavity free from saliva either by the application of a sheet of rubber (rubberdam) over the tooth, or the stopping up of Stenson's, Wharton's and Rivini's ducts by the placing of sterilized cotton over them. Then the filling material is introduced. If the nerve is exposed, the same is covered with cement, which is admixed with aristol, and this is mixed with phosphoric acid, and a little eucalyptol. (This is my method; there are many others.) After this mixture hardens, the filling is introduced.

3. *A Case of Pyorrhœa Alveolaris.*—The patient is requested to rinse the mouth with a solution of chlorinated soda or permanganate of potassium. The teeth and roots are carefully scaled with sterilized instruments, and the alveoli are washed out with some antiseptic solution, as the case may require, then packed with cotton dipped in medicaments, according to the indications of the case. In these cases special care as to aseptic proceedings is looked out for, and I have formed a habit of keeping, for the reception of cotton soiled with pus and broken-down tissue, a special vessel, which is always flushed with a bichloride solution.

4. *A Case of Alveolar Abscess.*—The case indicates immediate opening of the abscess. The patient is requested to rinse the mouth with formaldehyde solution. Then the area where the abscess points is wiped off with alcohol, and then full strength of carbolic acid is applied on cotton. Incision is then made with a sterilized bistouri, the pus is evacuated and the cavity washed out. If there is no marked pericementitis, the tooth is opened, the dead pulp removed, and the abscess cavity flushed through the pulp chamber, to obtain thorough drainage. If this is the case, I usually inject carbolic acid, full strength, and, after that, loosely pack the opening in the tooth, so as to allow the escape of gases. The patient is given some antiseptic wash, and dismissed for the day.

These are the ordinary, every-day proceedings of the dental surgeon, and I leave it to the medical profession at large whether these are septic or aseptic operations. I trust that the doctor whose remark brought forth this short paper, and also the readers of these lines, will now see that dentistry, as practised by legitimate practitioners, is not quackery, plied as a trade, by ignorant, unscrupulous individuals, but a specialty of medicine the same as ophthalmology or otology, or any other branch of the science of healing.

823 PARK AVENUE.

The Toxic Effect of Alcohol on the Ganglion Cells of the Retina.—Harry Friedenwald reports his experiments on the rabbit with pure and commercial methyl alcohol, absolute ethyl alcohol, and essence of Jamaica ginger, made of 95 per cent. ethyl alcohol. The experiments extended over a period of almost four months. There was a high degree of cirrhosis of the liver found in the rabbit fed with absolute ethyl alcohol. The animals were all in apparently good health when killed. The effects of all four substances were alike. The retinal ganglion cells showed marked degeneration and the inner and outer nuclear layers were less affected. It was evident that methyl and ethyl alcohol act similarly on the retina in chronic poisoning, and that the degenerative changes resulting from chronic alcohol poisoning are like those found by Holden and Birch Hirschfeld in acute methyl alcohol poisoning. These are the first experiments in which ethyl alcohol has been used, as well as the first in which degenerative changes have been demonstrated in chronic alcohol poisoning.—*Bulletin of The Johns Hopkins Hospital.*

Clinical Department.

THE INDICATIONS CALLING FOR OPERATIVE INTERFERENCE IN "GALLSTONES."

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The "bile plant" consists of the liver, gall-bladder, and ducts. The gall-bladder and its system of sluices are lined with mucous membrane continuous with that forming the inner coating of the duodenum, and, therefore, susceptible to catarrhal and bacterial invasion. Catarrhal and bacterial invasion invariably precedes the formation of gallstones—an important fact, as, with this knowledge, we may be quite certain that a large proportion of pain experienced in chronic catarrhal gastroenteritis is due to involvement of the gall-bladder, accompanied by the transit, through the ducts, of clotted mucous, steatomatous plugs, and, possibly, biliary sand. The presence of pathological mucous in the gall-bladder, together with exfoliated epithelia, bacteria, and the 95 per cent. cholesterine proportion of the bile fluid affords the nucleus for stone.

In some unknown way, probably chemical, these muco-epethelial foci attract to themselves biliary salts, thus growing by accretion, and found to consist of cholesterine pigment, bacteria and inorganic salts of iron, potash and soda.

Gallstones present many interesting variations; thus, in shape and size, from sand to cracked corn beechnut or nutmeg; in consistency, from gelatine to flint; in color from pale yellow to chocolate. It is not, however, to the etiology of this affection that I desire to draw attention, but to the indications for operative interference.

I may be pardoned, I trust, if I digress to state my position regarding the treatment of gallstones (other than surgical) having for its object a radical cure. In my judgment, the present-day medical treatment of gallstones is absolutely not curative, but merely palliative in its effects. I do not believe in the theory of the disintegration of gallstones within the gall-bladder or ducts by medicinal agents. Furthermore, I do not believe that any experiment to determine the curative effects of medicinal treatment can be successfully conducted, since such experiment would be surrounded with so much uncertainty that the scientific mind would reject its conclusions should they be favorable—as altogether unworthy of credence.

The only authentic instance of the disintegration of a gallstone, that I know of, is reported by Dr. J. W. Kime in the *International Journal of Surgery* for October, 1901, where, in a case of impacted choledochus stone, occurring in Dr. Kime's practice, Murphy of Chicago was called and performed cholecystotomy, suturing the cut edges of the gall-bladder and parietal incisions together, thereby establishing free drainage, and trusting to nature to effect the expulsion of the stone by mechanical retrogression, as so frequently happens upon the resultant subsidence of inflammation of the involved ducts, when for sufficient reasons it is deemed inadvisable to subject the patient to the more serious choledochotomy.

The external wound was kept open for eleven months, the stone, however, retaining its position. Choledochotomy becoming necessary, the stone was found to be softened and disintegrated throughout most of its external layers, to the consistency of putty. Murphy thinks this due to contact with atmospheric air during the period of cystic drainage. The inference to be drawn from this is plain.

To resume, the indications calling for operative interference in gallstones are—arbitrarily—two, *i.e.* the *elective* and *imperative*. The elective indication is the mere fact of the presence of foreign substances, *i.e.* mucous plugs, steatomatous bodies, biliary sand, gravel, or stones. The imperative indication is the advent of complications.

The "elective" indication.—The presence of gallstones, in any except the nebulous period of their formation in the gall-bladder, I believe to be always an indication for radical removal, all other things being equal. Such operation is just as safe in uncomplicated cases as interval operations in chronic catarrhal appendicitis.

In view of this, corroborative symptoms of faceted or non-faceted gallstones are, to me, an indication for the elective operation, in which the patient is advised of the prognosis, both as regards the effect of the condition upon the general health and the complications liable to supervene, after which the patient must decide either to take the risk of palliative treatment and procrastination or elect the radical procedure. We shall not have done our whole duty to our patient until we have done this.

The corroborative symptoms of gallstones are, briefly, the discovery of faceted or non-faceted calculi in stools, after varying recurrence of colic pains in the right hypochondriac and subscapular regions. The stools may be gray in spots or sections. Jaundice may be present in varying degree, and evanescent. Severe spasms, due to tentative efforts on the part of the gall-bladder to expel stones, is also an indication of their presence, even though no evidence be present in the stools. Precedent gastro-intestinal catarrh strongly indicates their presence when combined with the above-mentioned symptoms. Spasms due to the passage of mucous plugs or bodies also calls for section, since the best possible treatment for catarrhal cholecystitis, the mother of gallstones, is cholecystotomy, with external drainage. Tenderness upon pressure is not common in uncomplicated cases, but soreness and lameness usually follow these attacks, and remain for a greater or less period.

The imperative indication.—Sooner or later the gall-bladder takes on acute inflammatory conditions from bacterial infection constituting the degrees and forms of cholecystitis, infective, ulcerative, suppurative, gangreneous; as a result of the precedent and ever-present catarrhal condition, the presence of calculi, and lesions and obstructions caused by the latter in their efforts to effect a passage outward. The indications in all these conditions is immediate section and drainage, particularly if there is a distended gall-bladder, threatening rupture, with all that this implies. The symptoms are pain and tenderness in right hypochondriac region, elevated temperature, rigors, jaundice, fulness, and perception of a globular body, by palpation, in the gall-bladder region, and rigidity of the overlying abdominal muscles. An acute attack of billiary calculi, with severe colic, is not an imperative indication to operate unless all the foregoing symptoms accompany. Impaction of a stone, however, in any part of the cystic or common duct, causing rise of temperature, and chills, with varying degrees of jaundice and distention of gall-bladder, is an "imperative" indication to operate to avoid further serious complications, such as rupture, peritoneal infection, hemorrhage, exhaustion, shock, etc.

Report of four cases showing peculiarities.—Case I.—Mrs. F.; aged forty-five years. Diagnosis, diffuse pelvic abscess; evacuation of half-pint of stinking pus by posterior colpotomy; gauze drain renewed daily; much improved by end of week. When admitted, slightly jaundiced; eight days from admittance severe attack of biliary colic, rapidly jaundiced, urine like concentrated bile, common duct obstruction; patient not in condition to undergo section, on account of septic condition; coma and death in eighteen hours; efforts at elimination, including intravenous saline infusion, utterly futile; death due to extra strain upon already overloaded kidneys in eliminating septic bile; no albuminuria or casts to indicate nephritis.

Case II.—Miss F.; Diagnosis, chronic catarrhal gastroenteritis; has frequent severe colic pains in epigastrium, and passes numerous steatomatous beechnut shaped plugs or bodies in stools, together with large quantities of glairy mucus; has iliocolic tenderness, distended abdomen from flatulent dyspepsia and constipation; no jaundice nor signs of obstruction; gastrointestinal condition treated for six months, with marked improvement; gall-bladder symptoms continue, and are rather more severe; this is a case for "elective" cholecystotomy and drainage, the best possible treatment of gall-bladder catarrh. Operation refused.

Case III.—Mrs. T.; history of gallstones; symptoms of calculus impacted in common duct, jaundice; colicky pains very severe; rigid abdominal muscles over hepatic area; elevated temperature, rapid failing pulse, rigors, gall-bladder tensely distended, presenting to the right of and on a level with the umbilicus; abdomen quite tympanitic, operation "imperatively" indicated, was rapidly performed, disclosing partially gangrenous gall-bladder walls, which, rupturing under the great tension, gave vent to a large quantity of muco-purulent bile fluid. Alongside of the gall-bladder, in the left hepatic lobe, was a large abscess, filled with thick, creamy pus. A large stone was felt impacted in the common duct; no calculi present in the gall-bladder. The duct-stone was allowed to remain and "work out" later, because of the generally unfavorable condition for immediate removal. Drainage was instituted and the stone was delivered in about five weeks, the gall-bladder entirely sloughed away, and fistula closed. Made good recovery and is well after four years. Weight of stone, 47 grains.

Case IV.—Mrs. W.; slight jaundice, fever, chills; pain constant in epigastric region; distension of gall-bladder forming distinct tumor; muscular rigidity over tumor; stools quite natural in color. Diagnosis of gallstone impacted in cystic duct, operation being "imperatively" indicated, section was done, and gall-bladder found to be filled with a pale yellowish, serous fluid, and containing, besides, three calculi, two of large size, faceted, and one, small, brown, and beechnut-shaped. One of the large stones was snugly fixed in the mouth of the cystic duct, like a cork in the neck of a bottle, while the second opposed its faceted surface to that of the lower. The three stones weighed 137 grains. Recovery was prompt and fistula closed in three weeks.

23½ Merchants' Row

Perforation of the Intestines by Ascarides.—Sante Solieri reports the case of a man suffering from collapse and such alarming symptoms, that laparotomy was performed. The peritoneal cavity was filled with pus, fæces, and ascarides. The intestines were distended, reddish brown in color, filled with fecal matter, and deprived of all peristaltic movements; in one of the loops of the small intestine a round perforation was found, which gave issue to fæces and ascarides. The patient died nine hours after operation, and at autopsy the intestines were found to be filled with fecal masses and ascarides, the latter, doubtless, having caused the perforation.—*La Riforma Medica.*

DEATH FOLLOWING AN ENEMA*

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I desire to report a case in which death was produced in a most unusual manner, and the clinical history of which will emphasize strongly two points: (1) The dangers of enemas as used by inexperienced nurses and by the laity; (2) The proneness of the medical profession to account for most abdominal disturbances by looking to the much-abused appendix.

C. D., aged thirty-two years, married, carpenter, no family history obtainable, habits good, four years ago had an attack of pain and tenderness in abdomen, vomiting, etc., for which he was treated for appendicitis and recovered. He has suffered for years with chronic constipation, for which he had to resort to purgatives and enemas. On the evening of February 3, 1902, he was hale and hearty; he partook rather liberally of clams during the evening, and returned home about 10 p.m. He suffered from a little griping pain in the abdomen, and as he was constipated, proceeded to take an enema as was his usual custom and in the following manner: to a long piece of hose he attached a hard rubber nozzle about six inches in length; to the faucet of the bath tub, sat himself in the tub, and inserted the tip into the rectum. I was unable to get any information regarding the result of this enema. About 12 o'clock, midnight, his abdominal pains increased, and he was vomiting. This continued until 7 a.m., when he was seen by his family physician. He found the abdomen distended more prominent on right side, general abdominal tenderness, more tenderness on right side, especially over McBurney's point. Temperature, 103° F.; pulse very rapid and weak. He gave him a soap enema with fair result. At 10 a.m. he saw him again, in consultation; found him in same condition but weaker. Temperature dropped to 102° F. Both physicians agreed on a diagnosis of rupture of an abcess from appendicitis, and advised his removal to hospital for immediate operation. On his arrival there, at noon, the hospital surgeon found him with high temperature, rapid, weak and thready pulse; abdomen distended; general abdominal tenderness, especially over site of the appendix; rigidity of right rectus muscle. Here a diagnosis of acute fulminating appendicitis was made, but no operation was performed, as the patient's general condition would not warrant it.

The patient continued to grow worse and died at 9 p.m., about twenty-four hours after he gave himself the enema.

Autopsy.—Performed fourteen hours after death; body well nourished; rigor mortis relaxing; marked signs of beginning decomposition; case evidently septic; abdomen moderately distended; abdominal incision made. On opening the peritoneal cavity, a large amount of clear fluid gushed out; entire abdominal cavity filled with this clear fluid; intestines covered with fibrin and agglutinated together; all the signs of a beginning septic condition; peritonitis was present; stomach empty; small and large intestines carefully gone over; ileum joins cæcum three inches above normal situation in lumbar region; appendix about four and a half inches long, running upward behind the peritoneum; no evidence of present or former inflammation; the caliber of the sigmoid and rectum was unusually small; both empty; found an old ulcer situated posteriorly at lower end of sigmoid near beginning of rectum which was perforated, and the edges of which were gangrenous; no evidences of any hemorrhage.

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*Report of case, read before N. Y. Celtic Medical Society, February 27, 1902.

The conclusion drawn from the autopsy was that he had either punctured this old ulcer with the end of the nozzle of the enema tube, or that the force of the stream was sufficient in itself to rupture the wall of the gut at the site of the old ulcer. The fluid certainly entered the general abdominal cavity, setting up septic peritonitis, causing death.

BILE BURNS IN ANÆSTHESIA.

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Burns of the face sometimes follow upon the administration of an anæsthetic, and upon these occasions it is the custom of the operator to blame the administrator for faulty technique in allowing dripping of the anæsthetizing agent to occur.

Both chloroform and ether will burn the skin of the ordinary subject if poured continually over a part, in concentration, but bile altered in its passage through the stomach during the progress of an anæsthesia is capable of producing a similar action.

Bile as formed is alkaline in reaction, and when, either from relaxation or a wave of reverse peristalsis, it gains entrance to the stomach, though that organ be at rest and therefore covered with mucus and alkaline, the mere presence is sufficient to cause an outpouring of gastric juice. Hydrochloric acid in the juice at once decomposes the taurocholate and glycocholate of sodium salts of the bile, setting free their acids with a resultant fluid vomit easily capable of burning.

Since the profession has been educated during the past few years to know when an anæsthesia is being, conducted with the greatest safety to the patient as well as in securing despatch for the operator, it has become the exception to see the violent struggles heretofore the rule, when, instead of the patient taking the anæsthetic the anæsthetic took the patient, with an ever-present danger to life, which, under present-day methods, all must concede is almost wholly removed. At such times it was not infrequent for quantities of the anæsthetizing fluid to be spilled over the patient's face, with danger to his eyes or skin-surface. While this source of possible burning is now happily done away with, it is customary to grease the front of the face with vaseline. The statement that this procedure is not an adequate safeguard from bile and stomach contents vomit will be accepted when the principle of emulsifying oil, which bile has, is recalled.

The case which I saw and which has led me to the conclusion that the irritating qualities of bile are sufficient to cause a burn of the skin, occurred in a lady of fair complexion and fine skin texture, who had been taken with an attack of acute gastritis. After vomiting a quantity of food particles she threw off several ounces of a light yellow and very acrid smelling, watery fluid; within the course of six hours afterward blebs were raised where this fluid had spattered over her bared shoulder and arm, giving the appearance of a scald.

The writer has recollection of two cases of burns, occurring after ether had been employed as an anæsthetic, in which the administrator claimed to have taken the precaution of applying vaseline to his patients' faces and to have spilled none of the anæsthetic during use. The burns were small in both cases, being about the size of a ten-cent piece, extending outward from the mouth and on the cheek, but healing was slow. In both cases there had been vomiting of a strongly acrid, bile-stained fluid.

To prevent any ill effects arising from contact of vomited fluids next the skin of a patient under an anæsthetic, it is simply necessary for the anæsthetist to have ready at hand a towel saturated with a weak soda solution, with which to wipe the patient's face or other exposed parts after the onset of vomiting. It is certain that observers, having their attention drawn to this matter, will be enabled to explain the presence of excoriations and blisterings of their patients after anæsthesia in which vomiting has occurred, and which is otherwise unexplainable to those who study a careful technique in the administration of anæsthetics, and having observed the fact, will be enabled to prevent future conditions of this sort.

805 Madison Avenue.

A CASE OF RESPIRATORY TINNITUS.

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The following case of tinnitus is, perhaps, of sufficiently unusual a character to justify a brief account of its development, treatment, and final subsidence.

On the 18th of June last, S. D., a man aged forty-six years, an inmate of the Home for Incurables, appeared at the aural department of the University-Bellevue College dispensary, complaining of tinnitus. The disease for which he had been admitted to the Home had not been positively diagnosed. In the history, kindly supplied by Dr. J. C. Jones, the physician in charge, the following symptoms were recorded: Previous to admittance the patient had suffered with severe headaches, shooting pains in the legs, and great loss of strength. On admission there was partial retention of urine, catheterization night and morning being necessary. Patient complained of a sensation of numbness and cold in the left side of face. Pupils uneven, the left being smaller than the right. Both pupils reacted rather slowly, both to accommodation and light. Patella reflex absent on left side, very slight on right. Patient walked firmly and without difficulty, and stood steadily with eyes closed. No symptoms of ataxia. The symptoms, on the whole, had improved during his sojourn at the hospital.

At the dispensary the patient gave the following aural history: He had never suffered from aural disease, either during childhood or later in life; never a pain; never a discharge from either ear. His hearing he considered perfect, except that it was somewhat interfered with by subjective noises.

In April last, and constantly since, he had experienced loud and distressing noises in the left ear. These noises he described as low blowing sounds, like a very low whistle. When asked if the noises were continuous, he said "no; that they came and went as he breathed." When told to fill his lungs and hold his breath, he said that the noises ceased. When asked to breathe rapidly, he said that noises recurred with proportionate rapidity. The patient said that the noise was experienced both with inspiration and expiration. With the noise, he described a sensation as if he were breathing through the ear. "When I breathe in, it feels as if it were coming in, and when I breathe out, as if it were going out of the ear." Evidently, then, the noises were synchronous with the respiratory movements of the chest, and were caused by air passing either into the tympanum, or over the pharyngeal orifice of an abnormally open tube. During the examination it was noticed that the patient repeatedly closed the mouth and nostrils and, by attempting to inflate the lungs, drew in the air from the ears. Reversed Valsalva). In explanation of this, he said that by this means he was able to stop the noises, but that they always returned as soon as he swallowed. He denied experiencing any unusual sound or quality in his own voice, so that autophony—which is so often present where the entrance of air into the tympanum is rendered abnormally easy—does not seem to have been among his symptoms.

Physical examination of the ear, nose and pharynx revealed the following conditions:

Left ear (in which the noises were heard).—Drum membrane perfectly healthy in appearance, the position, color, light reflex being absolutely normal.

Right ear.—Normal except for a slight congestion along the handle of the malleus.

Nose.—Ecchondroses from both sides of the cartilaginous septum; slight congestion of the nasal mucosa. (The patient, however, states that he has never experienced any discomfort or difficulty in nasal respiration.)

Pharynx.—Uvula abnormally long, deflected to the left, and lying in contact with the base of the tongue for about one-third of an inch. The pharyngeal walls showed no evidences of acute inflammation.

On inflating the ears by catheter, both Eustachian tubes were found to be patent, the left seeming to be abnormally wide and open.

Functional Examination.—The reactions to functional tests were the same in both ears. Acumeter and whisper heard with ease twenty feet, the limit of the examining room. Lower tone limit, 26 D.V., upper tone limit 1.4—Galton. Weber's test lateralized to the left. Bone conduction, fork 256 D.V., normal in right ear; very slightly increased (?) in left. Upon the above history—mainly upon the apparently unusual caliber of the left tube—a tentative diagnosis of beginning sclerosis in the left tube was made.

Treatment.—With the object of stimulating the mucous membrane of the Eustachian tube, the left tympanum was gently inflated per catheter, a stimulating vapor (containing iodine, menthol and camphor) being introduced. This, it was hoped, would produce increased vascularity, and, perhaps, cause absorption of any newly-formed connective tissue in the tube.

During the following month the patient came once or twice each week to the dispensary, and during this period the treatment above mentioned was continued without affording any relief. During all this time he claimed that he was constantly distressed with the noises already described, his only relief being that temporarily obtained by performing a reversed Valsalva.

On July 29 a bougie was prepared of No. 5 piano wire; the end, wound with cotton, was dipped in an alcoholic solution of bichloride, 1 in 4,000, and this was introduced through the catheter into the Eustachian tube, and carried as far as the isthmus. After a few moments the bougie was withdrawn. A cotton applicator was then bent so as to describe a curve similar to, but rather greater than that of, the Eustachian catheter, and the end, having been wound with a pledget of cotton and dipped in the alcoholic bichloride solution, it was introduced catheter-fashion into the pharyngeal orifice of the tube, and pushed as far into the tube as it could be made to go. This was kept in place half a minute or more. On its withdrawal, the patient expressed complete relief from the subjective noises.

On August 3 the patient returned to the dispensary, stating that the relief afforded by the last treatment had lasted about two hours, when the noises had returned and persisted as before. The treatment as above described was again instituted, with the result that the noises were again relieved. A week later, August 10, the patient returned stating that the relief following the last treatment had lasted nearly two days before the noises returned. On this occasion he received about the same treatment as on the two preceding visits, but for some reason—possibly because the hour happened to be late and the time at our disposal limited—he failed to experience the same relief as before. He left promising to return within a week.

From this time, August 10, the patient did not return to the dispensary until October 1, when he came in response to a note from the writer. In explanation of his failure to return for treatment he stated that shortly after leaving the dispensary the noises had ceased; that since then they had returned only at long intervals, and then had lasted but a few moments, so that the noises no longer annoyed him and he considered himself practically cured.

Objectively his present condition differs but little from that observed on the day of his first visit to the dispensary. The left drum-membrane still presents a normal appearance, and the right still shows congestion along the hammer handle. The uvula no longer rests upon the base of the tongue, the redundant portion having been excised. The pharyngeal roof and naso-pharynx show nothing more marked than a certain degree of chronic congestion. Upon catheter inflation, however, the auscultatory signs are slightly modified on the left side, where the tube seems narrower than when he first came under observation, so that I can no longer detect any difference in the caliber of the two tubes. Both tubes are patent, of rather large caliber, but apparently healthy.

In reviewing this history the chief point of interest, and that which is still unsettled in the mind of the writer, is the determination of the original condition upon which the symptoms depended. Two theories present themselves:

1. That already suggested, of a beginning sclerotic process, originating in the Eustachian tube, and which later would have invaded the tympanum and made itself known there by impairment of function.

2. That, as the result of a mild congestive, or inflammatory process, affecting first the naso-pharynx and later the cartilaginous portion of the Eustachian tube, the walls of the latter were left rigid, and prevented from assuming their normal apposition.

The writer is inclined to regard the latter condition as having been the original cause of the patient's symptoms; and assuming the correctness of this view, it is probable that the symptoms would have disappeared in time without treatment.

Perhaps future attacks may occur to throw further light on this patient's trouble. In the meantime, though kept under occasional observation, he is practically without symptoms referable to the ear.

810 PARK AVENUE.

Syphilis and Marriage.—W. A. Hardaway says that his own rule of conduct has been to refuse professional consent to the marriage of a syphilitic for four full years from the date of infection, this period being occupied with assiduous specific and hygienic treatment; and further, that there should have been at least two years of complete immunity from specific manifestations. But even then he does not think that a medical man is in a position to give absolute and exact guarantees to the patient.—*St. Louis Courier of Medicine.*

How Shall We Treat Sepsis Following Labor and Abortion?—W. O. Henry gives the following rules: (1) Remove early with the finger, sharp curette and flushing, all débris, decidua, blood clots and sloughing tissue which may be infected from the uterus and from all raw surfaces in cervix, vagina and vulva; (2) Dry all these raw surfaces and freely apply to them 95 per cent. carbolic acid, washing away the surplus acid with sterile water; (3) Unless hemorrhage requires, leave no tubes or packing of ank kind in either vagina or uterus; (4) Have simple carbolized 2 per cent. vaginal douche used twice a day thereafter; (5) Open the bowels freely with calomel, ½ gr. every hour for four hours, then follow with Rochelle salts until sufficient action has occurred; (6) Give 3 grs. sulphate of quinine every four hours, followed by 15 drops tincture of chloride of iron, in water; (7) Give good nourishment with milk, eggs and stimulants every four hours; (8) Let this be the routine; *early* treatment and more radical measures will rarely be indicated; (9) Fixation of uterus, with infiltration in Douglas' culdesac or ligaments, or pus in tubes or ovaries must be treated by opening and draining through vagina; (10) Multiple abscesses in uterine walls, or infection of walls or pelvic cavity, call for removal of uterus and all else necessary by the vaginal route. The abdominal route in all acute cases is dangerous and seldom, if ever, justifiable.—*Annals of Gynecology and Pediatry*, February, 1902.

The Operative Treatment of Chronic Bright's Disease.—A. Primrose reports the case of a child of ten years suffering from nephritis, with general anasarca and ascites. Paracentis abdominis had been performed seven times. The author cut down on the right kidney in the loin and found it much enlarged. He made an incision two inches long through the capsule, and drained the wound for two weeks; the amount of urine secreted increased from 14 oz. in twenty-four hours to 40 oz. on the seventh day after operation, while the percentage amount of albumin diminished from 1.6 per cent. to 0.8 per cent. The child's condition did not continue to improve, and therefore the capsule of the left kidney was removed in its entirety. The child was critically ill for some days subsequently, and unfortunately contracted pneumonia, but he gradually recovered , and the renal symptoms underwent a remarkable abatement, so that while the amount secreted in twenty-four hours ran to 44 ozs., the amount of albumin diminished to 0.03 per cent., the casts were largely diminished in number, the general œdema vanished and the ascitic fluid disappeared. Sixty-two days after the last operation the patient continues to improve. The anæmia has largely disappeared, and the albumin is a mere trace. Very few casts are found; no return of œdema or ascites. —*The Canadian Journal of Medicine and Surgery*, March, 1902.

Opium in the Treatment of Some Cases of Intestinal Obstruction.—B. T. Mason relates the history of a woman of seventy-five years with irreducible hernia femoral of the left side. Not being able to have a passage of the bowels, and having other symptoms of strangulation, she took a cathartic and used injections, with the result of aggravating the symptoms of strangulation. There was a swelling in the groin, of the size and shape of a cucumber, six inches long, of an angry red color, and very sensitive to the touch. The woman had vomited repeatedly. After moderate taxis, without any result, she was directed to take half a grain of opium every six hours, or oftener if necessary to control the pain, and to anoint the tumor and adjacent parts with belladonna ointment, and to apply flaxseed poultices over the tumor and the whole of the abdomen below the navel. This treatment was continued for three days, when the poultices were abandoned, and the lower part of the abdomen and the tumor were painted with collodion, so as to form a thick investment. On the sixth day of the opium treatment she had five spontaneous movements, and on the seventh the swelling was soft, small in size, and little sensitive to the touch. All the symptoms of strangulation, except confinement of the bowels, passed away after the first few doses of opium.—*Massachusetts Medical Journal.*

Symptoms and Treatment of Coal-Gas Asphyxiation.—Carl J. Lind describes the symptoms seen recently in a case as consisting of mydriasis, emesis, unconsciousness or anæsthesia coma; the action of the heart was depressed, the pulse was quickened (120 per minute), there were low blood pressure, the cherry-red color of carbonic-oxid-hæmoglobin; slight and early epistaxis, dyspnœic respirations, slight convulsions during unconsciousness. Treatment consisted in the admission of fresh air, Sylvester's method of artificial respiration, a hypodermic injection of 2 milligrammes of nitrate of strychnine given at once, and followed by another of 1 cubic centimeter of ergotol to tone up the relaxed circulatory system. Inhalation of oxygen should be used when this gas is at hand, and next to this in value is dioxide of hydrogen, U. S. P. strength. This patient being unconscious, the following drugs were mixed and introduced into his stomach by a tube: 1 c. c. of tincture of capsicum, 60 c. c. of dioxide of hydrogen, 60 c. c. of pure water. In less than thirty minutes the patient showed signs of recovery. One hour after the first dose of H_2O_2, a rectal enema was given containing 100 c. c. of hydrogen dioxide with 300 c. c. pure water. The patient became semi-conscious and could swallow a little, and was then given 20 c. c. H_2O_2 in a little distilled water every thirty minutes for five hours, then every four hours for forty-eight hours. He made a good recovery.—*Northwestern Lancet.*

On the Propagation of Vaccine from Calf to Calf.—S. Umeno describes his method of preparing vaccine by starting with humanized lymph and propagating it successively from calf to calf. He claims that in this way efficacious and safe vaccine may easily be obtained; that the vaccine can be preserved for a long time without deterioration; kept in stock and prepared in large quantities if a sudden demand arises. The conditions of its successful preparation are, that the original vaccine should be of good quality and free from contamination; that the calf should be a vigorous one, from two to three months old; that the area of inoculation be about 2.5 sq. cm. per 1k. gm. of calf. The lymph should be drawn off 108 to 120 hours after inoculation, ground in a mortar and diluted with three times its quantity of a 60 per cent. solution of glycerin, containing carbolic acid in the proportion of 1 to 1.3 per cent. This mixture should be aspirated into a capillary tube, which is then closed at both ends and kept in an ice box, after having been kept in a room temperature not higher than 20°. For immediate use it should be kept in an incubator for a few hours, but for long preservation the quantity of carbolic acid should be reduced. The lymph thus prepared is extremely strong, and should be diluted with glycerin water before inoculating the calf.—*The Sei-I-Kwai Medical Journal.*

Snake Venom in the Treatment of Plague.—Hem Chandra Sen considers the fresh venom obtained from strong, young black cobra (keuta variety) the most powerful stimulant in plague. Fortunately, it is an irritant to the bowels, and a hepatic stimulant, so that most of it is thrown out and the danger of poisoning is thus lessened. The author prefers its administration by the mouth, mixed with bile or arsenic, to giving it hypodermically, as in the latter case it is liable to cause disintegration of the red blood cells, which are already in danger of disintegration from the plague itself. The objection made by some scientific men that snake venom is inert when administered by the mouth, is met by the statement that in many men now living who have recovered from plague after the administration of snake-venom pills, the medicine caused a burning sensation in the head, which lasted for some time after recovery.—*Indian Medical Record.*

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SUSCEPTIBILITY TO DISEASE.

ONE of the impossibilities of medicine as a so-called exact science is that the patient is not always responsive to morbific influences in accordance with any set rule. Thus the two sides of the equation are never balanced in any given case in exactly the same way. All sorts of controlling influences are at work in modifying the generally accepted conditions of cause and effect. There is no such thing as mathematical conclusion in estimating the chances of a positive prognosis in any given case, or in predicating the special action of any particular class of remedies. While we may be well informed as to the laws of disease, the patient himself is the main factor to be taken into account. In the attempt to form an opinion, we are governed by the study of the sick one's proclivities, and of his various and complex receptivities of morbific influences. It is the proper appreciation of these qualities which constitute the judicious and careful practitioner as compared with the careless and off-hand prescriber.

We cannot go far in this method of reasoning without considering the important rôle played by the inherent vital resistance of individuals, not only as regards susceptibility to contagion or infection, but in reference to an equal combative tendency against complications in any given malady. Not only do certain individuals differ from others in hereditary tendencies and in the complex responsiveness to their varied environments, but the same person shows various degrees of resistance at correspondingly different periods. Thus in early life he has one variety of diseases, and later on others—each in its own time and following certain laws which are now very well understood. It is the stroke of the clock on the mark of the hour. The old-fashioned physician, who was not only acquainted with the general constitution of a family, but also with the physical peculiarities of its individual members, always worked to advantage in foretelling the probable outcome of the sickness in question. The probabilities were always in one direction or the other. From many points of view it is a great pity that this kind of knowledge, upon which a prognosis could be most reasonably based, is fast dying out with the growth of specialism and with the fashionable tendencies of patients to be constantly changing medical advisers.

Some of the most interesting facts bearing on hereditary influences have been gathered by tracing the family diseases through different generations in isolated communities. The life insurance companies study the question also on a correspondingly broader and more comprehensive scale, reducing probabilities to almost mathematical accuracies. Thus the life limit fixes the rate of premium for all ages of persons who are apparently in good health at the time the contract of risk is taken. It is necessary to go still further than this if we expect to apply general principles to special physical types. Nordau goes to extremes in generalizations respecting the signs of degeneration. Still, he started rightly, and the facts he obtained in support of his theory are of value as suggestive of a more reasonable plan of study. We are, at least, convinced as to the relation which true physical degeneracy must bear to disease proclivities.

When we adapt general principles to individual cases we must assume, so far as susceptibility to disease is concerned, that the depression of vital force is the first step to that end. In other words, the system must be prepared for the attack by the lowering of physical tone. Susceptibility in such a sense means temporary weakness. At least this admission appears to explain why, when the various causes of disease are constantly operating, the individual escapes attack until the soil is duly prepared for the seed. We see this fact constantly exemplified in the study of the infectious properties of all the common diseases. Pneumonia, typhoid, and tuberculosis serve as apt illustrations of the point in question. In every case the weaker persons are the ready prey for the lurking and ever-ready bacilli. One surgeon, who is overworked and below par, pricks his finger and the infection rapidly multiplies itself, another one eliminates the poison as readily as a duck sheds rain. If we could more accurately determine these relative conditions, how much disease and consequent death might be prevented? In severe and prolonged operations, for instance, we could estimate the chances for the patient with much greater certainty than at present seems possible. We know well enough that one patient survives where another dies. The same kind of operation saves lives on one hand and kills on the other. The point at issue in this cursory discussion on the general subject of susceptibility is to know which is which. It is not impossible to hope that by a more thorough and careful study of this important question we may at no distant period be able to widen observation in each individual case, either by still newer methods of examining the blood, the urine or other of the secretions, or by the proper interpretations of peculiarities in physical construction, the relative chest capacity, the size and strength of the vital organs, the hirsute development, the skin circulation, the pulse rythm, the conformity of the limbs or the metabolic capacity. The important fact is to be discovered somewhere along these lines, and when once it is made plain, we shall have the question of prognosis in any given instance more definitely settled than is possible at present.

Cholera in the Philippines.—On April 13 it was reported that the number of cases of cholera in the islands up to date was 663, and of deaths, 510; the figures for Manila alone being 245 and 192, respectively. Among those attacked in Manila were four Americans, one of whom died.

CARCINOMA AND ITS ETIOLOGY AS REGARDED BY THE SURGEON AND PATHOLOGIST.

In Great Britain, recently, there occurred one of the most illuminating discussions on cancer which has ever taken place among English-speaking people. The opinions advanced by the eminent men who spoke on the subject were not distinguished by originality, but the whole question of cancer, and especially of its etiology, was thoroughly gone over, and the common-sense view of the matter was presented in good, plain language.

The particular occasion of this symposium was the reading by Sir William Banks, Surgeon to the Liverpool Infirmary, of a paper describing some of his experience in operating for the disease, and the conclusions which he has drawn as to its cause.

Sir William Banks' address was an animated and reasonable presentation of the subject, and although, naturally, he regarded the matter from the standpoint of the surgeon, yet as an operator of thirty-five years' experience, his deductions cannot but be entitled to consideration. Alluding to the much-vexed point as to whether there was or was not a cancer parasite, the speaker said that he was inclined to think that the parasitic theory had a great deal to be said in its favor. He thought that there was a special body in cancer very easily recognizable when one was able to appreciate it, which, at all events, accompanied cancer.

Mr. Plimmer, whose investigations into the cause of cancer have made his name known throughout the world, is, naturally, the most prominent advocate in Great Britain of the parasitic theory, and Mr. Harold Stiles of Edinburgh, the keenest upholder of the degeneration view of the case.

Mr. Stiles believes that the origin of cancer is due to degeneration of the nuclei of the epithelial cells.

Sir William Banks opposed Mr. Stiles' views, on the ground that the growing part of a carcinoma was its circumference, and the center was hard—that is to say, it was the point where fibrous degeneration was going on. In the active part alone the parasites were found, and that seemed to him in opposition to the theory of degeneration. Further, in the staining of these cancer parasites the reagents that affected them did not affect the nuclei of the epithelial cells. In his opinion, but one cause stood out prominently among the many that had been suggested, and that was the great increase in the amount of food, and notably of meat, which was now consumed by civilized people. It was not drunkenness; syphilis could not be the cause, because among all the women he had seen with cancer of the breast he could hardly remember one whose character was bad. It could not be bad water, bad housing or bad sanitation, because all cities were in a better state in these days than ever before. The wretched, half-starved patient was not the most prone to cancer; its most numerous victims were well-nourished persons with plenty of fat, and often with the color of health in their cheeks.

Mr. Marmaduke Shields made a strong plea for a stricter classification of the varieties of carcinoma, on the part of pathologists, and doubted whether the explanation of the origin of a slowly-growing epithelioma upon the face of an old man was the same as that of a quickly-growing spheroidal cancer in the mamma of a woman. His belief was that the mysteries of tumor growth were bound up in the mysteries of cell prolification, as illustrated on the contact of the sperm cell with the ovarian cell, and whoever solved a problem like that would throw light on many subjects otherwise doomed to perpetual darkness.

Of late there has been a growing conviction that an intimate connection exists between cancer and the conditions of nutrition. Some hold, and have supported their assertions with numerous statistics, that the consumption of raw vegetables is a prolific cause of cancer. Dr. Lyon of Buffalo read a paper in the spring of last year in support of the view of direct infection by means of raw vegetables, and so eminent an authority as Behla favors this theory.

Roger Williams, on the contrary, writing in the "Twentieth Century Practice of Medicine," inclines to the opinion that over-consumption of meat is a prominent factor in the causation of carcinoma. From returns collected by the British Medical Association Collective Investigation Committee, it appears that of one hundred and ninety four cancer patients one hundred and twenty-three had been moderate eaters, fifty-nine small eaters, and twelve large eaters. There was not a single vegetarian among them, and only a few had been great eaters of vegetables. That men are more liable to cancer than women in New Zealand and New South Wales is probably due, as Macdonald believes, to their gluttonous habits in respect to meat eating. Roger Williams holds that probably no single factor is more patent in determining the outbreak of cancer in the predisposed than high feeding. Many indications point to the gluttonous consumption of meat, which is such a characteristic feature of the age, as likely to be specially harmful in this respect.

Statistics show that the consumption of meat has for many years been increasing by leaps. When excessive quantities of such highly stimulating forms of nutriment are ingested by persons whose cellular metabolism is defective, it seems probable that there may thus be in those parts of the body where vital processes are still active such excessive and disorderly cellular proliferation as may eventuate in cancer.

It would, perhaps, appear to an unprejudiced observer that those have the greater weight of evidence behind them who think that excessive meat eating has undoubted influence on the causation of carcinoma. The fact cannot be denied that cancer has increased *pari passu* with an increase in the consumption of flesh; and also that in those countries in which meat is most largely eaten the growth in the number of cancer patients has been most marked.

The United States and Australia, and, in a lesser degree, Great Britain, are conspicuous examples of this coincidence.

At any rate, the question of nutrition as regards its influence on the causation of cancer is worthy of much closer investigation than has at present been made.

Without in any way wishing to depreciate the splendid work which has been done by investigators within recent years in their attemps to elucidate the mysteries of cancer, it would not, perhaps, be amiss if many of them were to take to heart the advice tendered them by Sir William Banks at the close of his address. He spoke as follows: "I sincerely hope that more caution will be observed in the pronouncements that pathologists and others may make in the future than has hitherto. been observed. Quite recently one gentleman has brought forward some views from which the most important results were expected, but the wonderful bodies which he has discovered turned out to be nothing more than cells from the corks of his bottles."

The parastic origin of cancer has not been nearly proved; indeed there is as much to be said for the the belief that the disease is derived from degenerations and dropsical changes in the nuclei, as for the former theory.

Our hope, with regard to clearing up the matter, rests upon the promise that in the near future the cancer problem will be investigated by the foremost scientific men of several countries, untramelled in their efforts by lack of funds—the obstacle which has, up to the present, more or less seriously hindered research work everywhere. In this respect the United States, thanks to the generosity of her rich men, will be able to strive for the goal on an equal, if not on a better, footing than any other country.

RECOMMENDATIONS FOR THE RETIREMENT OF SURGEON-GENERAL STERNBERG WITH THE RANK OF MAJOR-GENERAL.

Surgeon-General George M. Sternberg, U. S. Army, who now has the rank of brigadier-general, has made formal application to be retired with the rank of major-general at his coming retirement for age on June 8, next. Special legislation is required for such action, and the application has been forwarded to Congress with the favorable endorsement of the Secretary of War and Adjutant-General. Under present laws, officers of the Navy who served in both the Civil and Spanish wars are retired with an increased grade, and it is only just that the same consideration should be shown to officers of the Army who have had equally long and distinguished service. Under this law Surgeon-General Van Reypen of the Navy was recently retired with the rank and pay of rear-admiral, corresponding to a major-general; and there is every reason why the same grade should be given to the head of the Medical Department of the Army, whose responsibilities —from the greater size of the latter and the conditions under which it serves—are much heavier, and whose duties are more arduous.

In his application General Sternberg calls attention to the fact that his forty-one years of service include the entire period of the Civil war, the war with Spain, the Philippine Insurrection, the relief expedition to Pekin, two Indian campaigns, and professional service in several epidemics of cholera and yellow fever.

General Sternberg was brevetted a captain and later a major for gallant services during the Civil war, and was subsequently brevetted a lieutenant-colonel for gallant services in 1877 against the Nez Perces Indians under Chief Joseph. As a bacteriologist, sanitarian, scientific investigator and author, his services to humanity and the science of medicine have been twice rewarded with the degree of LL.D.; and he has been made President of the American Medical Association, The American Public Health Association, The Association of Military Surgeons, and a member of many scientific societies. He has repeatedly represented the Medical Department of the Army at national, foreign and international medical congresses.

To ignore his request for the consideration already granted others is to disregard a career which can scarcely be equaled for long and honorable military service, gallantry in battle, self-sacrificing heroism in epidemic disease, valuable work as a scientific investigator, and admirable administration of official duties.

A strong memorial has been presented to Congress by the legislative committee of the American Medical Association, consisting of Dr. H. L. E. Johnson of Washington; Dr. Wm. H. Welch of Johns Hopkins University; and Dr. W. L. Rodman of Philadelphia, urging that proper recognition be given to Surgeon-General Sternberg's services, and that he be placed on the retired list with the increased rank for which he has applied. Certainly no one is more worthy of such consideration than General Sternberg, in the honoring of whom the profession should itself feel honored.

Tuberculin as an Aid to Surgical Diagnosis.

Dr. J. M. Elder, Lecturer on Surgery and Clinical Surgery, McGill University; and Surgeon to the Montreal General Hospital, read a paper before the Montreal Medico-Chirugical Society, October 18, 1901, giving notes which he had gathered in the Montreal General Hospital with regard to the use of tuberculin, as an aid to surgical diagnosis, and the deductions he drew therefrom.

The tuberculin used was supplied by Dr. Trudeau of Saranac, and Dr. Elder regretted that he had not more than one kind of tuberculin, in order to try one where the other failed.

The object in instituting the series of experiments was an effort to answer the following queries: (1) In what class of surgical cases due to tuberculous infection does the use of tuberculin give most aid as a diagnostic agent? (2) Is its use followed by any untoward symptoms, either local or constitutional? (3) How long after its infection should we expect the rise in temperature which shows the typical reaction? (4) Is the reaction constant when tuberculosis is present?

Four cases in which tuberculin was used under the direction of Dr. Elder showed reaction and in three the results were negative. In all cases which were operated on after administering the serum the pathological reports verified the clinical diagnosis, and in all care was taken to give the serum only after the temperature had been observed for several days, in order to exclude, as far as possible, accidental variations after giving the serum. The temperature was taken every two hours, and this, says Dr. Elder, should be kept up for thirty-six hours at least, as the reaction is sometimes delayed.

The observations led to the following answers to the questions which Dr. Elder had set himself:

1. That tuberculin is valuable as a diagnostic

aid in suspected lesions of glands, synovial sacs and bones. In tuberculous peritonitis it gave no reaction.

2. Its use was followed by no untoward symptoms, either local or constitutional.

3. That the reaction, as shown by rapid increase in temperature, varies in time, appears only in acute cases where lesions are large, and should be looked for even as late as thirty-six hours afterwards.

4. The reaction does not appear constant even when tuberculosis is undoubtedly present, but contra, in no case did we get any reaction when tuberculosis, so far as we could determine otherwise, was not present.

The conclusions arrived at by Dr. Elder are in the main similar to those reached by former observers. The tuberculin test is by no means an unfailing one, but in certain forms of tuberculosis is a valuable diagnostic agent, and as its use is—not according to the majority of authorities—followed by harmful results, its merits in deciding whether a tumor is of tuberculous, syphilitic, or neoplastic origin, though not undoubted, are yet considerable in their aids to diagnosis.

THE INTERNATIONAL SANITARY CONGRESS AT HAVANA.

In Public Health reports, March 21, is a report to the Surgeon-General, United States Marine Hospital Service, by P. A. Surgeon G. M. Guitéras on the above congress.

Dr. Juan Santos-Fernandez of Havana delivered the presidential address. In the course of his remarks he referred to Dr. Finlay as the discoverer of the method of transmission of yellow fever by the mosquito, and, for this and other reasons, he thought that Cuba was entitled to be selected as the gathering point of periodical pan-American sanitary conferences. Continuing he said, "It is consequently a proximate result of this sanitary congress, held today in Havana, to spread, no doubt, in all Latin America the news of the progress realized here in Cuba in the study of yellow fever, the rumors of which were carried away by the members of the third Pan-American Medical Congress who came from these countries—rumors that are now transformed into certain and distinct sounds and unquestionable truths."

The greatest amount of interest was centered in the paper read by Lieut.-Col. Valery Harvard, Surgeon, U. S. A., entitled "Recent Advances in the Study of Yellow Fever." It gave a detailed account of the work of the United States army commission, supported the proposition that, so far as known, the Stegomyia fasciata was the only means of transmitting yellow fever, and that, therefore, prophylactic and quarantine measures should, as far as possible, be based upon that fact.

These conclusions did not, by any means, meet with universal approval, and several speakers combated in animated language the now widely accepted theory that the mosquito is alone responsible for the dissemination of yellow fever.

Immediately after the close of the general session, President Santos-Fernandez called a meeting of the official delegates, to hear the reports of the committees appointed at the previous meeting, and to discuss the resolutions to be adopted by the Congress. Lieut.-Colonel Harvard was called upon for his report, and presented the following resolutions:

1. That the Stegomyia fasciata is, up to the present time, the only means demonstrated for the transmission of yellow fever.

2. In accordance with the above, prophylaxis should consist in the destruction, as far as possible, of this species of mosquito, and the best means should be adopted to prevent these mosquitos from gaining access to persons ill of yellow fever.

3. That quarantine measures against yellow fever shall be based thereon.

The first two resolutions gave rise to little adverse criticism, but a stout opposition was offered on the part of many of those present to the adoption of the third.

Dr. Glennan, speaking for the Marine Hospital Service, stated that its representatives could not accept the proposition in its present form, and that it was necessary to bear in mind that in the reformation of quarantine regulations against yellow fever it was necessary to take into consideration the opinion of the health authorities of the Southern United States.

The president and others suggested that the third proposition should be left out, but Colonel Harvard insisted upon its retention.

Upon the matter being put to vote, the third resolution was rejected and the first and second were unanimously accepted.

It has, undoubtedly, been proved definitely that the Stegomyia fasciata is the principal means of transmitting yellow fever. Nevertheless, the demonstration that the aforesaid mosquito is the sole agency whereby the disease is conveyed has not been as yet entirely conclusive. As long as there be any doubt with regard to the point, it would seem reasonable that quarantine measures should be wide enough to cope with all possible modes of spreading infection.

REPORTS OF THE UNITED STATES ARMY GENERAL HOSPITAL, PRESIDIO, CAL., FOR 1900 AND 1901.

These reports have recently been published by Lieut.-Colonel Alfred C. Girard, Deputy-Surgeon-General United States Army, the medical officer in command.

In the report for 1900 an interesting history is given of the establishment of the hospital, together with a detailed description of the buildings. During the fiscal year ending June 30, 1901, the institution was greatly enlarged, among other additions being a power-house and a building to be used as a chapel or library for the hospital.

Unfortunately, however, in the early part of June, 1901, the northeast portion of the hospital was destroyed by fire, necessitating the expenditure of a large sum for reconstruction.

The total number of patients admitted to the hospital during the fiscal year 1901 was 5,587, of whom regulars numbered 2,813; volunteers, 2,278, and discharged soldiers, 496.

The patients have been derived from the following sources: Transports from the Philippine Islands, admissions from the model camp, Presidio, San Francisco, Cal., admissions from civil life in the case of discharged soldiers, and readmissions from various sources.

During the year there have been 182 deaths, divided as follows: Regulars, 74; volunteers, 96; discharged soldiers, 12.

The nosological index of diseases treated in the hospital from July 1, 1899, to June 30, 1901, show that diseases of the digestive system stand first in order of frequency; infectious diseases, second; accidents and injuries, third; diseases of the respiratory organs, fourth; diseases of the nervous system, fifth; diseases of the muscles, bones and joints, sixth; diseases of the genito-urinary system, seventh; diseases of the integument and subcutaneous connective tissue, eighth; diseases of the circulatory system, ninth; diseases of the ear, tenth; diseases of the eye, eleventh; diseases of general nutrition, twelfth; diseases of the nose, thirteenth.

The greatest number of deaths occurred from chronic dysentery, although the mortality rate was low.

The treatment of this disease at the Presidio hospital has varied considerably. In the amœbic cases the treatment, which has proved very successful, has habitually been by quinine injections. In the forms of dysentery other than amœbic the treatment by sulphate of sodium or magnesium sulphate has been used in the more acute cases with much success, and often in the chronic cases the treatment by magnesium sulphate has resulted in many cures. Injections of nitrate of silver have been used rather extensively, and in many instances with good results. One of the greatest objections, however, to this method of treatment, is the intense pain which the injections cause, and which, in some instances, has been so severe as to preclude their use. Bismuth subnitrate and opium have not been used to any extent in the Presidio hospital in the treatment of dysentery.

The report of the bacteriological laboratory of the Presidio hospital, under the charge of Contract Surgeon Charles F. Craig, is of exceptional interest, but, owing to lack of space, it is impossible to more than refer to the investigations here. At another time the matter will be dealt with at length.

One hundred and eighty cases of insanity were received at the hospital during the fiscal year, and with regard to its etiology the report reads as follows: "The etiology of insanity in soldiers returned from the Philippine Islands is a subject which is at once simple and complex. Without doubt a large proportion of the cases which become insane have a hereditary taint which had not been discovered prior to enlistment. This, taken with the long distance from home, the intense heat of the tropical sun, constant harassment by an enemy which it is impossible to see, excessive use of alcoholics, and the depressing influences always present in a tropical climate, will account for the changed mental condition. . . . Almost all of the cases of melancholia will, upon examination, be found to be due to nostalgia, and, as a rule, in these cases the prognosis is very favorable, provided the patient is transferred to the United States. It would be uninteresting and of no value to consider the etiology of the different forms of insanity present in soldiers, for all of them will, upon examination, be found to be due to one or more of the causes mentioned above."

The United States Army Medical Hospital at Presidio has in its short life performed efficiently the services for which it was established.

THE EDUCATION OF THE DEAF-BLIND.

The *Review of Reviews* for April contains an excellent article by Ruth Everett on this subject. The history of the development of the education of these unfortunate members of the human race is given, and it is shown that to France, and particularly to one of her sons, the Abbe de l'Epée, is due the honor of being the pioneer in the systematic education of deaf-mutes; he laid the foundations for the sign language.

Dr. Samuel G. Howe, an American, did the same service for the deaf-blind, and the whole American system of the education of the blind is the outgrowth, declares Miss Everett, of Dr. Howe's individual work and experiments in that field of action.

By his successful education of Laura Bridgman he proved, contrary to the opinion of all the eminent authorities of the day, that it was possible to educate a deaf, dumb, and blind person.

The training of an individual thus afflicted is manifestly attended with countless difficulties,. and requires on the part of the instructor the possession of a superabundance of patience, zeal, and tact.

Miss Everett sums up the course of teaching in the following words: "The deaf-blind is taught to associate a point sign with each letter of the manual alphabet, and with his stylus and a slate prepared for the purpose, or a writing machine for point, prick the points on a soft piece of paper that will take and hold them. After the child has learned to read and write, it may be said that, with industry, patience, and perseverance, it is within his power to open many a gate that leads into pleasant places. The deaf-blind study their letters from raised print; to facilitate recitations, a typewriter is generally used. The writer discusses at some length the sign language, the oral system, and the combination of the two, and expresses herself as satisfied that the use of signs and the manual alphabet does not interfere with the knowledge of lip-reading and oralism, and, in support of this view, quotes Mr. Wade, one of the best-known authorities, who gives these reasons for his belief. First, because no pure oralist was ever able to read his lips, while three, using the manual alphabet and signs, did so."

Miss Everett concludes her article by instancing several remarkable examples of the efficacy of the education of the deaf-blind conducted on modern lines.

Health of the City of Manila.—The report of the Board of Health of Manila for the month of January, just received, states that during the month the general health of the city was good, the death rate comparing favorably with that of many cities located in the temperate zone. The Board says, however, that until many radical sanitary defects are removed or remedied, the mortality among the lower classes will remain above the average. The damp and humid habitations of a large proportion of this class, says the report, .are a potent cause in elevating the death rate. As a general rule, on account of the humidity, the lower stories of houses in Manila are unfit for sleeping purposes. Before a proper sanitary condition can be reached, the report states that it will become necessary to make a number of permanent improvements which will involve the expenditure of large sums of money. The principal municipal improvements needed are a modern sewerage system, increased water supply with filtration beds, better drainage and suitable parks.

During January the death rate in Manila was 30.33 per thousand. The report calls attention to the fact that out of a population of 300,000 there was not a single death from smallpox, scarlet fever, or diphtheria. No case of plague occurred during the month, though eighteen cases occurred during January, 1900, and four in January, 1901. In 1900 plague was most prevalent in March, while in 1901 the maximum intensity of the disease was reached in May, when 124 cases occurred. The report states that radical measures for stamping out plague are being enforced. These include the cleaning out and disinfection of houses in which cases of plague have occurred, or in which rats affected with the disease have been found; the destruction of rats by traps and poison; the immunization of the lower classes, among whom the disease usually occurs, by means of the Shiga antitoxin; the thorough cleansing and disinfection of all filthy habitations, and the prevention of overcrowding. It is believed by the Board that the enforcement of these measures and the exercise of continued vigilance on the part of the sanitary inspectors will result in the complete elimination of plague from the city of Manila.

News of the Week.

A Triumph for Lunacy Examiners.—Mrs. Julia N. Egan of 353 West Thirty-fourth street, New York City, was brought to the Pavilion for Insane, Bellevue Hospital, September 10, 1897. She was found to be insane, and a commitment being made, it was presented to Judge George P. Andrews of the Supreme Court, who committed her to the Saint Vincent's Retreat. Her husband then decided that he wished to take her home instead of sending her to the asylum, whereupon he was asked to sign the usual contract used at Bellevue in such cases, showing that it was against the advice of the physicians that she was released, and stating that he was to assume the entire responsibility for the same. It was later shown that he had great trouble with her during the months that followed, and that he was frequently obliged to leave home for weeks at a time to avoid the actual violence to which she subjected him; but, notwithstanding this fact, it was October 18, 1898, before he made another move in the matter. He then sent two physicians, Drs. Austin Flint and Allen Fitch to examine her, report, and advise with him in regard to the future course to be pursued. They told him she was undoubtedly insane and ought to be sent to some institution for custodial care, as a recovery could not be hoped for; but, before the necessary commitment could be procured, she became so violent that a policeman arrested her in the street and arraigned her in the Fifth District Police Court on a charge of insanity. Magistrate Deul committed her to the care of the Commissioners of Public Charities to be examined. On the morning that this occurred the husband went to the office of one of the physicians whom he had previously employed to make the examination, whereupon a petition was made, signed, and sworn to by the husband, and a certificate of lunacy was later made out and signed by the physicians. This was presented to Judge William N. Cohen later in the day at the Supreme Court Chambers, who promptly signed the same. Upon this paper being shown to the Superintendent at Bellevue Hospital, where the woman was found about five o'clock of the same day, he discharged her upon Judge Cohen's order, which it contained, to the authority of the Long Island Home at Amityville, N. Y., where she was taken that night. A writ of habeas corpus was immediately applied for by a lawyer that she met in the police court, and Judge Cohen discharged the woman to the custody of this lawyer, making this note upon the papers: That, inasmuch as the physicians who signed the commitment did not inform him that the woman was committed at a police court for examination at Bellevue, and also did not tell him that they had not examined the patient at that hospital, material facts had been concealed from him in making the commitment; consequently, he would discharge her for that reason. An application had been made to the court for a trial of the case before a commission in lunacy and a sheriff jury before she was discharged by Judge Cohen, but the unique position taken by him in the matter constantly crept into the case, and resulted in a disagreement of the jury. The commission, also, were not able to agree, as they voted but two to one for insanity; whereupon a suit for damages was immediately brought against Drs. Austin Flint and Allen Fitch, who signed the certificate of lunacy, and Dr. Orville Jay Wilsey and the Long Island Home corporation for $100,000 each. The case came up for trial on Wednesday and Thursday of last week, before Judge David Leventritt and a jury. The Judge, however, without hearing any defense whatever, dismissed the complaint upon its presentation by the plaintiff's attorney, thereby taking it out of the hands of the jury. In making this decision he made a special allowance of $500 to each of the several defendants, besides the costs of the proceedings, which amounts to over $300 more. The physicians are to be congratulated in the matter, because they declined to settle the suit when they could have done so for $350, which would have been far cheaper to them; besides, the very considerable amount of trouble involved in fighting the case to an issue. But they now have the benefit of a decision which cannot fail to work good to all who examine and make certificates of lunacy for the commitment of the insane.

A Bill to Create a Commission of Public Health.—Mr. Cockrell (by request) introduced a bill to establish a commission of public health and fix the salaries of the commissioned officers of the Marine-Hospital Service. It provides that the commission of public health, which shall consist of one commissioner of public health, appointed by the President, from senior officers of Marine-Hospital Service, and an advisory board, composed of the Surgeon-General of the Army, the Chief of the Bureau of Medicine and Surgery of the Navy, a representative of the Department of Justice, versed in international law, and the Chief of the Bureau of Animal Industry; and the members of the advisory board to serve without additional compensation or emoluments.

It also provides that the Marine-Hospital Corps shall consist of 108 officers; one commissioner of public health, who shall receive an annual salary of $4,000 and shall supervise the office and discharge all the duties as now performed by the Supervising Surgeon-General of the Marine-Hospital Service; and thirty-five surgeons, who shall receive a salary of $2,500 per annum; and seventy-two passed assistant and assistant surgeons, who shall receive an annual salary of $2,000 and $1,600 for their respective grades. Also, that the commissioner of public health shall promulgate all needful rules and regulations for the guidance and discipline of the officers and employees of the Marine-Hospital Service, and shall, in conference with the advisory board and with the approval of the President, make all needful rules and regulations for their enforcement relating to national sanitation in all its foreign and interstate relations; for the hygienic laboratory, and for the several departments in the enforcement of the provisions of this Act and existing laws.

Further, it shall be the duty of the commissioner of public health to collect and diffuse information upon all matters affecting the public health; to advise the several departments of the Government, the executives of the several States and Territories, and health authorities on all questions of public health, to secure the best sanitary condition of vessels, their cargoes, passengers, and crews, from domestic or foreign ports; to prevent the introduction of contagious and infectious diseases into the United States and their spread from one State or Territory and the District of Columbia; and to cooperate with and aid the State and municipal health authorities in the execution and enforcement of such needful rules and regulations as are deemed necessary to suppress contagious and infectious diseases.

The commissioner of public health is to invite annually the several State and Territorial boards of health to delegate one of their members to meet in Washington for the purpose of conferring on matters pertaining to the public health, and to take such action as will tend to secure the co-operation of State, Territorial, and municipal boards in guarding against contagious and infectious diseases in the United States, and to provide a uniform system of registration of vital statistics, and also, by co-operation with the proper health authorities of foreign governments and municipalities, endeavor to extend to the United States a reliable system of international notification of the existence and progress of cholera, yellow fever, typhus fever, smallpox, bubonic plague, or of other contagious diseases within their respective governments.

The President is authorized, when requested by the commissioner of public health, to detail officers from the several departments of the Government for duty in the hygienic laboratory.

Meeting of the British Association for the Prevention of Consumption.—The third general meeting of the association for the prevention of consumption and other forms of tuberculosis was held during the week ending March 22, under the presidency of the Earl of Derby. The report for the year recorded that King Edward had consented to become patron of the association, and that the Prince of Wales had accepted the position of president. During the year branches were formed in several cities, and the treatment and prevention of consumption, the erection of sanatoria, and similar work, was reported to be making good progress. The report added that in the future, progress should be hoped for more particularly in the following directions: (*a*) The suppression of indiscriminate expectoration as a danger and a nuisance; (*b*) the universal adoption of voluntary notification of phthisis in all towns and districts; (*c*) The general recognition of the fact that foul air is as great a menace to the public health as foul water; (*d*) The establishment of sanatoria, as far as possible, on self-supporting lines for the working classes. Sir William Church, Sir William Broadbent, and others took part in the proceedings.

Female Nurses for Bellevue.—A rumor is current that all the nursing at Bellevue Hospital will, in the near future, be performed by women. At present, men who are trained at the Mills School are employed to nurse patients of their own sex in Bellevue, while women graduates from the Bellevue Training School for nurses have the care of the female patients. It is said that the undergraduate male nurses are considering the advisability of raising the question as to the women violating the intentions of the founder of the school in taking charge of the male wards.

Tuberculosis in Cattle.—A series of experiments, extending over more than a year, has just been completed at the Storrs State Agricultural College, Mansfield, Conn., by Professor H. W. Conn of Wesleyan University, to test the accuracy of the statements made by Professor Koch in regard to the relation of bovine tuberculosis to that of man, and its significance to the dairy herd. Professor Conn says that his experiments show that the danger of the spread of tuberculosis through the milk of diseased animals is not so great as has been commonly supposed, but that, in the earlier stages of the disease, when the udder is not affected, the danger from the use of the milk appears to be limited. He says, however, that it is impossible for a farmer to tell accurately when the udder will become affected with the tuberculous germs, and that the only method for freeing the herds of cows in the country from the greatest danger which menaces them is to segregate every animal upon which the tuberculin reacts.

Dr. W. H. Doty, Health Officer of the Port, has received from the directors of the Pan-American Exposition at Buffalo the award of a gold medal for his exhibit on sanitation. The exhibit consisted of models of boats, quarantine plant, islands, with photographs and other material.

The Late Dr. Ervin Alden Tucker.—*Whereas*, an inscrutable Providence has removed from our fellowship an honored member, Ervin Alden Tucker, A.M., M.D., suddenly, in his prime, with only the first sheaf of life's harvest garnered; and

Whereas, the fellows of the New York Obstetrical Society, from long association, have grown into a knowledge of his rare qualities and exceptional equipment for the high sphere of usefulness he had made for himself in his profession; and

Whereas, as members of his own guild and calling, thereby entering into a juster appraisement of his skill and capacity, the fellows of the New York Obstetrical Society especially esteem their departed brother for his unusually long, painfully laborious and self-contained preparation in the hospital wards; his tireless fidelity as observer and statistician; his methodical evolution of a technique in obstetrics; his soundness and directness as a teacher, carrying his formative influence through medical graduates of the last decade to bedsides far beyond his personal ken; his kindly, active, almost paternal, interest in each individual of the large family of medical men he himself selected from the city hospitals and trained as obstetricians; his cohesive power in holding the hospital alumni in fraternal bond; his quiet self-poised yea and nay, which inspired in patients a merited confidence, marvellously rooted; his clean life; his high conception of the responsibility and dignity of the holy office of ministrant at the threshold of life;

Therefore be it Resolved, that the fellows of the New York Obstetrical Society spread upon their records their pride in the fame of their honored fellow, their appreciation, not only of his individual work, but also of the spiritual power of his completed and crystallized life-lesson, which will ever be a stimulus to younger men in the profession;

Be it further Resolved, that a copy of these resolutions be conveyed to the bereaved family as a token of sympathy, appreciation, and consolation in that our brother, "though dead, yet speaketh."

In witness whereof,

E. C. Savidge, M.D.,
J. C. Edgar, M.D.,
G. L. Brodhead, M.D.

New York Academy of Medicine, Section on Otology, Resolutions on the Death of Edwin M. Pyle, M.D.—*Whereas*, it has pleased the Almighty to suddenly call from us our esteemed and respected colleague, Dr. Edwin M. Pyle, and

Whereas, for several years past he had zealously devoted himself to the special field of otology, distinguishing himself in the hospital by his unselfish industry and superior skill as an operator, and winning in these meetings the esteem and admiration of his colleagues for his sincerity of purpose and genuine devotion to the advancement of this branch of medical science,

Therefore be it Resolved, that while we accept submissively the decree of Divine Providence, the members of this Section, as associates in the field of otology and as co-workers in the New York Eye and Ear Infirmary, to which deceased was attached, desire to record the sense of loss which they have sustained in the sudden taking away of their fellow practitioner, and,

It is further Resolved, that the members of this section extend to the family and friends of the deceased their heartfelt sympathy and sincere condolence in their bereavement, and that these resolutions be spread upon the records and a copy be sent to the family and to the medical journals for publication.

(Signed) James F. McKernon, M.D.,
Frank J. Blodget, M.D.,
Joseph Kenefick, M.D.,
Committee on Resolutions.

Government Control of Therapeutic Sera.—Senator Spooner recently introduced a bill into Congress to regulate the sale of vaccines and therapeutic sera in District of Columbia, and to regulate the interstate traffic in the same, the intention of which is to place the manufacture and sale of all such agents under the direct control of the National Government as represented by the officers of the Marine Hospital Service. The following is a summary of the bill as published in *The Times*:

It penalizes by fine or imprisonment, or both, in the discretion of the court, the taking from one State to another, or the sale, barter, or exchange of any virus, therapeutic serum, toxin, antitoxin, or analogous product for use in the treatment of diseases in human beings, unless the same is produced at an establishment operating under license from the Treasury Department. Every package of such organic perparation which may be legally taken from one State or Territory to another for sale or use shall bear the name, address, and license number of its maker, and the date at which it may be expected to lose its therapeutic value. Establishments working under license from the Treasury Department are to be at all reasonable times open to inspection by its authorized representatives or agents. The action of the Secretary in granting or revoking licenses for the domestic production of such preparations shall be taken on the recommendation of the Supervising Surgeon-General of the Marine Hospital Service, and none of foreign production shall be received into the country unless the foreign producers shall permit the same inspection of their establishments as is provided in the case of licensed manufacturers in this country.

A Pension for the Widow of Dr. C. S. Taft.—A bill recently passed Congress providing a pension for Mrs. Sarah Frances Taft, widow of Dr. Charles Sabin Taft, late Acting Assistant Surgeon United States Army, the first surgeon in attendance upon President Lincoln after his assassination. Dr. Taft was born at Lyons, N. Y., and received his education there and at Carroll College, Wis. At the outbreak of the Civil War he enlisted and was stationed at Washington. At the close of the war he was ordered to Texas, where he remained until about seventeen years ago, when, after resigning, he removed to New York. He lived during the latter part of his life at Mount Vernon, N. Y., where he died December 18, 1900, of a cancerous affection of the throat. As Dr. Taft had been a contract surgeon, his widow, under the law, was not eligible to a pension, and it was only by act of Congress that she could be placed on the roll.

New Pest Hospitals for New York City.—Dr. Lederle, the Commissioner of Health, has asked the Board of Estimate and Apportionment for $1,025,000 with which to provide new hospitals for the treatment of contagious diseases, and to repair the old ones. The contagious disease hospital plant, he says, so far as its permanent characteristics are concerned, is now in a state thoroughly discreditable to the city, though in spite of resultant difficulties, the efficiency of the working staff has not been reduced, 5,638 patients having been cared for in 1901 against 2,748 in 1898, the first year of consolidation. Two buildings for the reception hospital at the foot of East Sixteenth street, one small building at Kingston avenue hospital in Brooklyn, and five small pavilions at North Brother Island, cover practically all the additions to the city's contagious disease hospital plant in the last ten years. Bronx, Queens and Richmond boroughs are absolutely without such institutions. In proof of the need the Commissioner said that recently two cases of smallpox were discovered in remote parts of Staten Island, and a department diagnostician had to travel forty miles and the department steamboat *Franklin Edson* sixty miles before the patients could be landed at North Brother Island. The Medical Advisory Board urges upon the Board of Estimate the appropriation asked for, and advises that the money, if obtained, be spent as follows: *Borough of Manhattan.*—Two pavilions, administration building, annex to Willard Parker, power house, laundry, crematory, morgue, disinfecting plant, alterations, repairs, fixtures, architects' fees, etc., $600,000. *Borough of The Bronx.*—Administration building, four pavilions, station for disinfection, ambulance service and power plant, with fixtures, architects' fees, etc., $100,000. *Borough of Brooklyn.*—Two pavilions, power house, alterations, repairs, fixtures, architects' fees, etc., $125,000. *Borough of Queens.*—Administration building, four pavilions, station for disinfection, ambulance service, power house, with fixtures, architects' fees, etc., $100,000. *Borough of Richmond.*—Administration building, one pavilion, station for disinfection, ambulanec service, power house, with fixtures, architects' fees, etc., $50,000. *North Brother Island.*—Alterations, repairs and additions to present buildings, with necessary fixtures, architects' fees, etc., $50,000.

The Board of Health of Westfield, N. J.—At a meeting of the newly-organized Board of Health in Westfield, N. J., held last week, Dr. J. B. Harrison was reappointed township physician and president of the board, and J. M. C. Marsh was elected secretary. E. Edgar was reappointed sub-inspector. Three disinfecting machines have been purchased, and the Board is now prepared to cope with any contagious disease.

The San Francisco Board of Health.—The Mayor of San Francisco, recently removed the Board of Health of that city, on the absurd ground that it had incorrectly reported the presence there of bubonic plague, and so had brought injury to the city and State. In place of the deposed members he appointed Drs. A. S. Alder, J. Coplin Stinson, T. A. Rottanzi, and M. E. Van Meter.

Health of Troops in the Philippines.—During the month ending February 15 the percentage of sickness among the troops in the Philippines was 6.39, a slight increase over the rate for the previous month, and due largely to measles introduced from transports carrying recruits. Malarial fevers showed an increase during the month, but this was more than compensated for in the decided falling off of gastric and intestinal diseases from 31.9 to 18.50. Bubonic plague has not as yet appeared among the troops.

The Results of Oil Treatment of Mosquito Pools.—The South Orange, N. J., Village Improvement Association, which initiated a campaign of extermination against mosquitos last summer, has decided to resume its labors in that direction this year. In a circular just issued the Society draws these conclusions on the results of the work of last season: "An immense improvement was made in localities where it was comparatively easy to get at and place oil upon the stagnant water. No perceptible improvement was noted where there were large pools of water difficult to treat with oil. Tall grass and weeds in low spots add greatly to the difficulties of finding stagnant water and applying the oil. It is unwise to depend upon property owners to attend to the oiling. Wherever complaints arose of mosquitos being numerous a breeding place could be found within a few hundred feet of the locality complained of. Drainage in some localities is absolutely demanded."

The Late Dr. W. W. Johnston.—A public meeting of the Medical Society of the District of Columbia was recently held in Washington in memory of the late Dr. W. W. Johnston, perhaps at the time of his death the most prominent and successful physician in that city. The large hall of the Columbian University, in which the meeting was held, was crowded to the doors. Eulogies were pronounced by Drs. S. S. Adams, A. F. A. King, Henry D. Fry, and Geo. M. Koper, all of Washington, and by Dr. William Osler, of Johns Hopkins University, and Dr. Walter Reed, U. S. Army. Announcement was made that steps had already been taken to endow a hospital in memory of Dr. Johnston. With reference to the charitable work done by Dr. Johnston during his thirty odd years of practice, it was stated that this, computed at the lowest rates of the District Medical Society, would have had a money value of more than one million dollars.

New Treatment for Cataract.—The New York *Herald*, March 30, announces that a Bordeaux oculist, M. Cadel, has taken up, with remarkable success, the treatment of cataract without operations, by the application of baths of salicylate of soda. He has, he declares, arrested the progress of opacity in the crystalline lens for several years in numerous cases, and is sanguine of success if the treatment is begun at an early stage.

Dr. William W. Keene of Philadelphia was elected an honorary member of the German Surgical Association at the recently held thirty-first annual session. He has also been appointed honorary president of the first Egyptian Medical Congress which will be held in Cairo, in December of the present year.

Philadelphia Neurological Society.—At a stated meeting, held March 25, Dr. Max H. Bochroch exhibited "A Case of Adiposis Dolorosa." The patient was a woman with huge masses of fat depending from the upper arms, the buttocks and loins and the thighs, while the forearms and hands, the legs and feet, and the face preserved their normal proportions. The fatty deposit was the seat both of spontaneous pain and of tenderness. Dr. F. Savary Pearce exhibited "A Case of Adiposis" in a colored woman, in whom, however, the element of pain was wanting. In other respects the clinical picture was much like that presented by the case first exhibited. Dr. Wm. G. Spiller read a report of "Two Cases of Involuntary Muscular Contractions of the Face," the one being an example of spasmodic tic, in which great relief was conferred by applications of electricity. The other occurred in a patient with paralysis agitans without tremor, and the movement was thought to be of associated character. Dr. Spiller reported also "A Case of Primary Degeneration of the Pyramidal Tracts without Muscular Atrophy." Dr. A. A. Eshner read for Dr. S. Weir Mitchell a paper entitled "The Muscular Factors Concerned in Ankle-clonus." It was shown that when ankle-clonus is excited, with the leg placed in the situation most favorable for inducing this reflex movement, namely in that of slight flexion, the soleus alone is the responsible factor, the gastrocnemius being relaxed by reason of its attachment to the femur. Dr. Chas. K. Mills presented "A New Scheme of the Zones and Centers of the Human Cerebrum." Dr. John K. Mitchell described "An Unusual Form of Foot-clonus" occurring in a woman with lateral clonus of the foot, and clonus of the great toe in addition to other phenomena of exaggerated reflex activity, lateral nystagmus and scanning speech. Drs. Chas. K. Mills and J. W. McConnell described "A Group of Brachial and Pectoral Reflexes" in a man presenting symptoms suggestive of meningo-myelitis. When the outer extremity of the clavicle was struck with a percussion-hammer, the forearm was slightly flexed on the arm, and when the upper portion of the sternal attachment of the pectoral muscles was struck, some of the fingers were extended.

Philadelphia County Medical Society.—At a stated meeting held April 9, Dr. W. S. Wadsworth exhibited a heart displaying a gunshot wound near the apex, with secondary gangrene of the wall of the ventricle, and hemopericardium, and hemothorax from injury of an intercostal artery. Dr. David L. Edsall read a paper entitled "The Diagnosis of Chronic Diabetes Mellitus, and the Urinary Findings in this Disease." He pointed out the distinction between mere glycosuria of alimentary origin or transitory occurrence and true diabetes with the symptoms of profound metabolic derangement. The discrimination from dextrose of other substances in the urine simulating it can be made, in addition to the reduction of copper and of bismuth, by means of fermentation with yeast, and especially the use of the polariscope. Dr. J. P. Crozer Griffith read a paper entitled "Diabetes in Children," in which he referred to the rarity of the disease in early life and the gravity of the prognosis at this time. There appears to be an inverse relation between age and the severity of the disease. Dr. Walter L. Pyle read a paper entitled "Ocular Affections Associated with Glycosuria, with Especial Reference to Central Amblyopia." Dr. H. M. Christian read a paper entitled "The Clinical Significance of Various Forms of Hematuria."

Obituary Notes.—Dr. W. D. MIDDLETON, chief surgeon for the Chicago, Rock Island and Pacific Railway system, and dean of the medical department of the State University of Iowa, died on April 5, at Davenport, Ia., of blood poisoning, following a wound received in an operation performed for gangrenous appendicitis. Dr. Middleton was a graduate of the Bellevue Hospital Medical College in 1868. He was professor of surgery in the Iowa State University, and surgeon to the Mercy Hospital, Davenport.

Dr. JOSEPH H. GALLAGHER died at his home in Brooklyn on April 9, of pneumonia, at the age of twenty-six years. He was born in Brooklyn and was graduated from the Long Island Hospital Medical College in 1898, subsequently serving as surgical interne at St. Catharine's Hospital.

Dr. JOHN L. EDDY died suddenly of appolexy at his home in Olean, N. Y., on April 6. He was born in Rutland, Vt., in 1829, and was graduated from the Castleton, Vt., Medical College in 1854. He served as a surgeon during the Civil War and for many years he was surgeon for the Western New York and Pennsylvania Railroad. He was President of the New York Society of Railroad Surgeons and a member of the National Association.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

NEW ARMY WARRANT—VARICOSE VEINS—SLIGHTS TO MEDICAL OFFICERS—LAWSUITS—DANGER OF PRESCRIBING MORPHIA—PRESENTS FROM PATIENTS ILLEGAL—THE MIDWIVES' BILL—THE TWO COLLEGES—BRITISH MEDICAL MEETING.

LONDON, March 28, 1902.

THE new Royal Warrant for the Army Medical Service has been duly promulgated, and is received by those chiefly affected with mixed feelings. The younger men, and the more optimistic critics, are inclined to accept it as a good step and a token of the War Ministers' intention to be just. Older officers, with a bitter experience of how the War Office has frustrated former royal warrants and broken the royal promises, shake their heads doubtfully, or express want of confidence in anything that will have to be administered by the old official gang.

There has not been time at present for full criticism, but a hasty comparison of the warrant with the report of the committee which preceded it shows that some of the most objectionable points have been changed, *i. e.* the number of examinations for promotion proposed by the committee have been reduced, but there are still sufficient to disgust the really well-informed officer. He is to enter the service by competitive examination—if the War Office can attract competitors—but a further examination must be passed before he is made a captain, and yet another before he obtains his majority. If he passes the last with distinction it will accelerate his promotion to the next rank by a few months, but before he attains it, yet another examination stares him in the face. The officials profess to desire to attract the very best candidates to the service, but they seem rather blind to think that the pick of the schools are enamored of this Chinese examination craze. The most desirable candidates have, as a rule, already had enough of grinding for examination, and are intent on real practical work.

The warrant gives no indication of an increase in the strength of the Royal Army Medical Corps, nor of the burning question of Indian pay—two really vital points involving study leave. If the medical service of the army is to continue to be undermanned, and the Indian grievance unredressed, the new warrant will be as worthless as its predecessors in attracting the pick of the schools. Those young men have heard of the breaches of faith which have been perpetrated by the War Office, and have no confidence in vague official promises. They ask for definite pledges—they would do well to demand securities against the dodges by which their predecessors have been oppressed and robbed.

Some of the points of the warrant are more satisfactory. The Director-General is to have increased rank, the officers are promised an increase of pay, and special pay and charge pay are authorized. Officers of the Royal Army Medical Corps are to be eligible for brevet rank—a reward for special service hitherto denied them. Distinguished service whether in the field or otherwise is also to receive recognition.

The success or failure of the warrant will depend on the sincerity with which it is administered. To attain initial success, the War Minister should pledge himself not to suffer the permanent officials to tamper with it.

The Lettsomian lectures this year were delivered by Mr. Pearce Gould. The Medical Society was fortunate in its selection of a lecturer. The course is intended to be practical, and Mr. Gould took for one of his subjects "Varicose Veins," on which he discoursed with great clearness—the outcome of careful observation and considerable experience. The common view that the condition is due almost, if not entirely, to obstruction to the return of the venous blood through pressure above was repudiated by the lecturer. He accepted the view that varicose veins are rather to be regarded as venous overgrowths, a superabundant development of venous tissue—in a word, venous angioma. In support of this he pointed out that in the great majority of cases varicose veins make their appearance before growth is completed—this he had found to be the case in at least 80 per cent. of his patients. It is quite a common observation that patients, when varix appears, are otherwise in excellent health and their tissues generally sound. Nor do we commonly see any signs of obstruction. Œdema, lividity, etc., are conspicuous by their absence, and yet, in other cases, when venous obstruction is the undoubted cause, how serious are these symptoms. An ill-applied bandage, slightly impeding the venous return, will very quickly give rise to congestion and œdema below. In graver cases of valvular cardiac disease, or the growth of tumors, or plugging of a main vein where the obstruction is gradual but persistent, we are sure to notice the grave effects on the tissues when they are imperfectly drained of venous blood.

How then can we accept enlargement of superficial veins as evidence of obstruction in the main channels into which they open? Further, the beneficial effects of ligature and excision refute the obstruction theory. Pregnancy has often been held to give evidence in support of the obstruction theory, but Mr. Gould shattered this argument. He showed that, though not troublesome, varicose veins were often present before marriage—in fact did not become troublesome until after getting up after confinement or even after weaning the baby. Large ovarian or uterine tumors are attended with varicose less often than pregnancy, showing that some other factor has to be reckoned with. Then finally the sex-incidence of varix is heavier on men than women. Out of 245 cases treated by Mr. Gould 153 were men, and only ninety-two women, although in his hospital he has more female than male beds. Mr. Pearce Gould formulated his view that varicose veins are venous overgrowths, in support of which he instanced their irregular distribution, their relations to nævus, their hereditary character, and their frequent persistence through long years without injury to the function and structure of the parts from which they receive their blood. A varicose vein contains an increase of tissue. This is often said to be fibrous, but Mr. Gould has found it quite as much muscular and endothelial hyperplasia. Associated with the overgrowth there is usually a failure of the valve apparatus permitting regurgitation from the main deep veins into the superficial veins. This Mr. Gould has found to be almost constant.

Trendelenburg, in 1891, believing that insufficiency of the valve at the opening of the internal saphena had a great part in causing varix below, proposed to divide the upper end of this vein between two ligatures, and the operation has been freely practised.

Mr. Gould published, in 1899, the results of fifty cases. At this lecture he presented a table of fifty more cases. This only includes those whose present condition could be given. He has operated on twenty others from whom he has not received a report to date. He concludes that Trendelenburg's operation is simple, safe, and applicable to nearly all cases; that it relieves pain, stops further development of varices, and often leads to shrinking or even disappearance of the varices, also exerts a strong influence in preventing thrombosis. Its good effects are most marked when regurgitation into the superficial veins is most obvious. Its superiority to excision is greatest in cases of widely-distributed and numerous varices, as it exerts its influence on all veins which empty into the saphena trunks. It is, therefore, useful in those widely distributed, even general, varices of the lower limbs in which excision is inapplicable. To ensure success the obliteration of the vein or veins must be effected quite at their junction with the deep veins.

The way in which medical officers in the services are omitted from court functions is one of the reasons that the King's Commission is not popular. As an illustration, the Surgeon-General of the District—who is the next officer in seniority to the General commanding—was not invited to the official dinner at the King's recent visit to Devonport. Of course, the King knows nothing of these slights on his medical officers by the court clerks who make out the lists. They will continue and the service will not gain the popularity it needs until His Majesty is made aware of these slights, nothwithstanding promises (too often broken) of war ministers and warrants.

There have been some rather unusual law cases. A nurse sued Dr. Law for damages for treating her by hypodermic injections of morphia, through which she alleged she lost her health, etc. She seems to have become an habitual morphia taker. Many such persons blame the doctor for first giving them the drug just as drunkards declare they began under medical advice. However, it is an extraordinary thing for a nurse, who had been treated gratuitously, to sue for £5,000 as compensation. The judge expressed a strong opinion that an action ought not to have been brought. The jury stopped the case when Dr. Law had given his evidence, saying they did not want to hear more. But, though the doctor thus triumphs with the sympathy of court and jury, he is necessarily at considerable loss, for the nurse, of course, has no money with which to pay the costs. What a pity Dr. Law did not belong to one of the defence societies?

A grateful patient, a wealthy lady, presented Dr. Price, who had attended her for ten or eleven years, with checks amounting to £800 during 1899 and 1900. One was a Xmas present for £100. The largest sum (£500) was partly in recognition of his work as trustee of an institution founded by the patient, who died in 1900.

Her executors applied to the courts to have these moneys returned, on the ground that the lady did not ask independent advice as to giving them. Yet these executors did not dare to charge the doctor with using undue influence, and their counsel made quite a point that no imputation on the doctor's honor or kindness to deceased was intended. Moreover, the sum was but a moderate one compared with deceased's estate, which amounted to £90,000. Nevertheless the court ordered the doctor to return the money and pay the costs of the action, on the ground that the relation of patient and physician is a confidential one, and where that exists the donor must have had competent, independent advice before a gift can be supported. There is no exception to this rule of law. It is unfortunate for Dr. Price that he does not seem to have known this, or he might easily have asked his patient to consult her solicitor and let him remit through her banker; or, perhaps, these very executors might have been consulted, and thus prevented from grasping at the small percentage of the estate.

The Midwives' Bill is postponed until June, and preparations are being made for opposing it by various amendments.

Smallpox continues its variations. Yesterday there were fifty-four new cases, on Monday seventy-two, and on the intermediate days forty-one and forty-two. The opposition of the antivacs continues to give rise to ludicrous incidents in and out of Parliament, where most absurd questions are put with the object of discrediting the preventive.

Sir William S. Church was almost unanimously re-elected president of the Royal College of Physicians. The King has permitted his name to remain as an Honorary Fellow of this college as well as of the College of Surgeons.

Preparations for the annual meeting of the British Medical Association at Manchester are in a forward state. There are to be seventeen sections. At the meeting at Manchester, twenty-five years ago, there were only six.

Book Reviews.

Outlines of Anatomy. A guide to the Methodical Study of the Human Body in the Dissecting Room. By **Edmund W. Holmes**, M.D., Demonstrator of Anatomy, University of Pennsylvania (1892-1901), etc. Second Edition. Lancaster, Pa.: New Era Printing Co., 1902.

There are few changes from the first edition of this little dissecting room guide, as it appears in its present form. A schedule of dissection for twenty-eight days is arranged, and if the student follows this he will have dissected the whole body pretty thoroughly. The book is not a quiz compend, and pretends to no such use. It is of convenient size for the pocket.

A Retrospect of Surgery During the Past Century. The Hunterian Oration of the Hunterian Society, 1901. By **John Poland**, F.R.C.S., Surgeon to the City Orthopædic Hospital, etc. London: Smith, Elder & Co., 1901.

To give a retrospect of the progress and achievements of surgery during the nineteenth century, is to call attention to all that is most important in this branch of science. The lecturer in this instance need hardly have done more than give a list of the more important discoveries and advances in order to impress us with the advantages which a patient has now over one fifty or sixty years ago. The discoveries of anæsthesia and of antisepsis naturally stand out preeminently in a lecture of this kind, but considerable space is devoted to the subject of *x*-rays, to which the author accords a high degree of importance. The lecture in its present form makes a very readable discourse.

Manual of Physical Diagnosis for the use of Students and Physicians. By **James Tyson**, M.D., Professor of Medicine, University of Pennsylvania, etc. Fourth edition. Philadelphia: P. Blakiston's Son & Co., 1901. 12mo; 298 pages.

Professor Tyson's diagnosis has been for so many years a standard work that the usual attempts in improving successive editions have been virtually unnecessary. The present edition has been revised and some new matter added, but, altogether, the work is not changed in any essential particular.

Handbuch der Physikalischen Therapie. Herausgegeben von Dr. A. **Goldscheider** und Dr. **Paul Jacob**. Teil II. Band I. Leipzig: Georg Thieme. 1902.

This work on physical treatment, previous numbers of which have been reviewed, continues to present the various subjects in a most scientific and careful style. There are fifty-five illustrations in this volume. The first chapter is on skin therapy, by Dr. C. Kopp of Munich, covered in forty-three pages. The next on muscular affections, the next on joints and gout; then follow infectious diseases, metabolism, and diseases of the respiratory tract, to which Friedrich, Gutzmann, Fraenkel, Egger, and Renvers have contributed.

Readers of German will find here all that pertains to baths, gymnastics, massage, electricity, non-cutting operations, such as intubation and aspiration, and other physical methods, well described.

Venereal Diseases.—A Manual for Students and Practitioners. By **James R. Hayden**, M.D., Chief of Clinic, and Instructor in Venereal and Genito-Urinary Diseases, College of Physicians and Surgeons. Third and Revised edition. Philadelphia and New York: Lea Brothers & Co. 12mo., 292 pages.

The third edition of this little volume contains new sections on vegetations and herpes progenitalis, and also many new illustrations. As a whole, it is an excellent and concise book for the student.

Xavier Bichat. Anatomie Générale appliquée à la Physiologie et à la Médecine. Steinheil, Paris, 1901. 2 vols, octavo, 1,100 pages.

Xavier Bichat, one of the great geniuses of medicine, born in 1771, lived, thought, achieved an immortal name, and died in 1802 at thirty-one years of age. His father was a physician. After obtaining his academical degree he began the study of medicine at Lyons, but was soon attracted to Paris by the wide fame of Desault, a surgeon and one of the foremost minds of the day. Shortly after his arrival in Paris he attracted the attention of Desault, who took him into his house, and it was under the guidance of this great man that Bichat continued his studies.

Possessed of an indefatigable activity, of a brain capable of grouping facts and details, and seeking for these facts from the laboratory, the hospital and the post-mortem table, and not from the inaccurate and misleading books of his day, he went farther and faster in a few years than most men do in a whole lifetime. The experiments that he made are remarkable both for their number and originality.

In consequence, Bichat stood at the beginning, and as a founder, of a new era in medicine, for he classified the many isolated items of knowledge and turned empirical, chaotic groping into logical, methodical research. Thus he founded Histology, the science of tissues; General Anatomy, Pathological Anatomy, rational therapeutics, and left such a mark on physiology that for long decades physiologists were wont to entitle essays "Progress of Physiology since the days of Bichat." The object of the Anatomie Générale is:

"To study with precision the properties of living bodies, to show that every physiological phenomenon is finally due to these properties, that every pathological phenomenon is due to their increase, dimunition or alteration, and that every therapeutic phenomenon has for prime object their return to the normal condition; to state the cases in which each is called into play; to distinguish in physiology and in medicine that which comes from the one from that which comes from the others; consequently to determine in a rigorous manner which of the normal and pathological phenomena obey physiological and which physical laws; that is the general doctrine of this work."

"The relation of law and phenomenon as cause and effect is a well-known axiom in physics, chemistry, astronomy, etc. If this work establishes an analogous axiom in the physiological sciences, it shall have fulfilled its purpose."

And that is what he does in this work. It is anatomical physiology more than anatomy. He shows the various systems not merely as anatomical specimens, but alive, in action.

After a consideration, along the broadest lines imaginable, of the tisues in general, he takes up each of the great systems separately, osseous, vascular, nervous, etc. Each is systematically treated as to its general anatomical and histological features; its physical, then physiological properties; its development.

While this is not a work on pathological anatomy, the subjects are enriched by the vast knowledge which he acquired at the post-mortem table, for he gave a tremendous and lasting impulse to this study. In his time, some one here and there did make post-mortem examinations, but never systematically. In the space of a few months, Bichat opened some six hundred bodies and demonstrated the immense advantage that might be derived from their study.

Progress of Medical Science.

The Boston Medical and Surgical Journal, April 10, 1902.

Myokymia.—G. L. Walton reports the case of a man who has had persistent muscular quivering for five years, without atrophy or loss of power. The calf muscles are most affected, but the muscles in practically all parts of the body are subject to the quivering, which is identical with that of progressive muscular atrophy. There is no wasting, and the patient can stand on heel and toes, and make every motion perfectly. This condition has been named myokymia, and has been known to persist unchanged for twenty years, and then to disappear gradually. It is not to be confounded with paramyoclonus multiplex, and has nothing in common with electric chorea of Dubini, or with the fibrillary chorea of Morvau. Even when persistent it is not necessarily in itself of grave import.

The School in Its Effect upon the Health of Girls.—E. G. Brackett, while not wishing to underrate the importance or the effects of the school, criticises its inelasticity. The school is responsible for many of the conditions found among our women, in so far as its demands interfere with the usual and necessary amount of sleep and out-of-door play; in so far as by a competitive or ranking system it increases, during the periods of accelerated growth, its demands on the mental powers, and in so far as it trains the mind at the expense of the body. It is responsible in so far as this system fails to recognize individual variations in the child, and especially between the boy and girl, and thus fails to adapt the training to the individual need, for the method is not only not adapted to girls as individuals, but not even to girls as a whole. At the developmental stage, statistics show that there is a large number of girls who are distinctly below par, who show evidences of distinct neuroses, and who are working dangerously near or beyond their fatigue limit. Of the children who enter the hospitals in consequence of physical developmental defects, hardly more than 5 per cent. are boys.

The Effect of Public School Education upon the Health of the College Girl.—Jane Kelly Sabine says that the type of the American student is better now than it was ten years ago, because of the influence of gymnastics and athletics in the lower schools. Bicycling, golf, and increased interest in all out-of-door sports have also done much to raise the standard. Nevertheless, the faults of the American type would still be marked; namely, flat chest, hollow back and prominent abdomen. Observation of 2,000 students in finishing schools showed defects in eyesight and hearing, and especially marked menstrual difficulties, 75 per cent. being found with irregularities dating from puberty, 60 per cent. had to give up from one-half to two days, and 90 per cent. had leucorrhœa. Since these defects date from the time when menstruation first takes place, when habit neuroses are most easily formed, when morbid sensitiveness keeps the girl at work in school, the reconstruction in her education must be made in the preparatory schools. For whatever position in life she is to occupy she needs good, sound health. Education at the expense of health is worthless. A sound mind in a sound body is a priceless possession; the college girl should represent that type.

Journal of the American Medical Association, April 12, 1902.

The Bacillus Coli Communis in Human Infections.—A. J. Lartigau presents the following conclusions: (1) The B. coli communis is widely distributed in the normal body and in nature; (2) It may, under what seem normal conditions, be carried during life from the intestine to healthy viscera; (3) Agonal and post-mortem invasion of the tissues is common, occurring with great frequency under the most diverse circumstances with or without apparent lesion of the mucous membrane of the intestine; (4) The virulence of the bacillus coli communis is influenced by at least two factors: 1, changes in the physiologic activities of the intestine; 2, growth in new host environments; (5) The rôle of this organism as a primary inciting factor in infection is infrequent. It is as a secondary invader of tissue previously occupied by microorganisms, or of tissue already injured from other causes, that it claims our chief attention; (6) The bacillus may induce inflammatory lesions, mainly suppurative, in the body tissues generally; the infection may originate in the intestine; (7) Its rôle in acute inflammatory lesions of the intestine, more particularly of the appendix, peritoneum, and urinary passages, has been generally overestimated. Whilst it may be the primary inciting factor, other organisms usually take this part, the bacillus coli communis more commonly acting as an accessory factor; (8) It is a factor of importance in the incitement of cholelithiasis.

Report of Cases Treated with Röntgen Rays.—W. A. Pusey reports cases of tuberculosis of the skin, epithelioma, carcinoma of the breast, carcinoma (deep-seated) of the head and neck and of the abdominal cavity, granuloma, keloid, and leukæmia. The paper is well illustrated, and the author's sections seem to show that the rays cause a degeneration of some sort of carcinomatous tissue and subsequent absorption of the same. He believes that a similar change follows exposure to the rays in the other diseased conditions above enumerated. The indications for this method are as follows: (1) In all cases of malignant disease which have been operated on there is reason to urge the subsequent use of x-rays as a prophylactic measure; (2) In all inoperable cases of malignant disease the use of x-rays should be tried; (3) In all such cases there is a probability of relieving pain and a possibility of inhibiting the progress of the disease. The advantages are thus summarized: (1) It is painless; (2) It destroys diseased tissue, but leaves the healthy tissue in its place; (3) It leaves small scars; (4) It can be used in cases where the surrounding healthy tissue cannot be sacrificed; (5) Hence, it is available for cases in which ordinary methods involve extensive operations and serious subsequent disfigurement, as, for example, about the eye and nose; (6) It is available in cases in which ordinary methods are impossible, because of the amount of destruction of tissue which complete removal would require; in other words, it is applicable to many inoperable cases; (7) It often relieves pain.

New York Medical Journal, April 12, 1902.

A Phenomenon Observed on the Tongue in Acute Malarial Infection.—Lucien Loften calls attention to the fact that in acute malarial infection the tongue exhibits one or two (generally two) dark lines, running from the base of the organ to the apex, and usually separated by a clearly-defined tract of clean mucous membrane about one-sixteenth to one-eighth of an inch wide. These lines are pyramidal in appearance, and begin among the large papillæ at the base of the tongue. They vary in width, and may be from one-eighth to one-quarter of an inch wide, gradually coming to a point in the middle of the tongue. In color they resemble the stain of a 10 per cent. solution of potassium permanganate that has been exposed to the air for some time. They are quite different from the discoloration seen in users of tobacco and snuff, and, when once carefully noted, are thereafter easily recognized. This condition will most likely be found from one day to two weeks after exposure or inoculation. It remains in some individuals longer than in others, notably in the negro. It is more beautifully defined from six to twelve hours after the initial sporulation, and remains until the system is thoroughly cinchonized.

Surgical Shock from a Clinical Standpoint.—Eugene Boise takes exception to the prevailing view that shock is due to a paresis of the circulation, especially of the heart and arteries, and believes it to be due to a profound disturbance of the entire vasomotor and sympathetic systems. This disturbing influence may reach the vasomotor center through various channels, as, for instance, by direct irritation of the sympathetic nerves in abdominal operations; by crushing injury to the skeletal nerves, as in railroad injuries; and through the medium of the brain, as in sudden fright. Or two or more of these factors may unite as a causative influence, as in railroad injury, where the influence of sudden and great fright is added to the crushing of the large nerve trunks. The condition induced is essentially an excessive vasoconstriction. As measures of relief Boise advocates the use of nitrite of amyl, strychnine (which, in very large doses, paralyzes the vasomotor centers and so induces vasorelaxation) and saline solution thrown into the veins. The latter should be given at a temperature of 115° or 118° F. Thus administered, the heat of the solution is brought directly to the irritated ganglia, and vascular spasm is relieved.

American Medicine, April 12, 1902.

A Case of Parotitis Iodica.—Enrico Castelli reports this case. The patient was a man of forty-seven years. The writer, after diagnosing arteriosclerosis, prescribed potassium iodide. In ten days the patient was in bed; the eyes were watery, and the eyelids œdematous, and he was also suffering from coryza and from ptyalism. There was a swelling in the region of both carotids. Pressure on the parotid, opening of the mouth, swallowing, and mastication were very painful. The iodide was stopped, and in nine days the swelling and all the other symptoms disappeared. Some days later the treatment was resumed, and the symptoms returned. The treatment was stopped and again the symptoms ceased. The evidence of parotitis iodica seems undeniable in this case.

Rheumatic Appendicitis.—William A. Edwards gives the following résumé of his paper: (1) The present state of our knowledge does not warrant the use of the term rheumatic appendicitis; (2) There seems to be but two conditions in which rheumatism can at all be considered in etiological relation with appendicitis, and these are when a rheumatic endarteritis of the single appendicular artery exists and when the blood supply is greatly diminished thereby. It seems to be pretty well conceded that the entrance of fecal matter of itself does not necessarily give rise to appendicitis, but it is probable that the inflammation may have its origin in the microorganisms conveyed to the interior of the organ by the fecal matter. Even if rheumatism is an infectious disease, and the infection is due to staphylococci whose seat is in the gastro-intestinal tract, it is not improbable that the fæces in these cases are usually toxic; but this, again, is far from proved, so that when considering a so-called rheumatic appendicitis we must resort to the old Scotch verdict "not proven."

Spontaneous Rupture of the Heart.—Don D. Grout gives notes on three cases of this kind, which he has observed. It is interesting to note the similarity of age, size, and location of the ruptures, and weight and condition of the hearts and arteries, in these cases. All three patients were men, and the ages were respectively sixty-five, sixty-eight, and sixty-nine years. Autopsy in the first case, five hours after death, showed the pericardium filled with partially coagulated blood; the weight of the heart was fifteen ounces, it was evidently fatty, and the coronary arteries were atheromatous. A complete rupture, nearly an inch in length, was observed in the lower anterior portion of the left ventricle. In the second case, autopsy was performed thirty-six hours after death. The pericardium contained about 1½ pints of partly coagulated blood. The heart weighed 15½ ounces. A rupture one inch in length was found in the anterior wall of the left ventricle near the apex. The condition of the heart and coronary arteries was practically the same as in the first case. Examination of the third case revealed practically the same condition of heart muscle and coronary arteries as was found in the first two cases. The rupture, also, was about the same as to size and location. Disease of the coronary arteries is probably the most important factor in bringing about the pathological condition necessary to produce rupture of the heart. An interesting point in the second case reported in this article is the evidence of the length of time that intervened between the inception and culmination of the rupture, which was probably about seventeen days. It is positive, at any rate, that it was fully seven days.

Medical News, April 12, 1902.

The Etiological Classification of Varicose Veins of the Legs.—William S. Terriberry first makes a broad distinction between those cases which occur with predisposing cause, and those in which there is no acquired or congenital defect in the vascular apparatus. Further, with or without predisposing cause, all cases of varicose veins may be placed in three groups: (1) The cases due to regurgitation following stenosis above the saphenous valves; (2) The cases due to regurgitation with stenosis inferior to the saphenous valves; (3) The cases due to stenosis without regurgitation.

Spa Treatment of Gout.—Charles C. Ransom, after discussing various theories concerning the cause of gout, states that at present we must be content to accept the fact that we are dealing with faulty metabolism, the cause of which we can only surmise, and base our treatment upon general principles of hygiene. For this reason, the spa treatment seems to be the proper method of procedure. He first describes the bath, which is given in three stages. The preparatory stage is that in which the body surface is put into a receptive condition by means of exercise, or warming the skin with hot blankets, the hot-air bath, or the douche bath. The treatment stage consists in the application of the thermal stimuli in such order and intensity as to produce precise results, as regards heat production and abstraction and the avoidance of injurious reaction. The correct method will depend upon the condition of the patient. In the reaction stage the object is to retain or intensify the results of the bath. After the bath the patient should be covered with warm sheets and be rubbed dry. The internal use of water is always of great value to the gouty. As to diet, the writer believes that, in spite of the many diverse theories, a mixed general diet which contains a fair proportion of vegetable food, will, on the whole, be found most rational and satisfactory. Exercise is also of great value. As to climate, a dry, inland region of moderate altitude will generally be found the best. Sudden changes in temperature are harmful. Exposure must be guarded against. A pleasant environment is very beneficial. In spa treatment the patient is under much better control than at home. For treatment of joints there are various measures that may be employed locally. One of the most important of these is the local douche. Massage of the joint is also used, as well as the hot-air treatment. Lately, static electricity has been used with excellent results.

The Philadelphia Medical Journal, April 12, 1902.

Rubella and the "Fourth Disease."—J. P. Crozer Griffith declares that, as far as his own experience goes, he can see no possible reason for, and every reason against, the assumption of the existence of a "fourth disease." He believes that every infectious disease is liable to variation in its type, both in the individual and in the epidemic, and that aberrant cases and forms, and even aberrant epidemics arise. A new name cannot be given to each of these. The history of rubella shows that it is peculiarly liable to vary. There is still entirely lacking the most important evidence of all that any "fourth disease" exists; namely, we have yet to see the occurrence of scarlatiniform rubella, as generally understood, fail to protect from an attack of morbilliform rubella, or *vice versa*. The writer thinks that the existing evidence in support of the generally accepted view is strong.

Ophthalmia Neonatorum.—Reynolds Wilson gives the following summary of the treatment of this affection: (1) The antepartum care of the birth canal; (2) The scrupulous cleansing of the lids following expulsion of the head, and constantly thereafter in suspicious cases; (3) The non-invasion of the palpebral sac by separation of the lids before the appearance of typical discharge; (4) Prompt and absolute isolation upon the appearance of conclusive signs of specific inflammation; (5) Thorough and systematic irrigation; (6) Astringent application of silver nitrate in cases of prolonged suppuration. In conclusion, as an important adjunct to local treatment, attention should be given to the general condition of the child in cases of debility and malnutrition. The measures directed toward the care of the infant are comprised in cod-liver oil inunctions, small doses of whiskey internally, and breast feeding. At the same time the mother should receive some form of tonic treatment.

British Medical Journal, April 5, 1902.

The Causation of Death During the Administration of Chloroform.—E. H. Embley states that chloroform has an immediate and progressively paralytic effect upon the heart muscle. There is no preliminary period of stimulation. There is no abrupt change in the rate or efficiency of the heart. Heart muscle is very sensitive to the poisonous effect of chloroform—a tension of chloroform in blood corresponding to 0.8 per cent. chloroform vapor in the air inhaled kills the isolated mammalian heart in sixteen minutes. In the administration of chloroform by inhalation to the intact animal, the vapor tension of chloroform in the blood only slowly reaches that of the inspired air.

Presence of a Tooth in the Lung.—William T. Gardner reports this case. His patient was a woman, aged twenty-nine years. She was troubled with a very irritable cough, which was constant day and night. No treatment relieved it. She had recently had an attack of pleurisy. She had a sharp hemorrhage and the sputum was bloody, although no tubercle bacilli were ever found in it. Her temperature was that of a typical phthisical case. After some months a very careful inquiry into her previous history discovered that she had within that year had nearly all of her teeth extracted under chloroform. The writer became convinced that she had swallowed a tooth at this time. The Röntgen rays failed to discover any foreign body in the lungs. Several months afterwards the patient coughed up a ragged crown of a tooth, and since that time her symptoms have gradually improved.

A Contribution to the Study of the Presence and Formation of Agglutinins in the Blood.—M. Armand Ruffer and M. Crendiropoulo conclude that: (1) The cultures of a microbe freed from that microbe by filtration, dialysis, or centrifugalization have a distinct, though feeble, agglutinating effect on that particular microbe. The age of the culture and the constitution of the medium are important factors in determining the quantity of agglutinins present in such cultures; (2) The red blood corpuscles of non-immunized and immunized animals contain no trace of agglutinins; (3) On the other hand, the polynuclear leucocytes of non-immunized animals always possess an agglutinating power greater than, or more rarely equal to, that of the serum. They may therefore be rightly considered as the producers, or, at any rate, the carriers, of the agglutinins; (4) In immunized animals the specific agglutinins appear in the polynuclear leucocytes, and are therefore probably formed in them. The quantity of agglutinins begins to increase thirty to forty-eight hours after the injection, and goes on increasing up to the tenth day or thereabout; they then passed into the serum, the agglutinating power of which increases correspondingly; (5) The formation of specific agglutinins in polynuclear leucocytes and in the serum is preceded and accompanied during the first three or four days after the inoculation of a given microbe by an increase of agglutinins for other microbes. This latter increase is of short duration and stops suddenly, whereas the increase of specific agglutinins persists for a much longer time.

The Diagnostic Value of the Variations in the Leucocytes and Other Blood Changes in Typhoid and Malarial Remittent Fevers Respectively.—Leonard Rogers believes that the percentage of the different forms of leucocytes counted in a stained blood film is of great diagnostic value in differentiating typhoid and malarial remittent fevers, and is easily ascertained. An increase of the lymphocytes to 40 per cent. or over, without any increase in the large mononuclears, points to typhoid as against malarial fever. An increase in the large mononuclears to about 12 per cent. and upwards, especially during the remissions of the temperature, strongly indicates malaria as against typhoid fever. This change is of great value when parasites are absent from the blood. The presence of myelocytes in any number, such as from one to five per cent., points to malaria as against typhoid fever. A high degree of anæmia, such as a reduction of the red corpuscles to below 3,000,000 per c.mm., is much more frequently met with in malarial than in typhoid fever. A very great reduction in the total leucocyte count, such as to below 2,000 per c.mm., is much more frequently met with in malarial than in typhoid fever, while the proportion of white to red corpuscles in malaria is not infrequently less than 1 to 2,000, which is rare in typhoid fever. Leucocytosis can be detected by the presence of a great excess of white corpuscles, upwards of 80 per cent. of which are polynuclears, in a stained blood film, and is often of service in excluding malaria in intermittent fever due to liver abscess or other local inflammation.

Deutsche medicinische Wochenschrift, March 20, 1902.

Charcoal as a Substitute for Iodoform.—Arthur Frommer does not think that charcoal is an efficient substitute for iodoform in the local treatment of tuberculous bone and joint lesions. Fränkel has thought that iodoform thus used acts chiefly as a mechanical irritant, and that, for this reason, equally good results could be obtained by the employment of charcoal. Following the injection of charcoal, a painful swelling of the affected region supervenes, resulting in a more or less extensive necrosis, which is accompanied by fever and continues for two or three weeks. The injection of charcoal-glycerin emulsions produces the same result. The same is never observed after iodoform injections. The difference between these results and those obtained by Fränkel is probably due to the fact that his researches were made upon non-tuberculous animals, and the injections were made into healthy tissue. It is certain that charcoal is much inferior to iodoform in the treatment of tuberculous lesions. The use of non-sterile iodoform-glycerin emulsions gives better local and general results than the use of similar sterile preparations. The infective danger of injections of such non-sterile emulsions is not to be considered. In 1,000 such injections Frommer has never produced secondary infection. Following these injections iodine is excreted in the urine for from two to three weeks. This shows that its action is not only local but general. Indeed, the general condition is always benefited by this treatment. Sterilized iodoform injections are not followed by such extended excretion of iodine in the urine.

Iodophilia.—Siegfried Kaminer, as the result of experimental work, regards the so-called iodine reaction of the leucocytes as due to a toxæmia. It is never present under normal conditions. The leucocytes of guinea-pigs and rabbits give this reaction if the animals are inoculated with virulent cultures of streptococcus, staphylococcus, pneumococcus, diphtheria bacillus, typhoid bacillus, anthrax bacillus, colon bacillus, the bacillus pyocyaneus, and Friedländer's bacillus. The bacillus of hen cholera does not produce the reaction. The reaction is also produced by the inoculation of the toxins of these microorganisms. While diphtheria toxin produces the reaction, tetanus toxin fails to do so. The reaction produced by these toxins is of three grades of intensity: (1) A diffuse brown staining of the protoplasm of the leucocytes; (2) A granular red brown staining of the protoplasm of the leucocytes; (3) A complete metamorphosis of the protoplasm of the leucocytes with the presence of large reddish-brown granules. Animals immunized to diphtheria with diphtheria antiserum, and subsequently inoculated with diphtheria toxin do not show the reaction. The inoculation of ricin and abrin also produces the reaction. The subcutaneous and intravenous inoculation of rabbits with glanders and tubercle bacilli does not produce the reaction. This is, however, readily accomplished by the feeding of tubercle bacilli or the intraperitoneal inoculation of glanders bacilli. The intraperitoneal inoculation of tuberculin in large doses (6 gm.) gives rise to the reaction. It is apparent that iodophilia is diagnostic of a toxæmia, and that the intensity of the reaction corresponds to the intensity of the toxæmia; it seems certain that it is of value as a prognostic and therapeutic indicator.

Tuberculosis Verrucosa Cutis.—Max Joseph and Gottfried Trautmann record statistical observation with respect to the occurrence of this disease, and draw conclusions therefrom concerning the relations between bovine and human tuberculosis. They observed forty-seven cases of tuberculosis verrucosa cutis among 26,294 dermatological patients. Of these six were women and forty-one were men. Of the men nine were cabinetmakers, eight butchers, five locksmiths, four merchants, two laborers, two without occupation, and one each an engraver, mechanic, stone cutter, bookbinder, turner, shoemaker, baker, tailor, painter, and barber. Of the eight butchers, three worked in the same slaughter-house and constantly came in contact with tuberculous animals. However, 585 persons worked in the same slaughter-house, of whom 159 were exposed to tuberculous infection. It is evident, therefore, that a very small proportion of those exposed developed the disease. It should be remembered, however, that other forms of tuberculosis might have been present in some of the other 156. The largest proportion of those who suffered from tuberculosis verrucosa cutis were cabinetmakers. The frequency of the disease among these is to be explained by the great liability of their hands to injury. In these, also, the human source of the contagion is the most probable. Of the eight butchers above mentioned, four were also exposed to human infection. From these observations it is apparent that the infection of man by bovine tuberculosis is rare, nevertheless its possibility cannot be denied. In the treatment of tuberculosis verrucosa cutis the local use of a 30 per cent. resorcin paste is to be especially recommended. It is caustic in action, but elective, acting principally upon the tuberculous tissue.

Münchener medicinische Wochenschrift, March 25, 1902.

Vital Properties of Maternal and Fœtal Serum.—Josef Halban and Karl Sandsteiner, as the result of comparative studies, show that the vital properties of active maternal serum are more marked than those of active fœtal serum. This applies to its hæmolytic, agglutinating, bactericidal, anti-fermentative (antitryptic), antitoxic, and precipitating properties. The human serum examined, if added in excess, impairs the intensity of the agglutination and precipitation. The precipitation is also lessened by the excessive addition of precipitating immune serum. It is certain that active fœtal serum is of the same chemical composition as active maternal serum, but that the active principles are present in the former in reduced quantity. This explains the slight resistence of the new-born to various infections. Further researches are required in order to ascertain at what period of extra-uterine life the vital properties of the serum are fully edveloped.

Berliner klinische Wochenscrift, March 24, 1902.

Serum Diagnosis of Pulmonary Tuberculosis.—Francesco De Grazia, as the result of clinical and experimental research, finds that cultures of the bacillus tuberculosis are agglutinated not only by the serum of tuberculous individuals but also by the serum of those suffering with other infections. Frequently also the same result is produced by the serum of perfectly healthy persons. Furthermore, the serum of tuberculous patients energetically agglutinates cultures of various other microorganisms, such as the staphylococcus pyogenes aureus, typhoid, diphtheria, cholera, and colon bacilli. It is not possible, therefore, to regard this agglutination reaction as specific. No constant relation exists between the intensity of the reaction and the stage of the tuberculous process. In the later stages it may be very marked and in the early stages very slight. The reverse, however, frequently occurs. Dead as well as living tubercle bacilli are thus agglutinated, but with the former the process is much slower than with the latter.

French and Italian Journals.

Chronic Parenchymatous Metritis.—Armand Siredey urges general hygienic treatment as well as the use of local measures in this affection. Congestive tendencies are to be averted by a simple, non-stimulating diet; and by securing free catharsis. Over-fatigue is to be avoided; rubbing and hydrotherapy prescribed. Acute congestive attacks are to be treated by rest in bed, scarification of the cervix, glycerin tampons, etc. Intra-uterine treatment is to be very cautiously used, if at all. Curettage is valueless. Instead of the routine hot vaginal douches, it is better to give slow, prolonged irrigations of four to five liters of water at 104° F. two or three times a day. When there is great pain, it is better to replace the water by a decoction of poppy and marshmallow roots, with some non-irritating antiseptic, as boric acid.—*La Gynécologie, February,* 1902.

A Case of Acute Yellow Atrophy of the Liver.—The points of interest in the case reported by Tito Carbone are: (1) That it occurred in a boy of twelve years. The affection is rare in childhood. Death occurred in ten days; (2) There were signs of cirrhosis preceding the atrophy. Its course was latent, and its existence was discovered at the autopsy; (3) The mesenteric glands were found in a condition of degeneration and necrosis, which would seem to bear out the theory that acute atrophy of the liver is due to the absorption of toxic substances from the digestive tract.—*La Riforma Medica, March* 11 *and* 12, 1902.

Cyst of the Superior Maxilla.—Maass reports the case of a boy, twelve years old, in whom there developed a tumor filling the canine fossa. This growth appeared eighteen months after the extraction of two teeth for a periostitis at the root. This tumor was covered with a thin, bony plate. Exploratory puncture brought forth the contents, which were composed of leukocytes, cholesterine crystals, and pavement and cubical epithelium. The tumor was a cyst of the root of the tooth, due to a proliferating epithelial formation.—*Gazette Hebdomadaire de Médecine et de Chirurgie,* March 20, 1902.

Fetal Variola Not Secondary to Maternal Disease.—Guiseppe Jacontini reports the case of a woman who gave birth to a still-born child, on whom were all the signs of smallpox, of which there had been an epidemic in the neighborhood. The mother had no sign of the disease. The author concludes that there may well be a condition of immunity to certain diseases on the part of a pregnant woman which does not extend to the fœtus. As there was no fever, nor any lesion of the placenta, he holds that the infective substance passed directly from the blood of the mother to that of the fœtus.—*La Riforma Medica, March* 14 *and* 15, 1902.

Garlic in the Treatment of Pulmonary Tuberculosis.—Giulio Cavazzani reports in detail a number of cases in which the administration of garlic absolutely cured cases of undoubted phthisis. The author disclaims any idea of having found a cure for tuberculosis; he simply describes the cases, and asserts that garlic has been of more value to him in treating them than has any other remedy. Three to six grammes a day rapidly reduce the expectoration and finally causes its disappearance. Fever and night sweats cease, cyanosis disappears, and the patient's appetite is greatly improved. All this occurs with great rapidity. The pulmonary symptoms vanish more slowly. Garlic was used of old in bronchitis, and even at the present day is given in the Far East for consumption. It possesses an antiseptic action, and this may, perhaps, be exhibited with especial force in regard to the Koch bacillus.—*Gazzetta Medica Lombarda, February* 16, 1902.

Diagnosis of True and False Intestinal Occlusion in the Course of Pregnancy.—Richelot reports several observations he has made. The first case was a woman of twenty-eight years, pregnant for six months, who exhibited symptoms of intestinal occlusion. Two baths, however, improved her condition and cure followed an electrical bath. The second case was that of a woman whose symptoms simulated those of appendicitis with peritoneal infection. This condition had been precipitated by a fall which had broken her leg. Laparotomy revealed an intact appendix, but the small intestine was empty, retracted, discolored, and bent on itself. This patient was delivered of a dead infant, and the same evening the bowels were evacuated. In this case it was only a nervous affection that had resembled occlusion. The writer calls attention to the necessity in such cases of not only considering the local symptoms, but also of considering the temperament of the patient, especially from the arthritic point of view.—*La Presse Médicale,* March 19, 1902.

Dietetic Treatment of Gastric Catarrh.—Ewald declares that the first indication in this trouble is lavage of the stomach. It will depend upon circumstances whether the morning or evening is the best time. As a rule, the patient prefers the evening, as then sleep is not disturbed. Lavage not only removes the products of fermentation, but also a large number of microorganisms. The favorable effects are increased by using an antiseptic. The functions of the intestine must be regulated. Constipation is the rule in these cases. These patients should never completely satisfy the appetite. Whatever is taken for drink should be lukewarm—neither hot nor cold. The water taken should be pure. Mastication should be thorough. The white meats, fowl and game, are more easy of digestion than beef, mutton or pork. Eggs are not always well tolerated. All irritating foods should be avoided, such as those containing acetic acid, spices, alcohol and rich sauces. Carbohydrates are not well borne. The milk diet is excellent for these cases, but the total quantity necessary is so large that when it is taken in small quantities at a time the patient becomes very weary of the treatment.—*Journal de Médecine de Paris,* March 16, 1902.

Removal of Abdominal Fat in Cases of Large Abdomen.—Pousson speaks of the troubles incident to fatty development of the abdominal wall. Besides the annoying deformity, there very often occurs an obstinate and painful erythema and eczema, under the folds of superfluous flesh which fall down over the hips. To this is added a predisposition to ventral hernia and enteroptosis, for the aponeuroses finally give way under the continuous strain and become distended and relaxed. The writer describes an operation that he has devised for this affection. He relates the case of a woman of forty years, who presented herself for operation for an enormous umbilical hernia. The abdomen was very large and lax, and there was present a painful erythema. After finishing the operation for hernia the writer proceeded at the same time to relieve the abdomen of a part of its superfluous fat. A curved incision was made from one iliac spine to the other with the concavity turned toward the umbilicus. A second incision was then made with the same points for its extremities, but with the middle point about the width of a hand below the first. The fatty tissues thus circumscribed were removed down to the aponeurosis. The two borders of this huge breach were then sutured together. There was union by first intention, and the patient was cured in about fifteen days. The abdomen was firm, and at last reports the result was still most satisfactory.—*Gazette Hebdomadaire des Sciences Médicales,* March 16, 1902.

Rachitis in Relation to Artificial Feeding.—M. G. Variot has spent much time on this subject, and he has come to the conclusion that, aside from mother's milk, which nothing can perfectly replace, the use of sterilized milk is almost as safe as a wet nurse. Mother's milk is, without any doubt, superior to that of animals, but, practically, when the mother is incapable of nursing the child, there are so many possible objections to a wet-nurse that the writer advises the use of sterilized milk for a normal infant. He reserves the wet-nurse as the last resort, in case the child does not thrive on the other treatment.—*La Tribune Médicale,* March 26, 1902.

Transplantation of Sarcoma.—Mayet reports the postmortem findings in a white rat on the fourth of March, in which had been inserted on the twenty-ninth of November a bit of malignant sarcoma. The point of injection was surrounded by a small cyst hanging from the great omentum. About this primary focus were vegetations which had reached the size of the initial growth. In the great omentum and in the gastrohepatic omentum were secondary growths, four or five in number, in the form of white spherical tumors, and of the size of small peas. Near the primary growth was a very vascular tumor, red, pedunculated, and a little smaller than the others. On the surface of the small intestine were several flattened ovoid growths, three or four millimeters in diameter.—*Lyon Médical,* March 23, 1902.

Hydatid Cysts of the Neck.—Léon Thévenot declares that hydatid-cysts of the neck are a very rare affection. As to the etiology, sex seems to have no influence. The affection often occurs in children, but it is between the ages of twenty and thirty years that it is found most frequently. The infection generally comes from animals, and it is the dog that is ordinarily accused as being the source from which the malady is transmitted. The echinococcus, aside from those cases in which it is introduced into the system through a wound of the skin, generally enters through the digestive tube. It is often stopped in its course by the liver, though it may pass out into the general circulation and be arrested in the lungs or even pass still further. This cyst develops so slowly and insidiously that it is only by its volume that it is at last detected. If intervention is early, the prognosis is benign. Otherwise it may open itself into neighboring organs, or become adherent, and its removal will then be made very difficult. The operation may consist of simple incision or of total or partial extirpation of the wall. The former is very simple, but is open to the liability of recurrence. The latter is sometimes difficult. If suppuration has begun, treatment consists of incision and drainage after evacuation of the abscess.—*Gazette des Hôpitaux Civils et Militaires,* March 22, 1902.

American Journal of the Medical Sciences, April, 1902.

Primary Tuberculosis of the Liver.—Louis Frank believes that primary tuberculosis of the liver, though rare, may occur. The infection may take place by way of the intestine and the portal circulation, the bacilli finding entrance through an ulcer in the bowel, and leaving no trace of the place of entrance into the body. Tuberculosis of the liver may infect the other abdominal viscera, and also the peritoneum secondarily, and the process may also cause a great increase of the connective tissue in the liver (interstitial hepatitis). The disease results fatally, he says, within twelve months.

Localization of the Mental Faculties in the Left Prefrontal Lobe.—Charles Phelps, from his work on this subject, makes the following generalizations: (1) In every instance but two of the cases studied, in which consciousness was retained or regained, and the mental faculties were not perverted by general delirium, laceration involving the left frontal lobe was attended by default of intellectual control; the lesion was usually, if not always, of the prefrontal region, and implicated either its superior or inferior surface. Subcortical disintegration, or deep or extensive laceration of the cortex, was specially characterized by abrogation of mental power, and superficial laceration by aberration in its manifestations; (2) In every instance in which laceration was confined to the right lobe, the mental faculties were unaffected, except as they were obscured by stupor or delirium occasioned by coincident general lesion; (3) Compression or contusion of the left lobe only exceptionally produced specific intellectual disturbance.

Albuminous Expectoration Following Thoracocentesis.—David Riesman concludes that: (1) Albuminous expectoration is a very rare complication of thoracocentasis. It is usually serious, and sometimes fatal; (2) It consists in the expectoration of a viscid albuminous fluid closely resembling the fluid of serous effusion; (3) The condition is best explained on the basis of an intense congestion and œdema of the lungs (congestion by recoil); (4) The principal cause seems to be either too rapid or too great a withdrawal of fluid; (5) Serious cardiac disease and morbid conditions of the opposite lung, hindering expansion, are predisposing causes; (6) Under all circumstances, but particularly when these complications exist, aspiration should be performed slowly. If the effusion is large, the amount withdrawn at any one time should be moderate; (7) In some cases it may be wise to perform several tappings, drawing off a small quantity each time; (8) The treatment consists in counter-irritation, venesection, and artificial respiration, together with the use of morphine if the cough is severe.

On the Association of Stone and Tumor of the Urinary Bladder, with Report of a Case.—Edward C. Rosenow declares that, contrary to the views of some authorities, an etiological relationship between calculus and tumor is not to be denied altogether, and calculus seems to favor the development of tumor in a larger percentage of cases than tumor favors the development of stone. In over half of the cases which the writer reviews, it appears that the stone was primary in point of time. Inflammation of the urinary bladder resulting from irritation other than that produced by a calculus has been found to cause an increased liability to new growths; and it is therefore permissible to conclude that the mechanical irritation from a calculus may have the same effect. Tumor of the urinary bladder uncomplicated by stone occurs more frequently in the lower segment. In cases of calculus the anterior wall is nearly twice as often the seat of the tumor as the posterior wall. Both calculus and tumor occur more frequently in the male sex, and nearly at the same age. In from 90 to 95 per cent. of primary carcinoma of the gall-bladder biliary calculi are present, so analogy would lead us to expect a somewhat similar relation between stone and tumor in the urinary bladder.

An Experimental Study of the Effects of Change of Color upon Pigment Bacteria.—Charles A. Oliver concludes that color-changes, both of kind and intensity, take place in and around many chromogenic bacteria when such microorganisms are placed under different color conditions. Rehabilitation of chromogen bacteria into old color environments, after having later obtained a new color-value under any particular color-condition, is quite frequently accompanied, sooner or later, with a return of the germ's color-equivalent to that which it primarily held while in its original situation. Differences of color-conditions in pigment-bacteria most probably signify in part relative changes in the various methods of obtaining sustenance, peculiarities in the kinds and the ratios of foodstuffs, and irregularities in the character of resulting excreta; each species of color-bacterium exhibiting its chromogenic change in a typical and relevant manner, a behavior that has its determining effect upon the very life of the germ itself. The naming of bacteria by specific coloration is only of value when the actual habitat of the microorganism is understood. It is most certain that all color changes of true objective type in living animal or vegetable forms are expressions of biochemical peculiarities taking place in and around the organisms.

Annals of Surgery, April, 1902.

Graves's Disease Treated by Ligation of All Four Thyroid Arteries.—R. H. M. Dawbarn reports the case of a woman of twenty-eight years presenting all the classical signs of Graves's disease. The goiter was not very large, but on account of its dense fascia, severe pressure was exerted on the trachea. Excision was not thought advisable. If unilateral, it leaves asymmetry; if bilateral, death is apt to speedily follow the operation, and there is danger of subsequent cachexia strumipriva. So all four thyroid arteries were ligated. Primary union resulted, and the dressings were removed on the fifth day. The neck, which before operation measured seventeen inches, decreased to fourteen in ten days. Other symptoms also improved. In addition the patient was placed upon the dietary treatment, which has been so strongly advocated by W. H. Thomson; that is, the avoidance of highly nitrogenous food, especially meats, and the use of milk in various forms, and stale bread, combined with the persistent administration of some intestinal antiseptic, such as phenol bismuth, and an occasional mercurial purge.

An Experimental and Clinical Research on the Temporary Closure of the Carotid Arteries.—From experimental researches on dogs and from the results of eighteen operations on patients suffering from various tumors about the head and neck, George Crile presents the following clinical summary: Closure was effected by the use of a clamp inserted through a very small incision. One or more carotid arteries were closed in eighteen patients. Both common carotids were closed in ten; one common carotid in five; one external carotid in three. In all there were twenty-eight closures of individual vessels. The ages of the patients ranged from seven months to sixty-nine years. There were no deaths attributable to the temporary closure of the arteries. In every instance the circulation was resumed immediately upon releasing the clamps. There were no appreciably late effects upon the vessel wall at the point of clamping, and none upon the circulation in the closed arteries and their branches. There were no later cerebral effects. Less anæsthetic was necessary with closed arteries, especially in the cases in which common carotids were closed. In the latter case there may be embarrassed respiration, especially later. The complete or partial release of one or both carotids gave material and immediate assistance to the respiration. The operating time was much diminished, since the field of operation was quite free from blood. The amount of blood loss was strikingly less, as was also the difficulty in keeping blood from the respiratory tract.

Prostatectomy by the Perineal Route.—Parker Syms describes a bladder retractor which has served a useful purpose in the operation named in the title. It consists of a rubber tube of a caliber of 38 French scale, having a rubber bulb attached to one end, which can be dilated when introduced into the bladder. With the aid of this instrument, the operation is performed as follows: The patient is placed in the lithotomy position under ether narcosis; a median perineal section is made, extending from the bulbous portion of the urethra as far back as is safe without injuring the rectum. The membranous urethra is exposed by dissecting backward until the tip of the prostate is reached; an opening about an inch in length is made in the membranous urethra, a staff having been introduced into the bladder; the bladder is now carefully irrigated, the prostatic urethra is dilated, and then the rubber retractor, collapsed, is introduced through this opening in the membranous urethra so that the bulb is well within the bladder; then this bulb is dilated to a diameter of two and a half inches by injecting two and a half ounces of water through the tube by means of a piston syringe; the tube is then clamped, to prevent the escape of the water; firm traction is made on this tube, and then it is turned well up over the perineum and held there by an assistant; it will not be in the operator's way, and it will be found that this traction holds the neck of the bladder and the prostate from receding, and gives the requisite fixation to enable one to enucleate the diseased lobes. Now the capsule of the gland is entered and the lobes are enucleated by the index-finger; in this enucleation the prostatic urethra will be torn through quite frequently; Syms has done this in several instances, but without prejudicing the final result of the case. In some instances the enucleation will be accomplished with comparative facility, though it must not be assumed that prostatectomy is ever an easy operation.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held April 3, 1902.

ROBERT F. WEIR, M.D., PRESIDENT.

The Modern Treatment of Fractures of the Lower End of the Radius as It Is Dictated by the Relations Shown by the Röntgen Rays.—Dr. CARL BECK read a paper with this title. He said that it had been found that the anatomical aspects of the various forms of fracture at the lower end of the radius differ more than in the case of any other fracture. In the first place, the question of whether or not the fracture is extra or intra-capsular was of great importance. A solution of continuity about one inch or one inch and a half above the carpal epiphysis causes the "silver fork" deformity in the majority of cases, but there are still many cases which do not present this characteristic appearance first described by Colles. In classifying the various fractures of the lower end of the radius one should distinguish the following: (1) The epiphyseal fracture; (2) Fissure of the carpal end of the radius; (3) Complete fracture; (4) Incomplete fracture; (5) Fracture of the carpal end of the radius with fracture of the styloid process of the ulna; (6) Associated fracture of the lower end of the ulna, and (7) Fracture of the carpal end of the radius with fissure or fracture of the scaphoid bone. Just as the healing of wounds of the soft parts by first intention required careful adaptation of the wound surfaces, so in fractures a quick and perfect result occurred only under the same conditions. Fortunately, at the present time this could be done through the guidance of the Röntgen rays. In cases of fissure of the carpal end of the radius a simple band around the wrist would insure comfort and sufficient restriction of motion, at the same time allowing sufficient motion of the fingers and hand to prevent adhesions of the tendons. The wrist should be carried in a sling with the ulnar side of the hand on the edge of the sling, and the patient should be instructed to move the fingers frequently as in playing the piano. A good plan was to have the patient carry some marbles in the pocket, and from time to time roll them with the fingers in the palm of the hand. In the majority of cases of fracture of the lower end of the radius associated with deformity the direction of the displacement would be found toward the ulna. He found no dressing better for these cases than plaster of paris. If the direction of the displacement were slightly upward and outward the plaster-of-paris splint should embrace the thumb, and the hand should be moderately flexed. Having applied the bandage, the Röntgen rays should be called into requisition to determine whether or not the fracture had been properly reduced. This fluoroscopic examination should be made not only antero-posteriorly, but also laterally. In the Y-shaped variety one fragment was usually displaced towards the ulna and the other outward. After reduction the fragments should be kept apart and in place by pressure made in the interosseous space by means of a piece of rubber tubing, held in position by a strip of adhesive plaster, passing partly around the forearm. Fracture of the lower end of the radius, associated with fracture of the styloid process of the ulna, was not uncommon, having constituted about 26 per cent. in his experience. This fracture should be put up in plaster of paris in moderate abduction. The fracturing off of small pieces of bone was often mistaken for contusion or sprain. It was not surprising that patients of this class should become rebellious when treated by massage.

The Common Error in Treating Fractures of the Lower End of the Radius.—Dr. J. B. ROBERTS of Philadelphia was the author of this paper. He said that in the fracture under discussion the reduction of the fracture could rarely be effected without the exercise of considerable force. Students were seldom taught that this fracture was one eminently needing to be "set," and that this process required nearly all of the force that could be exerted with the two hands. It should be remembered that the palmar surface of the radius is concave, while the dorsal surface is nearly flat, and that these curves should be restored by the process of "setting" the fracture. The method was not so important as the exercise of the requisite amount of force. There is a slight elevation on the dorsal aspect of the radius, just at the point where the extensor tendons run in grooves. The surgeon must force forward the lower fragment which has been thrust backward by the force of the injury. Reduction might be effected without anæsthesia if the surgeon were quick and bold, though the pain for the moment is very severe. When the fracture had gone unreduced for several weeks it was better to employ general anæsthesia. This should always be employed if the surgeon were so afraid of giving pain that he was likely to slight his work. Pressure with the surgeon's finger tips would usually show him if the normal curves of the bony surfaces had been restored. When the fracture had been thus reduced the patient would hardly have any further need for the surgeon. A patient who could be trusted not to subject the forearm to muscular strain and not to fall upon it would probably do well if he only wore a sling for three weeks. It is usually safer, however, to apply a straight posterior splint, extending from the middle of the forearm to the middle of the metacarpus. In many cases a wristlet of adhesive plaster, three or four inches wide, would be found a simple and efficient dressing for this fracture. If these simple suggestions were heeded no fracture would be so welcome as that of the lower end of the radius because of the speedy convalescence and the very satisfactory results.

The Treatment at the Vanderbilt Clinic.—Dr. E. M. FOOTE read this paper. He said that most of the surgeons at this clinic were of the opinion that an anæsthetic was not necessary except in complicated cases, or in very nervous patients, but personally he was strongly in favor of using an anæsthetic, believing that this had very much to do with securing a good result. He also thought the Röntgen rays were most useful in guiding the treatment of this fracture, but, as a rule, four *x*-ray pictures would be required, two before and two after the dressing, and as this involved an expense of $25 to $40, the method was hardly available among people of slender means. No uniform splint was employed at this clinic, the splint being adapted to the individual case. While he believed that the *x*-ray was most useful and important, the clinical diagnosis should not be neglected, and undue reliance be placed upon the *x*-ray diagnosis.

Treatment at the Hudson Street Hospital.—Dr. F. L. TAYLOR read this paper. He said that in many cases traction alone without an anæsthetic would suffice to effect reduction of the fracture. In a few cases it might be necessary to overextend, and then sharply flex, the part. When the bony surfaces were obscured by swelling a fluoroscopic examination was made. When the radius and ulna were separated by soft structures, complete reduction might be impossible, and in such cases a very serviceable, though somewhat unsightly, wrist would result in time. At this hospital the fracture was put up in anterior and posterior molded splints, in a partially prone position, with the wrist slightly extended. The splints extend from the junction of the middle and upper thirds of the forearm to the middle of the palm and of the dorsum, respectively. The parts having been smeared with vaseline, the plaster splints are applied directly to the skin, and are removed until the end of the third or fourth week. In children and in inebriates the splint is kept on a week longer than necessary, to avoid refracture. This form of splint allowed of the radius and ulna being held together, thus preventing the marked spreading of the joint so often seen; it allowed of carrying out frequent massage, and it enabled the patient to put the arm through the coat sleeve. In old and neglected cases an improvement could sometimes be effected by refracture under anæsthesia.

Treatment at the New York Hospital.—Dr. B. T. Tilton presented this paper. He did not think enough stress had been laid upon the importance of using anæsthesia in order to insure thorough reduction. Many of the cases coming to the New York Hospital were not perfectly fresh, and hence an anæsthetic was usually required. When there was any tendency to impaction of the fragments, anæsthesia seemed to him imperative. He had chiefly used the ordinary wooden splint, padded in three places, viz., over the dorsum of the arm, on the palmar surface, and on the lower end of the ulna. He only made use of the plaster-of-paris splints when there was a tendency to displacement. The after-treatment seemed to him of much importance in order to insure a good functional result. He was accustomed to resort very early to finger movements, especially in persons over forty. At the end of the first week these movements were begun, and the splint was gradually shortened, so as to facilitate this. The fingers were particularly to become stiff if kept straight. He had seen results which were good at the end of three weeks, yet the removal of the splint at this time had ultimately caused a return of the deformity. He was, therefore, opposed to the early removal of the splint.

Treatment at the Roosevelt Hospital.—Dr. W. C. Clarke said that it was customary at this hospital to make the first examination under ether or gas anæsthesia. After reduction of the fracture, a molded splint was used anteriorly and posteriorly, as it was found to be much more comfortable than the straight wooden splint. The splints reach from near the elbow to the middle of the fingers. In young persons the hand was put up straight, but in persons over thirty years of age the hand was hyperextended on the forearm. At the end of the first week the splint was shortened to the base of the fingers, and at the end of the second week it was shortened up to the wrist. After three weeks the splint was shortened sufficiently to allow of pronation and supination. The patient then received massage daily, a part of the treatment which apparently did a great deal toward securing a good functional result. Examination under anæsthesia had been found so satisfactory that the x-ray had been used only to a limited extent.

Massage and Hot Air Useful.—Dr. J. P. Fiske spoke in favor of the more extended use of the Röntgen rays. He thought anæsthesia should be employed in all cases of Colles' fracture, and that if this were done as a routine measure there would be fewer poor results. The introduction of massage had greatly improved the results. The employment of dry heat at 150° in cases of fracture near the large joints, especially in persons over forty years of age, had been demonstrated to be exceedingly useful, as it caused an earlier return of function. Only when there was a tendency to displacement should the splint be kept on as long as was necessary to secure bony union.

Dr. George R. Fowler of Brooklyn said that he had hoped to hear more said about the diagnosis of the more obscure cases of fracture of the lower end of the radius, aside from the use of the Röntgen rays. A large number of persons suffering from this injury were unable to pay for the use of the x-rays, and hence it was important to discriminate in other ways between simple contusion and sprains, and actual fracture of the base of the radius. He had hoped to hear something said about the method of determining this by shortening of the radius as compared with the ulna and the elevation of the styloid process of the radius to the same level as that of the ulna. In his opinion, this was a fairly good guide if the case were seen sufficiently early. A deformity which was not appreciable without the use of the Röntgen rays was not likely to give rise ultimately to any great impairment of function. In the cases referred to he had been in the habit of removing a portion of the lower end of the ulna, and had succeeded in lessening or entirely overcoming deformity, and, at the same time, restoring the hand to a condition of comparative usefulness.

Dr. Stephen Smith said that, probably, no other fracture had given rise to such a large variety of methods of treatment, yet it was an interesting fact that the man who first described this fracture stated that he uniformly cured his cases without the slightest deformity, and secured a perfect functional result by a very simple method. That method consisted in putting a transverse pad on the prominence on the dorsal surface, and holding it in place by a bandage, and in putting over this a tin splint and another bandage. The speaker said that, according to his own experience, many cases could be quickly reduced, but would quickly return if traction were not kept up. In other cases, no matter how much traction were made, proper reduction could not be effected. The dressing he had ordinarily employed he believed he had first seen used in the New York Hospital. It consisted of two wooden splints, extending to the bases of the metacarpal bones posteriorly, and to the base of the thumb on the palmar side. These two splints were kept in place by strips of adhesive plaster, so applied as to give support to the ulna and at the same time hold the splints in position, and leave the site of the fracture entirely exposed. Dr. Smith said that he recalled the case of one hospital patient who disappeared after the first application of this dressing, and did not return for four months, yet at this time the dressing was found to be in perfect position. He had advocated the use of this dressing when teaching students, and had subsequently learned from many of them that they had found it most serviceable in their practice.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, Held March 27, 1902.

James N. West, M.D., Chairman.

A Clinical Report Relating to Hemorrhage Persisting Notwithstanding Curettage; Also Secondary Hemorrhage Following Abdominal Section.—Dr. Egbert H. Grandin read this paper. (See page 571.)

Dr. H. J. Boldt recalled an instance of uterine hemorrhage, observed some years ago, in which the source of the hemorrhage was found to be a cavernous angioma. He agreed with the reader of the paper that in almost all instances one could be reasonably certain regarding the existence of a secondary hemorrhage, and also that the diagnosis could be cleared up by exploration through the culdesac. Some years ago he had stated, in a discussion on abdominal surgery, his opinion that nine-tenths of the deaths occurring after abdominal operations, and ascribed to shock, were really due to other causes.

Dr. William S. Stone reported on the examination of the vascular thickening found near the horn of the uterus in one of Dr. Grandin's cases. Microscopical examinations showed nothing more than a hypertrophic endometritis and a recent exudative inflammation in the stroma.

Dr. A. Brothers spoke of a case of uterine hemorrhage in which curettage and amputation of the uterus had failed to check the bleeding. He had then tried vaporization of the uterus with a like result. He had accordingly removed the uterus and found hypertrophy of the muscular structure, and what the pathologist reported to be incipient carcinoma. In another case, after repeated curettage had failed to control the bleeding, he had removed the uterus and found a deciduoma malignum. In still another case curettage and vaporization with superheated steam failed to control the bleeding, and after removal of the uterus the pathologist was unable to find any cause for the hemorrhage. He had had two cases of secondary hemorrhage, both following the use of a mass ligature, and in both he had reopened the abdomen as advised by the reader of the paper.

Dr. H. N. VINEBERG said that secondary hemorrhage in the majority of cases was primary hemorrhage that had not been arrested—in other words, a small bleeding spot was frequently left behind uncontrolled, in the belief that it was of no importance. In his opinion, the differential diagnosis between internal hemorrhage and shock was not an easy matter. Many nervous women, after recovering from the stimulating effect of the ether, develop a rapid pulse, which causes the surgeon some anxiety for a time. When internal hemorrhage was suspected he thought it was better to reopen the abdominal incision. The making of an exploratory incision through the culdesac was not always an easy procedure, because of the formation of adhesions and the consequent danger of opening into the intestine. For this reason he did not agree with Dr. Grandin as to the advisability of making this posterior exploratory incision in cases of suspected hemorrhage.

Dr. PHILANDER A. HARRIS thought that most of the cases of so-called shock were really examples of hemorrhage. He wished Dr. Grandin would lay down some definite rules for making the differential diagnosis other than by posterior vaginal incision, for, the latter procedure had certain manifest disadvantages. The speaker narrated a case in which twelve hours after the operation the pulse rose from 90 to 130, although the temperature was normal. Two doses of morphia were given without clearing up the diagnosis. Thinking that this rapid pulse without fever indicated internal hemorrhage, he reopened the abdomen, and although at that time the patient's pulse was 150 he was chagrined to find that there was no hemorrhage. The temperature was normal at this time, but began to rise immediately after closing the abdomen, and at the time of the patient's death, twenty-four hours later, the temperature was 105° F. This case was reported to show how, in a case of sepsis, there might be at first a rapid pulse without elevation of temperature, and so might lead to an erroneous diagnosis of internal hemorrhage.

Dr. G. H. BALLERAY reported two cases in which he felt that if he had reopened the abdomen the patient would have died. It should not be forgotten that a patient may become almost pulseless from shock entirely independent of hemorrhage.

Dr. L. J. LADINSKI said that he did not believe it was necessary to make an exploratory incision in order to establish the diagnosis of extrauterine pregnancy, and he declared that the diagnosis could be made as certainly in this affection without such a procedure as in other pelvic diseases. Moreover, operation was indicated in the cases most likely to be mistaken for ectopic gestation. He thought it would be very difficult to make an exact differential diagnosis between hemorrhage and shock, pure and simple, but a very large majority of cases of so-called shock were really due to hemorrhage. Mention was made of the case of an extremely nervous woman who went into such a condition of extreme shock that he had hastily opened the abdomen, but had found absolutely no bleeding. The patient recovered, showing that the case was one of pure shock.

Dr. GRANDIN said that he had never made the statement that it was necessary to make an exploratory section in order to make the diagnosis of ectopic gestation, although frequently an exploratory vaginal section was indicated in order to make a positive differential diagnosis in the obscure cases. In very nervous and hysterical women the pulse might remain at 140 for several days, but it could be brought down during sleep by the use of morphia. Given the rapid pulse, the gradually, increasing pallor of the mucous membranes, the air hunger, the elevation of the surface temperature of the abdomen and the bulging of the posterior vaginal fornix there could be absolutely no question about the presence of internal hemorrhage. If in such a case morphia were administered the symptoms would be aggravated instead of relieved, as they would be in a case of shock. The great value of the posterior vaginal section was that it enabled the timid and the inexperienced surgeon to establish the diagnosis. He was thoroughly satisfied that he could make an incision into Douglas' culdesac without disturbing the patient and without anæsthesia, and without injuring the bowel determine whether or not hemorrhage was present.

Michel's Mettallic Clamps for Skin Approximation.—Dr. H. J. BOLDT exhibited this simple device, which, he said, he had found convenient and useful for skin approximation. The clamps are cheap, can be readily sterilized, and are quickly and accurately applied.

An Improved Tube for Intravenous Infusion.—Dr. PHILANDER A. HARRIS exhibited the Kelly tube, which he had modified by having several swells made on the shank of the tube, so as to readily accommodate snugly the various sizes of rubber tubing. Of course, a similar device had long been used on rubber hose, but his object was to apply it to the infusion tube, so as to make that instrument available for instant use at any time.

A Retractor for Exposing the Retrouterine Space in Abdominal Section.—Dr. HARRIS also exhibited a broad metal retractor having a long curve, which made it easy to bring the uterus forward and upward. The handle of the retractor is bent at a right-angle to the shaft of the instrument.

Dr. LADINSKI said that this modification of the infusion tube had been suggested several years ago by Dr. Luckett, and that such a tube was now in the market.

Dr. BROOKS H. WELLS objected to the use of Michel's clamps, on the ground that a subcuticular suture of silkworm gut would answer the same purpose, and it was well not to introduce unnecessary complications or instruments.

A Unique Monster.— Dr. A. ERNEST GALLANT presented this anencephalic monster. There was an entire absence of one side of the body from the right shoulder down. The left side of the body had swung around so much that the left hip was where the right shoulder should be. There was no brain and cranial bones, though the face was well formed. The diaphragm was absent and the foot had seven toes. Radiographs, taken by Dr. William J. Morton, were exhibited. The monster had been delivered at term by Dr. James A. Campbell after what the midwife called a normal labor. It was the mother's thirteenth pregnancy.

Dr. BROOKS H. WELLS said that the cause of the monstrosity must have been some injury to the fœtus at a very early stage of its development, which destroyed one-half of the body. He suggested that the monster be called a hemisomus.

Dr. S. MARX said that it was unfortunate that no accurate history of the labor was obtainable, because most of these monsters were born with very little liquor amnii. It was supposed that distortions occur as a result of absence of liquor amnii and the consequent pressure upon the fœtus.

Dr. WELLS said that quite a large percentage of monsters are born in connection with the opposite condition, hydramnios. He recalled one case of this kind, in which he had found an entire deficiency of the front part of the fœtus.

Ovarian Cyst Mistaken for Ascites.—Dr. G. H. BALLERAY exhibited an ovarian cyst removed from a woman who had been admitted to the medical ward of the hospital on the supposition that she was suffering from dropsy. Vomiting was very severe, and he opened the abdomen. This operation revealed a simple cyst of the ovary free from adhesions. The vomiting ceased at once, and she made a good recovery. The tumor weighed seventeen pounds.

Vaginal Hysterectomy for Puerperal Sepsis with Microscopic Sections of the Uterus.—Dr. H. J. Boldt reported this case and presented the specimens. The patient, a primipara, had been confined six days previously. According to the statement of her physician, the labor had been tedious and complicated by an adherent placenta, which was detached manually. On the third day after confinement the patient had developed a temperature of 101 to 103.5° F. The uterus had been irrigated a number of times with a weak bichloride of mercury solution. On the sixth day he had seen her in consultation. The countenance had the expression of one ill with intense septic infection. The pulse was 136 and the temperature 103.6° F. The abdomen was neither distended nor sensitive to pressure, showing an absence of peritoneal irritation. The uterus was large and boggy, and the cervical canal sufficiently patulous to admit a finger. No placental tissue could be felt in the interior. The parametria were free. There was no odor to the lochia. Dr. Boldt diagnosed septic infection, limited to the uterus. The patient was transported to the hospital the same night, and on arrival there a blood culture was immediately made. An intravenous infusion of 1,000 c.c. of saline solution was given, and subsequently the uterus was irrigated with boric acid solution, and an ice coil placed on the abdomen to reduce the temperature. A chill followed the intravenous infusion, but it was not repeated, and subsequently the temperature declined to 99° F. On the following morning the condition of the woman had markedly improved. The temperature, however, rose again. From this time on she became practically unconscious, and remained so, although the temperature dropped again to 99°. A number of blood cultures, taken at intervals, showed no microorganisms. The local condition still being as it was at the time of the first examination, Dr. Boldt decided to do a hysterectomy. Because of the semi-conscious state of the woman only a few inhalations of nitrous oxide were administered. The uterus was removed in a few minutes, and the patient was put to bed in about the same condition as before operation. During the first twenty-four hours her condition seemed to improve, as was manifested by a better and slower pulse and temporary disappearance of somnolence, but after that she began to sink again, and died on the third day. Unfortunately, an autopsy was not obtained. The microscopic sections of the uterus showed the invasion of streptococci through the mucosa in one place just beyond the boundary line into the muscularis. No other microorganisms were seen in the sections. Dr. Boldt said he had not been able to save any patients ill with bacteremia (the invasion of the circulation by microorganisms), and was therefore still undecided as to the proper treatment of such patients. He had had recently a number of patients desperately ill with septic infection. Blood cultures proved negative. They were treated on the plan outlined by him in a recent paper on puerperal septic infection, and all recovered. He could not explain his bad results in the bacteremic patients, when others, notably Prochownick of Hamburg had achieved such good results with hysterectomy. He did not believe that, in view of such testimony, we should absolutely condemn the procedure, unless further accumulated experience should show it to be irrational. Theoretically it did not seem possible for such patients to recover, because the blood was a good growth-medium for such microorganisms, and when such a small quantity of blood as was used for a culture already showed their presence, it was to be assumed that a goodly number must be present in the circulation—certainly more than the vitality of the system can overcome, even if the primary source was removed. The organisms in the blood would multiply too rapidly to allow of a good result.

A Large Ovarian Cyst.—Dr. A. Brothers presented an ovarian cyst weighing thirty-eight pounds which he had just removed by operation. The woman had been sent to him by her physician with a diagnosis of ascites, but physical examination at the hospital had led Dr. Brothers to doubt the correctness of this diagnosis. The tumor, which was a monolocular cyst, was removed through a two-inch incision because of the absence of adhesions.

Dr. Wiliam S. Stone said that he understood Dr. Boldt to argue that when the streptococci or other microorganisms had reached the general circulation the case was not suitable for operation. It should be remembered that often the infection becomes general, and yet so few bacteria are found in the blood that one may be readily led to infer that no general infection had taken place.

Dr. Boldt replied that when the point of infection was only in the uterus, so far as could be determined by examination, and the infectious elements were already in the blood, then, he thought, the uterus should be removed. He relied upon the blood examination to tell him this.

Further Remarks on Intestinal Anastomosis.—Dr. Frederick Holme Wiggin said that he presented this paper to this Section because operating gynecologists were so apt to wound the bowel that they should be conversant with the methods of repairing such injuries. It was important to remove all thickened intestinal tissue. He had found horsehair the best suture material, as it was elastic and allowed the use of a small needle. He objected to the Murphy button on the ground that the instrument was a foreign body and was occasionally retained, necessitating a second laparotomy, and that the variations in the construction of the button, wholly beyond the control of the surgeon, made this device unreliable and dangerous. Moreover, the caliber of the button easily became clogged with fecal matter. Maunsell's great work was the demonstration that the bowel can be safely united by means of sutures passed through all the coats of the bowel, and that the knots can be placed within the lumen. His method required no mechanical device, and it would have undoubtedly come more into favor had it not happened that the method was brought to the notice of the profession at the time when the simplicity and the ingenuity of the Murphy button had caught the popular fancy. Dr. Wiggin then described his previously published modification and improvement of the Maunsell method of intestinal suture. By this method of suturing any portion of the intestinal tract can be united to any other portion. The mesenteric portions are first united. He had followed a number of these cases for two or three years after the operation and had never found any evidence of constriction of the bowel. Dr. J. Gregory Connell substituted a loop suture for the circular one employed by Dr. Wiggin, a modification of no great practical importance. It should be remembered that hydrogen dioxide could be safely employed for cleansing the peritoneum, that special care must be taken in uniting the mesenteric portions, that the formation of intestinal adhesions may be prevented by leaving behind in the peritoneal cavity a quantity of saline solution before closing the abdominal wound, and that there was ordinarily less danger from closing the abdominal wound than from packing with gauze, and that union of the sutured parts takes only about sixty hours.

Dr. Brooks H. Wells said that it was certainly a great advantage to be able to do an intestinal anastomosis at any time, and with only the instruments that the surgeons might happen to have with him. He had personally had very good results from the use of the O'Hara forceps, the operation being easily performed and the convalescence being exceptionally smooth. This forceps makes it very simple to bring together the two portions of bowel, and a mattress suture of horsehair completes the operation. After the application of the stitches the forceps are drawn out.

Dr. Boldt said that he had recently had a case in which the Murphy button had become obstructed by hard fecal matter, and death had resulted. He would like to know how Dr. Murphy meets this objection.

Dr. WIGGIN replied that Dr. Murphy made no effort to answer that objection. He did not think the button was being used very much at the present time. Undoubtedly good results might be obtained with the forceps described by Dr. Wells, but he thought it was rather better to put most of the knots on the inside, because in this way there would be less danger of the formation of intestinal adhesions. It also seemed to him well for the surgeon to accustom himself to dispense, as far as possible, with special devices.

THE PRACTITIONERS' SOCIETY.

One Hundred and Seventieth Regular Meeting, Held on Friday, March 7, 1902.

JOSEPH D. BRYANT, M.D., PRESIDENT, IN THE CHAIR.

Remarks Concerning the Practice of Aseptic Surgery.—Dr. CHARLES McBURNEY read a paper on this subject. He said that by the term aseptic surgery we mean surgery which is conducted under conditions and with appliances which are as free from germ life as we are able to make them. In the practice of aseptic surgery we assume that every object which can, either directly or indirectly, come in contact with the wound, having been made surgically clean, we may make the wound without sepsis. We assume that wounds made under these conditions will heal without aid other than protection against sepsis, and we discard as utterly unavailing all chemical agents which are intended to hasten or encourage the natural tendency, on the part of the wounded tissues, to repair the damage done them. As far as is possible, with our present knowledge, we cleanse every object which may come in contact with the field of operation by heat, which more nearly perfectly than any other agent sterilizes instruments, ligatures, sponges, towels, dressings and bandages. We cleanse the surface of the patient in the gentlest but most perfect manner, first, with prolonged applications of a simple, non-irritating soap, then with soap and water, which removes all loose material of every description, and we get rid of soap and oily material on the surface of the patient by a final washing with sterile water and ether. We know very well that the skin in its sweat glands and hair follicles is permeated with germs, and for that reason we carefully avoid the use of scrubbing-brushes, caustic soaps and other strong chemical agents, which often break and excoriate the skin, and so afford means for the exit and re-entrance of numerous bacteria, which, if left undisturbed, we know to be harmful.

The skin having been made perfectly clean, a moist sterilized towel will protect it until the moment of operation. The surrounding area of skin, clothing and table is also covered in every direction with sterile material, which should be moist, in order that it may not readily slip and uncover an unsterilized object.

The patient is now prepared for the operation, and there remains to be considered only the living instruments, the hands, which must enter the wound and touch every sterile object about it. The sterilization of the hands has occupied the attention of surgeons and bacteriologists for many years, and while it is possible to temporarily sterilize some hands, if sufficient time and trouble are expended in the process, still the active use of the hands during an operation is accompanied by free exudation from the skin follicles, and by a continuous separation of the epithelium, so that the hand which may begin an operation in a sterile condition cannot be sterile after a few minutes' use. The speaker condemned all use of the naked hand in operations as inconsistent with correct ideas of asepsis. The problem is easily solved by covering the hand with a material which has been boiled and which is impervious to fluids, namely, thin India rubber gloves. The objections which have been made against the use of rubber gloves he regarded as purely theoretical. If the glove fits perfectly, the most delicate objects can be felt with perfect appreciation. As regards the liability to cut or puncture the glove, the careful sergeon is no more likely to do that than he is to commit other gross errors in manipulation.

The forearms, from the wrist to the elbows, should be covered with snug-fitting sleeves made of some sterile material, so that the bare skin of the arms may not come in contact with the wound, instruments, etc. The surgeon and his assistants should be clothed in sterilized gowns or coats. Caps on the head and respirators before the mouth the speaker said he regarded as unnecessary.

In making the wound, knives should be sharp, so that incisions may be clean-cut and not ragged and torn, for the latter condition is accompanied often by the death of minute fragments which favor the development of bacteria. For the same reason, what is called "blunt" dissection is to be deprecated. Especially should delicate tissues like the serous membranes and all those which are low in vitality be very gently handled, that epithelium, upon which so much depends, and minute vessels, which supply nutrition, may not be injured. Hemorrhage should be checked as early as possible, not only to save the blood of the patient and so preserve his general capacity of repair, but also to prevent the formation of small blood-clots in the loose connective tissue, which often give rise to collections of serum, and so creates a condition taxing, more or less, the reparative power. To remove small clots and blood fluid from the field of operation, it should be frequently washed with a 6-10 per cent. hot salt solution, which has been perfectly sterilized. What is called "dry sponging" is not desirable, for by this practice delicate cells are crushed and bruised. Preparations of an antiseptic nature, such as bichloride of mercury, carbolic acid, alcohol, iodoform, etc., are to be absolutely avoided, for if the wound is aseptic they cannot possibly do any good, and they may do positive harm by causing superficial cell injury and so create a condition favorable to germ life. Ligatures to control hemorrhage should be of fine material, so as to leave small knots, and should strangulate as small a bit of tissue only as is essential, and all ligatures should be of absorbable material, like catgut. Hemostasis should be made as complete as possible.

Before concluding his paper Dr. McBurney spoke of the importance of the aseptic handling of septic wounds. Because a wound is already septic the belief is widely entertained that many aseptic precautions may be omitted when operation is called for in such a case. Such a theory is quite erroneous. As regards the activity and virulence of sepsis, we find a great variety in different cases. In some an abundant collection of pus is nearly aseptic, and in others a very slight septic discharge is poisonous in the highest degree when applied to a freshly-exposed tissue. In all cases the addition of fresh septic germs will add to the activity of the sepsis which already exists.

Dr. T. MITCHELL PRUDDBN said that it was interesting to note how closely the practical conclusions of Dr. McBurney were in accord with the results derived from laboratory studies on the mechanism through which both immunity from infection and healing are secured. It would seem desirable to avoid the presence of blood-clots and of injured and dead tissue in a wound not only because these, as the speaker had indicated, might favor the development of bacteria, but also because, since the removal of these foreign materials must be effected by the same agencies as are concerned in the destruction of bacteria, they should, as far as possible, be left free for the accomplishment of the latter end. In other words, it may well be true that if the phagocytic capacities of cells be largely drawn upon for the disposal of dead or foreign tissue in a wound, the local capacity of the body to resist the invasion of germs will be proportionately reduced.

The PRESIDENT, Dr. BRYANT, said that many of the points touched upon by Dr. McBurney were of inestimable value in the practice of aseptic surgery. For example, a vigorous rubbing with a stiff brush for the purpose of cleansing the skin is not infrequently followed by free oozing, and in such cases an avenue of infection is opened, which is avoided by the employment of gentler methods. Another important detail is the absolute arrest of bleeding points and the close coaptation of the wound surfaces, in order to avoid dead spaces. Under certain seemingly aseptic conditions, Dr. Bryant said, he thought drainage was justifiable, because it must be admitted that even under the most favorable circumstances, suppuration occasionally ensues.

Dr. Bryant said he was thoroughly in accord with the views expressed by the reader of the paper regarding the aseptic treatment of septic wounds. There are two reasons why the same amount of care should be exercised in the treatment of a septic wound as of a fresh wound: First, because of the danger of reinfecting a septic wound with other septic germs, and, second, because a lack of the usual precautions in the treatment of septic wounds begets habits of carelessness on the part of the surgeon. In the re-dressing of wounds, also, the aseptic precautions should be just as absolute as in the operative work, if for no other purpose than to instil proper discipline into the minds of those who are brought into contact with open wounds.

In reply to a question, Dr. Bryant said he would advise drainage in a case where he was in doubt as to the proper cleanliness or proper closure of a wound or where he felt that dead spaces might form. The use of a drainage agent is regarded by many as a confession of lack of faith on the part of the surgeon in his own methods, but it should not always be construed in that light, but instead is a determination to be safe rather than sorry in that instance.

Dr. McBurney said he looked upon the proper drainage of wounds as a very important aseptic precaution. The application of drainage to a clean and closed wound does not imply a lack of confidence in the methods employed; drainage should be provided for, as it is better that free blood should escape into the dressings, than that it should collect in the wound, and so occasionally interfere with aseptic repair while awaiting absorption.

The fact that even serious wounds sometimes heal readily in spite of the contamination from dirty fingers and instruments only shows that nature is both powerful and kind. Such isolated cases do not prove anything, but their influence is unfortunate, as they are apt to lead to habits of carelessness in the treatment of wounds in general.

Dr. Andrew H. Smith said that Dr. McBurney spoke of renewing the drainage as soon as the gauze became saturated. This often necessitates frequent changing of the dressings, which the speaker thought might possibly be obviated by inserting, in connection with the sterilized gauze, a very small tube through which a small quantity of salt solution could be instilled continually for the purpose of washing out the wound.

Dr. McBurney said he did not think the suggestion made by Dr. Smith would meet the indications. Take, for example, a large suppurating wound in the thigh, which is filled with gauze with the idea that the gauze should absorb all the infected discharge instead of allowing it to lie in contact with the wound. The theory of this is correct but the method in which it is usually carried out is open to criticism. In most hospitals such a wound is dressed every other day; in some every three days, no matter what the condition of the gauze may be. Now what happens to the gauze may be this: Perhaps after six hours its capacity for taking up fluid has been exhausted, and if the interval between the dressings is forty-eight hours, the gauze, saturated with septic material, will be left in contact with the wound for forty-two hours, whereas if the gauze is changed at frequent intervals, the removal of septic products from the wound will be continuous.

Dr. Bryant said he thought it was wise to raise an emphatic protest against the so-called "packing of wounds." He recently saw an infected wound which was so tightly packed with iodoform gauze that the underlying pus could escape. Only sufficient gauze should be put in to properly drain the wound.

Appendicitis or Colitis.—Dr. Beverley Robinson, M.D., said that the differential diagnosis between appendicitis and mucous colitis may be at times very difficult. I have seen at least one case in which it was impossible, I believe, at first to differentiate the two diseases accurately. Indeed, I am inclined to believe now that the diseases were combined, and that the attack originated in the colon, then extended to the appendix, and finally fixed itself again more especially in the colon.

In colitis the pain may become localized over the appendical region, the resistance of the abdominal walls may be more pronounced over this region, with nausea or vomiting, high temperature, quickened pulse and respiration, we have pretty much the same symptoms as in appendicitis. In colitis the bowels may be loose in the beginning, but without showing mucus, blood, or any undigested food. Later, and with freer and more abundant evacuations, a considerable amount of bile colored mucus is apt to show itself in the stools, and thus with, perhaps, a somewhat lowered temperature, a diminution in the localized pain and a more relaxed, less distended abdomen, we are led to make the diagnosis of confirmed colitis with little or no cause for reasonable doubt. In either case I am inclined to believe that much the same treatment is indicated, short of operative interference. The great difficulty arises where we ask ourselves, should a laxative or purgative dose be employed? If, unfortunately, the appendix be ulcerated, on the point of perforation, or already perforated, a laxative may do great and immediate harm, perhaps directly occasion perforation, peritonitis and collapse. On the other hand, if we give laxative remedies, we may be able rapidly to change and ameliorate most threatening symptoms and avoid the necessity of operation. It is for the careful, wise, and conscientious practitioner to decide, and his mind is sometimes almost equally balanced on one side or the other. If careful consideration of the début and course of the case points somewhat towards colitis, I advise the use of small doses of calomel and soda at half-hour intervals, followed later by castor oil. In one case this treatment settled the diagnosis and the recovery beyond paradventure, and by medicinal agents alone.

Dr. McBurney said he had seen quite a number of cases of chronic colitis where the question was raised as to whether the condition was not really a chronic appendicitis, but he had never seen a case of acute appendicitis of so grave a nature as to make it unsafe to give a laxative or injection for fear of producing perforation where the question was raised as to whether the condition was really an acute appendicitis or acute colitis. When perforation is threatened in acute appendicitis, the diagnosis is usually not difficult to make.

Dr. McBurney said he had also seen one or two cases of unmistakable chronic colitis which were entirely cured by removal of a diseased appendix. This would seem to indicate that the inflammation in these cases had begun in the appendix and extended to the colon; the primary and chief lesion, however, being in the appendix.

The Etiology of Pernicious Anæmia.—Dr. Charles L. Dana said that about a year ago he read before the Society a paper on the etiology of pernicious anæmia, in which he advanced the hypothesis that the disease was a teratological disorder, due to a primary defect in the hæmatogenous organs, producing premature old age of the blood. In support of this theory he reported at the time a fatal case of pernicious anæmia, the patient being one of a family of fourteen, all of whom, but one, had died in early life.

Since presenting that paper, Dr. Dana said, he had investigated this subject more fully, and he found that, as a rule, the family history of these patients had not been carefully studied. Recently, the following case came under his observation: The patient was a woman, fifty-five years old, who had apparently suffered from pernicious anæmia only about two years, but previous to that time she had suffered from nervous symptoms, such as ataxia, paræsthesia and paraplegia. The nervous symptoms began about four years ago, so that apparently they antedate the pernicious anæmia. Upon inquiry it was learned that the patient's grand-parents were apparently healthy; her mother was eighty-nine years old and enjoying good health; her father had died of cancer at the age of sixty-nine. Her mother had seven children and one miscarriage, making eight pregnancies altogether. Of these children, three sisters died of phthisis rather early in life. There was no phthisis in the antecedent family history. One brother died, apparently, of rheumatism and Bright's disease, but his daughter states that his symptoms during his last illness were similar to those of his sister, who is now suffering from pernicious anæmia. Another brother died of what was said to be an accident. One sister is living, and one sister who died had a child who has epilepsy. Three of the other grandchildren are said to be peculiarly high-strung and nervous.

Dr. Dana's patient was a woman of good physique and mental qualities up to the time of the onset of her illness. Her family history, however, plainly shows the influence of a progressive degeneration, and it would be interesting in all cases of pernicious anæmia to carefully investigate the family history in order to ascertain whether it has any bearing upon the etiology of the disease.

Salivary Calculus.—Dr Bryant showed a salivary stone which he had removed from the sub-maxillary duct. It weighed twenty grains and was an inch and one-quarter in length, which is about the usual length of the duct in which it was moulded. The calculus had bothered the patient for about six months. It had given rise to considerable pain, due to obstruction of the duct.

New Instruments.

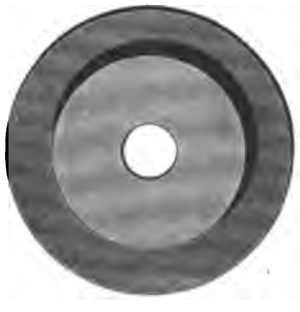
DRAINAGE TUBE FOR PLEURAL CAVITY.

By FREDERIC N. WILSON, M.D.,
NEW YORK CITY.

The drainage tube pictured and described below was devised for the drainage of the pleural cavity in cases of empyema, and is herewith presented to the profession after a year's uniformly satisfactory use, covering a considerable number of cases.

The objects in view when I devised this tube were:

First—To provide for free and sufficient drainage.



Second—To guard against the tube falling into the pleural cavity.

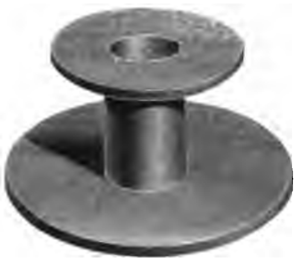
Third—To guard against the tube falling out and thereby interfering with the drainage.

Fourth—To permit free expansion of the lungs to the chest wall without doing any damage to the pulmonary pleura.

Fifth—To provide a drainage tube which should be self-retaining and at the same time easy both of insertion and removal.

This tube is of rubber, in the shape of a spool, and has been made for me, in two sizes, by Mr. P. C. Lorenz, New York City.

The dimensions of small size for children are: Tube length, ⅝-inch; thickness, ⅛-inch; diameter of lumen,



5/16-inch. Small cuff, which goes inside pleural cavity, diameter, 1¼ inches. Large cuff, which is applied to the skin, diameter, 2 inches.

Dimensions of large size for adults are: Tube length, 1½ inches; thickness, ⅛-inch; diameter of lumen, 5/16-inch. Small cuff, 1½ inches. Large cuff, 2 inches.

The small cuff is thin and soft, so it is easily folded upon itself and passed through the opening in the chest wall and into the pleural cavity without difficulty.

The cuts show the tube viewed from end and side respectively.

106 West Forty-seventh Street.

Books Received.

While the Medical Record is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.

The Drug Habits and Their Treatment. By T. D. Crothers, M.D. 12mo. G. P. Engelhard & Co., Chicago. Price, $1.00 net.

A Hand-book of Appendicitis. By A. J. Ochsner, M.D. 12mo, 182 pages. G. P. Engelhard & Co., Chicago. Price, $1.00 net.

The Causes of Death Among the Assured in the Scottish Widows' Fund and Life Assurance Society. 1874 to 1894. By Claud Muirhead, M.D. Royal Octavo, 90 pages. R. & R. Clark, Ltd., Edinburgh, Scotland.

A Manual of Childbed Nursing, with Notes on Infant Feeding. By Charles Jewett, M.D. 12mo, 84 pages, Fifth edition. E. B. Treat & Co., New York. Price 80c.

Contributions to Practical Medicine. By Sir James Sawyer Kent. 12mo, 209 pages. Third edition. Cornish Brothers, Birmingham, England.

Cliniques Medicales Iconocraphiques. By Haushalter, G. Etienne, L. Spillmann. Publication in 4 jesus comprenant, 62 planches composee de 398 figures en phototypie portant sur 284 observations publie en 8 fascicules. Prix de l'ouvrage, complete, 60 francs. C. Naud Editeur, 3 rue Racine, Paris.

Les Fonctions Hepatiques. By Gilbert et P. Carnot. 1 vol., in de 287 pages. Cartonne a l'anglaise. Price 5 Fr. C. Naud, Paris.

The practical Medicine Series of Year Books, Vol. IV. Gynecology. By E. C. Dudley, M.D. 12mo, 212 pages. Illustrated. The Year Book Publishers, Chicago.

Illiteracy in Europe.—Portugal is said to be the most illiterate country in Europe. Sixty-seven per cent. of its people cannot write. In Italy there are fifty-two illiterates in every 100, and in Russia 36 per cent.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending April 5, 1902:

	Cases.	Deaths.
Measles	639	20
Diphtheria and croup	301	35
Scarlet fever	335	29
Smallpox	66	12
Varicella	83	..
Tuberculosis	316	165
Typhoid fever	27	10
Cerebro-spinal meningitis	..	4

Climate of Panama and Nicaragua.—General Henry L. Abbot has recently discussed the climatic conditions that obtain along the lines of the proposed Panama and Nicaragua canals. Throughout the entire year the temperature varies but little from the annual mean of 79 degrees Fahr. High temperature and high relative humidity forbid hard manual labor on the part of white men. The hospital records of the Panama Railroad Company for the past twenty years show that there is no reason to apprehend serious trouble from sickness in the future. At Colon the annual rainfall is about 129 inches; in the interior it is about 94 inches, and on the Pacific Coast the precipitation is about 57 inches. There is a dry season of about four months everywhere along the route of the Panama Canal, and the difficult engineering operations can then be carried on. General Abbot concluded that the conditions are less favorable on the Nicaragua route. Near the Gulf Coast, where the heaviest excavations are required, the rainfall is about 250 inches and there is no dry season. On the Pacific Coast and in the interior there is a dry season, though the rainfall is everywhere greater than along the Panama route.

Instruction in the Care of the Teeth.—Instruction in the care of the teeth ought to be made part of the elementary school course in physiology and hygiene. So much depends upon cleanliness and health of the mouth and the teeth that the reasonableness of this proposition will be at once recognized. The decay of the temporary teeth may work lasting injury. Digestion is frequently impaired by imperfect mastication, due to defective molars. The presence of microbes bred in particles of food left between the teeth is often the source of serious stomach troubles. Nervous difficulties of various kinds can be traced to neglect of the teeth, and the inference that the development of serious lung diseases has resulted from a neglected mouth, is by no means far-fetched. The wisdom of increased attention to the education of children in the things affecting their present and future health and strength is evident to every intelligent adult. Therefore no opposition from school officers ought to be encountered in introducing lessons on the care of the teeth and mouth in the elementary schools."—*School Journal.*

Kipling and the Military Hospital Authorities in Cape Town.—The last time Mr. Kipling was in Cape Town he discovered in the neighborhood a military hospital which was without bandages, and very badly in need of them. The shops in the town had lots of bandages for sale.

He mentioned the matter to a friend and said that he would supply the want. Whereupon his friend rejoined that he would pay for all the bandages that Mr. Kipling would take to the hospital.

A wagon was loaded, and then Mr. Kipling learned that, according to regulations, a hospital was not allowed to receive supplies from private individuals.

"Well," said the author, "I will dump the packages on the pavement before the hospital door, then go in and tell them to come out and clear up the rubbish. Perhaps in that way they can manage to smuggle them into the building without having any red tape."

He then drove off with the bandages, and somehow or other the goods were smuggled into the hospital.

Swedish Census.—The Swedish census, according to an English journal, shows the lowest death rate ever recorded by a civilized nation. During the last decade it has been 16.49 per 1,000. Norway comes next with 17.9, then England with 18.8. Thus the Scandinavians are now the healthiest race in the world, At Skegness, in Lincolnshire, only twenty-five deaths occurred last year in a population of 2,500.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended April 12, 1902:

SMALLPOX—UNITED STATES		CASES.	DEATHS.
California, San Francisco	Mar. 22–29	7	
Colorado, Denver	Mar. 22–29	4	
Illinois, Chicago	Mar. 29–Apr. 5	9	
Danville	Mar. 29–Apr. 5	3	
Peoria	Mar. 1–31	17	
Indiana, Evansville	Mar. 29–Apr. 5	4	
Indianapolis	Mar. 29–Apr 5	18	
Terre Haute	Mar. 22–Apr. 5	1	
Iowa, Ottumwa	Mar. 1–29	32	
Kentucky, Covington	Mar. 30–Apr. 6	18	
Louisiana, Shreveport	Mar. 29–Apr. 5	14	
Maryland, Baltimore	Mar. 29–Apr. 5	2	1
Massachusetts, Boston	Mar. 29–Apr. 5	23	
Brockton	Mar. 29–Apr. 5	2	
Cambridge	Mar. 29–Apr. 5	3	1
Everett	Mar. 29–Apr. 5	5	
Holyoke	Mar. 15–Apr. 5	11	
Melrose	Mar. 5–Apr. 5	2	1
New Bedford	Mar. 29–Apr. 5	1	
Newton	Mar. 29–Apr. 5	3	
Quincy	Mar. 29–Apr. 5	3	
Somerville	Mar. 29–Apr. 5	1	
Michigan, Detroit	Mar. 29–Apr. 5	15	
Ludington	Mar. 29–Apr. 5	9	
Nebraska, Omaha	Mar. 29–Apr. 5	24	
New Jersey, Camden	Mar. 29–Apr. 5	4	
Elizabeth	Mar. 22–29	1	
Newark	Mar. 29–Apr. 5	20	3
New York, New York	Mar. 29–Apr. 5	75	20
North Carolina, Charlotte	Mar 1–31	30	1
Ohio, Cincinnati	Mar. 28–Apr. 4	13	1
Pennsylvania, Altoona	Mar. 29–Apr. 5	1	
Johnstown	Mar. 29–Apr. 5	1	
Philadelphia	Mar. 29–Apr. 5	26	6
Rhode Island, Providence	Mar. 29–Apr. 5	2	
South Dakota, Sioux Falls	Mar. 29–Apr. 5	1	
Tennessee, Memphis	Mar. 29–Apr. 5	15	
Nashville	Mar. 29–Apr. 5	1	
Utah, Salt Lake City	Mar. 29–Apr. 5	1	
Virginia, Roanoke	Mar. 1–31	32	1
Washington, Tacoma	Mar. 23–30	5	
West Virginia, Wheeling	Mar. 29–Apr. 5	1	
Wisconsin, Green Bay	Mar. 28–Apr. 6	2	
SMALLPOX—FOREIGN.			
Belgium, Antwerp	Mar. 15–22	11	6
Brasil, Rio de Janeiro	Feb. 16–Mar. 16.	..	21
Canada, Winnipeg	Mar. 22–29	1	
China, Hongkong	Feb. 16–Mar. 1	8	8
Colombia, Cartagena	Feb. 15–22	..	1
France, Paris	Mar. 15–22	..	2
Great Britain, Glasgow	Mar. 22–28	10	6
London	Mar. 15–22	449	53
North Shields	To Mar. 15	21	2
South Shields	Mar. 15	8	
Italy Palermo	Mar. 8–15	9	2
Mexico, Mexico	Mar. 16–23	3	2
Vera Cruz	Mar. 15–29	2	
Russia, Moscow	Mar. 8–15	2	2
Odessa	Mar. 15–22	3	2
Uruguay, Montevideo	Feb. 22–28	71	5
SMALLPOX—INSULAR.			
Porto Rico, Ponce	Mar. 15–22	6	
YELLOW FEVER.			
Brazil, Rio de Janeiro	Feb. 16–Mar. 16	..	128
French Guiana, Cayenne	Mar. 27	Present.	
Mexico, Vera Cruz	Mar. 15–29	6	3
CHOLERA.			
China, Sheklung	Mar. 31	Sporadic.	
Tung Kun	Mar. 31	Sporadic.	
Straits Settlements, Singapore	Feb. 15–22	..	2
PLAGUE.			
Brazil, Pernambuco	Apr. 4	Declared infected.	
Rio de Janeiro	Feb. 16–Mar. 16	..	1
China, Hongkong	Feb. 15–Mar. 1	1	1
Tsang Shing	Mar. 31	...	20
Japan, Nagasaki	Mar. 12	1 case on S.S. *Taichu Maru*, from Formosa.	

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Original Articles.

ABDOMINAL ECHINOCOCCUS CYSTS.*

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THE infrequency with which echinococcus cysts of the addomen are reported is not surprising when we consider that a cyst not affected by disease or injury, not large or accessible to palpation, easily escapes the observation of both patient and physician, unless its location disturb the function of a neighboring organ, or of the organ in which it is situated.

Of the four cases I report three have involved the liver, and one was situated in the recto-vesical culdesac. Of the abdominal organs the liver is the seat of these cysts in 47 per cent. of the cases, with the right and left lobes occupied in the ratio of 14 to 1. Nearly 70 per cent. of these cysts occupy the lower surface of the organ, and grow toward the peritoneal cavity, where but little resistance is offered by the neighboring soft and mobile organs.

The majority of cysts occupying the anterior segment of this surface are accessible to both palpation and percussion, while those situated in the posterior segment are not accessible to palpation until quite large. In some instances these cysts have rotated the liver upon a transverse axis, displacing it forward, and depressing its anterior border to such an extent as to completely mask the cyst, and to suggest a simple enlarged organ.

In other instances (Most[1]), cysts which have not been accessible to palpation, and have not displaced nor distorted the shape of the liver, have nevertheless caused symptoms by their pressure. Most[2] mentions two such cases, in which he was unable, until operation, to distinguish between an echinococcus cyst and cholelithiasis, in one case, and, in another case, between chronic suppurative cholecystitis and an echinococcus cyst. Körte[3] also mentions two cases strongly and wrongly suggesting cholelithiasis and suppurative cholecystitis, and cholelithiasis and cholecystitis.

Some cases reported by Neisser,[4] Davaine,[5] Arndt,[6] Weber,[7] and Körte,[8] in which a communication had taken place between the bile ducts and the cyst, and in which vesicles, or shreds of membrane, had passed through the ducts, gave a very true picture of cholelithiasis, with and without jaundice. Again, Liholzky,[9] Bahr,[10] and Lehmann[11] mention four cases where, owing to the pressure of an echinococcus cyst upon the pylorus, stomach, and œsophagus, gastralgia, vomiting, and nausea after eating had persisted for very long periods of time. Most[12] reported such a case, where the pressure involved both the œsophagus and pylorus. McArdle[12] operated successfully upon an echinococcus cyst situated beneath the liver, and adherent to the gall bladder, colon, and omentum. This cyst compressed the cystic duct, causing hydrops of the gall bladder and the colon, causing symptoms of ileus. Cysts occupying this surface have had communication with the intestinal tract, and without the slightest symptoms pointing to such an event. Such a case was operated upon, and reported by Krause.[14] Rarer cases where communications have taken place between the intestinal tract and the cyst, and have been followed by infection of the cyst, are reported by Madelung[15], and by Barbillon.[16] In the former case the colon and the cyst communicated. In the latter the stomach and the cyst. In both cases the contents of the viscera revealed the echinococcus membrane. A cyst situated in the region of the liver, and producing scarcely any pressure symptoms, is the following:

R. B., aged twenty-five years, Italy, New York Hospital, November 27, 1897. Personal history: He is, and has been, an exceptionally healthy man. Family history is negative. For the first time, eighteen months ago, he noticed a dull pain or ache in the right hypochrondium. This pain has been gradually increasing in severity. One year ago he noticed that the side was becoming steadily larger, but, beyond this symptom, he has not suffered from anything save an attack of jaundice, six months ago, which lasted a period of three weeks. Since the attack of jaundice, he has been in good health. His only complaint has been the dull pain, and the increase in size of the right hypochondrium. He has lost no flesh or strength. On admission to the hospital his temperature was 99°, respiration 24, pulse 100. The urine was clear, acid 1020, no albumen, no sugar; microscopically, uric acid crystals. The physical examination showed the heart and lungs normal. The liver dulness was increased. It extended about three inches below the costal arch. The margin of the liver could be felt. It was sharp, well defined, and normally regular. On deep palpation, below and behind the margin, and apparently not connected with the liver, was a smooth, elastic mass. This mass appeared not larger than a good-sized orange. It moved with the liver during forced respiration. It was situated in the parasternal line. The abdominal examination otherwise was negative. The diagnosis made was that of an echinococcus cyst, situated within the right lobe, and projecting below the inferior surface. The jaundice was thought to have occurred independently of the cyst. Operation, December 2; ether.

Longitudinal incision, five inches through the right rectus muscle. The abdominal cavity was opened. The liver, which was rotated upon a transverse axis, and was displaced downward, had to be lifted in order to expose its inferior surface, and reveal the tumor. The tumor was found situated in the posterior half of this surface, and was covered by a layer of liver tissue about 1 cm. in thickness. The tumor was firmly fixed, and so immovable that it could not be made to approach the abdominal wall by several centimeters. The projecting mass of this tumor lay in front of the kidney, and to the outer side of the duodenum (one and two parts), and beneath the gall bladder, encroaching upon each organ, yet not producing symptoms in any. A careful examination of the liver revealed no other cysts, nor could any cysts be felt elsewhere in the abdomen. It was thought advisable to pack the wound, from the abdominal wall to the level of the tumor, after closing the greater portion of the wound. Just before applying the final dressing, about one-half of the fluid in the cyst was removed by aspiration, and a solution of corrosive sublimate (1-1000) was injected into the cavity, where, after a few minutes, it was for the most part removed.

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*Read at the June meeting of the Society of the Alumni of Bellevue Hospital.

December 7.—The dressing was removed, and a 5 cm. incision was made in the cyst, liberating about 16 oz. of a clear fluid. The inner wall of the cyst was free from vesicles. The chitin, or cuticular membrane, was removed as thoroughly as possible. As the cyst was immovably fixed, and would not contract, it was deemed advisable to pack it with gauze. The recovery from the anæsthetic was satisfactory. The wound was dressed every three days.

December 29.—A small portion of the cuticular membrane came away to-day.

January 2.—Patient is about the ward, with a small sinus, from which he has no discomfort. The fluid removed was sterile. Hooklets were found.

January 10.—Discharged.

January 31.—Patient returned to-day with his sinus completely healed. Upon the superior surface of the liver these cysts are less frequently found, and, as they are often situated upon the posterior half of this surface, away from observation, they are less accessible to palpation. As they increase in size those upon the anterior half antevert the liver, depressing its border below the thoracic costal arch, and appearing as an elastic and sometimes fluctuating mass below the thorax, above the liver, and closely applied to abdominal wall. Nine such cases have been reported: Löbker, one[17]; Neisser, five[18]; Fick, one[19]; Krasnoff and Kolpatschki, one[20]; and Most, one.[21] The remaining cysts upon the surface usually occupy the posterior half, and are so well concealed that, when recognized, they have already acquired an unusual size. The latter usually retrovert, or tilt the liver to one or other side, and, at the same time, produce an atrophy and upward displacement of the diaphragm, resulting in compression of the lung, and widening of the inferior thoracic aperture. All echinococcus cysts occupying this surface are not necessarily primary occupants of the liver tissue. The retroperitoneal tissue behind the coronary ligaments is directly continuous with that behind the intestine, the kidney, the pancreas, and the spleen, and the latter three organs are in contact with the diaphragm, so that infrequently subphrenic cysts may originate in these tissues and organs. Of these we mention the spleen, the kidney, and the retroperitoneal connective tissue. As the spleen harbors only 3.16 per cent. (Trinkler) to 3.5 per cent. (Frey) of all echinococcus cysts presenting within the abdomen, its frequency as a seat for subphrenic cysts is correspondingly small. Trojanow,[22] who reports twenty-one cases collected in the Russian literature, does not mention a single case.

M. Wolff,[23] Maydl,[24] Magdalaine,[25] Donat,[26] Quenu,[27] Guido,[28] Reboul,[29] Alessandri,[30] Holstein,[31] and Aschoff,[32] have each reported a case originating within the spleen, and in its growth becoming subphrenic, rather than advancing in other directions. Of these cases two were suppurating at the time of operation, four were complicated with pleuritis, one with bronchopneumonia, three with perforation of the diaphragm and suppurative pleuritis.

According to Frey, echinococcus cysts of the kidney represent 10 per cent. of all cases involving the abdominal viscera. These so-called renal echinococcus cysts, many of which originate in the perirenal connective tissue, usually empty into the pelvis of the kidney, and less frequently in the intestine, lungs, or through the lumbar fascia externally.[33]

Simon mentions six cases arising within the kidney, one in the capsule, and two whose origin in the kidney was doubtful. L. Manasse[34] cites fifty-one cases originating within the kidney, with only one case as a subphrenic cyst.

Jarosch,[35] who collected eleven cases, and saw two cases, does not mention one as a subphrenic process. The noteworthy case of Fiaux, quoted by Maydl,[36] remains, therefore, quite as isolated as it did in 1894.

Cysts originating in the retroperitoneal connective tissue as primarily subphrenic, or becoming, by growth and extension, secondarily subphrenic, are rare. In Maydl, seventeen cases of subphrenic cysts, three only might have had such origin. "In almost all instances cysts occupying this locality have been extensions from the subpleural space, the pleura, lungs, the spleen, kidney, and liver." A case occupying the posterior half of this surface of the liver, and presenting a typical subphrenic abscess, is the following:

John D., thirty-two years old, Austria, laborer. August 2, 1896, Roosevelt Hospital. Family history is negative. Personal history, syphilis two years ago. Two years ago he was struck by a stone upon the right chest wall, and since that time he has felt pain at the spot.

On July 10 he was admitted to the medical wards, with the history of fever, pain in the right chest and epigastrium, loss of appetite and sleeplessness, extending over a period of several weeks.

Examination.—Nutrition is fair. There was slight jaundice, slight cough, and tongue is coated. There was pain upon pressure over the right chest, from the sixth rib down to the costal border. It was not marked in the epigastrium, where there was little or no tenderness. Flatness to percussion was present from the sixth rib to two inches below the costal margin of the right side. This flatness was not altered in position. The shape of the thorax was altered in that it was wider than usual at the costal margin. These manifestations, together with the physical signs of compression of the lung above the sixth rib (the failure of breathing and voice fremitus), the area of flatness below the seventh rib, the apparent increase in liver dulness, and the evident displacement downward of the liver, led to the diagnosis of a subphrenic collection of fluid. By deep inspiration the vesicular breathing was heard below its former level, so that the lung and the cystic cavity were probably separate. Moreover, it was probable, owing to the absence of cough, expectoration, dislocation of the heart, and the natural intercostal spaces, that this cavity was not an empyema of the thoracic cavity, although it might have been a sacculated one.

The temperature, 100°–102°; pulse, 72–92; respiration, 20–24. A needle inserted in the eighth space obtained a clear fluid, which, upon examination, revealed the presence of hooklets.

The diagnosis was then assured, and the location of the cyst was thought to be subphrenic.

August 3.—Operation. Ether narcosis.

A curved incision, four to five inches in length, over the seventh, eighth, and ninth ribs, between anterior and posterior axillary lines, was made, exposing these ribs. A resection of four inches of each of these ribs exposed the subpleural connective tissue. An exploring needle was inserted into the pleural cavity, and, no pus being found, the diaphragmatic and costal pleuræ were incised and sutured, so as to close off the pleural cavity. This was necessitated because of the adhesion of these layers, and the obliteration of a small portion of the pleural cavity. After reënforcing the line of suture between the diaphragmatic and costal pleuræ with sterile gauze packing, the needle was inserted through the diaphragm into the abscess. The abscess cavity, being apparently adherent to the diaphragm, an incision two and one-half inches long was made through it, and into the cavity. It was necessary, in entering the abscess, to pass through about one inch of liver tissue. Through the incision, numerous cysts, varying in size from a marble to an egg, and containing clear or slightly turbid fluid, escaped. The fluid escaping with the cysts was sero-purulent, and mixed with blood and bile. The cavity was thoroughly washed with hot salt solution, and many pieces of the cuticular membrane were removed with the forceps. After the cavity, which occupied the greater portion of the right lobe, and seemed to be bounded by the liver upon its lower and outer aspects only, was thoroughly cleaned, it was packed with sterile gauze, to give support to the tissues surrounding it. A sterile dressing was then applied to the transpleural wound.

August 4.—The outer dressing was soaked with a bile-tinged sero-sanguinolent fluid. The condition of the patient was good. The dressing was changed.

August 5.—Dressing was changed twice. The discharge seems less tinged with bile. The inner packing removed. The cavity seems small already. Temperature, 99°; pulse, 100.

August 7, 8, 9, 11 and 13.—Dressing changed daily. The cavity is gradually becoming smaller. The bile still stains the gauze.

This same treatment was continued until September 30, when the wound was healed and the patient discharged as cured.

Another case occupying this surface of the liver, but in the anterior segment only, is the following:

O. G., twenty-eight years old, October 18, 1900, Germany. Was referred to the New York Hospital on account of a swelling in the epigastrium, which was first noticed after recovery from a grippal bronchitis. Neither pain nor discomfort was experienced from this swelling. Unless he had noticed the deformity, he would not have spoken to his physician. The patient was somewhat anæmic. His tongue was clean, his appetite good, and his bowels regular. Urinary examination was negative. There was no jaundice. His pulse and temperature were normal. In the epigastrium, a little to the left of the median line, a tumor extended as high as the costal arch above and to the umbilicus below. The mass by palpation was, probably, three and one-half inches in its transverse and vertical diameters. It was dull upon percussion, and seemed to move with deep inspiration. The anterior margin of the liver was lost in the lower portion of the mass. As no temperature, pain, or previous history of functional disturbance in the abdominal organs, existed, and as the tumor seemed to be attached to the liver above, the diagnosis seemed to point to echinococcus cyst or sarcoma. Its absolute freedom from pain, its elastic resistance, and its smooth contour pointed to an echinococcus cyst rather than to sarcoma. An exploratory operation was advised and accepted.

October 13.—Ether Narcosis.

A median incision, extending from the xiphoid cartilage to below the umbilicus, was made. The peritoneal cavity was entered, and a cyst was seen occupying the upper surface and anterior border of the liver. Probably two-thirds of the circumference of this cyst was covered by peritoneum alone, so that, in an enucleation, only one-third, involving the liver, required careful work. With a fine syringe, one-half the contents were removed, and were replaced with a solution of bichloride (1-500). After five minutes the contents were removed as much as possible, only a very small amount of fluid remaining in the sack. The cyst was now circumvented with an incision, leaving a cuff of peritoneum and subperitoneal tissue. The cuticular membrane was removed intact. The hemorrhage was moderate in amount, and though the arteries were not easily caught and ligated, they responded readily to cauterization and pressure. Two large catgut ligatures were passed through the liver beyond the margins of the depression. They were lightly tied, and just opposed to the wounded surfaces. As this seemed sufficient to stop the hemorrhage, the abdominal wound was closed after a negative inspection of the liver, spleen, kidney, and omentum.

October 14.—Patient is in good condition; temperature and pulse practically normal.

October 21.—Dressing changed, primary union, stitches removed.

October 30.—Patient discharged cured.

November 29.—Patient was examined to-day. The scar is solid and movable upon the underlying tissues (liver); no apparent tendency to a hernia. In none of these three cysts occupying the liver was the hemorrhage a factor in the after-treatment, nor was there any significant flow of bile. This is the usual case, even where incision and drainage of the cyst have been used. In a few instances, however, a greater portion or all of the bile has been passed in this way, and its loss has been very differently tolerated by different individuals. While Wechselmann[37] and Krause[38] have seen a rapid convalescence after a few weeks of such escape, and Israel, after ten months, has seen a gain of five to six pounds in weight, Genzmer,[39] König,[40] Fick,[41] Most,[42] and Körte[43] seem to believe that patients so suffering are greatly weakened, and easily succumb to any intercurrent processes. The usual cause of the escape of bile is seen in the rupture of the innumerable varicose biliary vessels upon the circumference of a growing cyst, when its contents are suddenly emptied. This rupture is followed by the escape of bile, until granulation, cicatrization, and contraction of the newly-formed tissue closes its vessels. When, however, the stools are acholic, and persistently so, together with the escape of a large quantity of bile from the wound, either the common or hepatic ducts are obstructed. This obstruction has been found to be due to (1) A second tumor[44]; (2) To vesicles or portions of the membrane which have been forced into the ducts[45-48]; (3) To the development within the ducts of the echinococcus vesicles,[49-54] or, (4) An independent catarrhal inflammation of the ducts.

In not one of our cases have we been able to find more than one cyst, although as many as twenty have been seen in the liver. In such typical cases as 1 and 3, where the cysts were situated upon the anterior segment of the upper and lower halves of the liver, the diagnosis was reasonably safe, owing to the smooth, elastic mass presenting. No exploratory needle was used, lest the contents of the cyst might escape along the needle tract; especially if the cyst wall was thin and not covered by liver tissue, and give occasion to multiple implantation cysts,[56-57] to an aseptic peritonitis[58-59] to a foreign body, tuberculosis of the peritoneum,[60] or to a septic peritonitis. "The latter result may occur where the fluid withdrawn by the needle is clear and aseptic, for the needle may have punctured a daughter cyst, the contents of which were clear, while the fluid escaping along the needle puncture and from the mother cyst is purulent and septic." (Körte).[61]

The conditions presented by cysts occupying the superior surface and posterior border are very different from those presented by cysts upon the anterior half of the upper and lower surfaces of the liver. Here the needle is used in spite of its danger,[63] as it is the only means we have of telling whether the immediate line of flatness is liver or fluid, as well as the nature of the fluid, and the necessity for a transperitoneal incision.[64]

The next case I present is one involving the pelvic peritoneum between the bladder and the rectum.

J. B., admitted to New York Hospital, February 9, 1898, aged 34 years, Italy. Discharged April 24. Family history is negative. Previous personal history, gonorrhœa ten years ago. Three months ago patient began to have pain over the lower half of the abdomen. Two months ago patient noticed a tumor on the right side of the abdomen, which increased in size for a month and a half, and has remained stationary for the past two weeks. The pain subsequently shifted to the right side, where it has remained until the present time. The pain was dull in character, and was constant. It has not increased in severity. It was independent of the ingestion of food, or of a movement of the bowel. The patient has been constipated. His bowels have moved only with medicine. He has passed no blood per rectum. His urination has been painful and frequent, but he has never passed pus nor blood.

Examination on Admission.—Temperature, 98.8°; respiration, 28; pulse, 88. The abdomen is so tense that nothing can be discovered by palpation. The lower half of the abdomen is protuberant, is flat upon percussion, with a resonant border upon each side of the flatness. There is a slight suspicion of a fluid wave transmission. In all other respects the patient is a perfectly healthy man.

Diagnosis—Probable echinococcus cyst.

Operation, October 16. Ether. A median incision, carried through peritoneum, revealed the wall of a cyst close to the abdominal wall. Examination by the hand showed a cyst occupying a large part of the abdominal cavity. Upon the posterior surface of the cyst the wall was very thin, and during the manipulation of the abdominal pads, before opening the cyst to empty it, it ruptured, allowing an escape of fluid and cysts into the abdominal cavity. The patient was then turned to the side, and the opening enlarged sufficiently to allow a complete emptying of the cyst. After this unfortunate turn of affairs, it seemed only possible to clean the abdomen by a complete evisceration, and a minute inspection of every organ and cavity in the peritoneum, for the cyst held one and one-half buckets full of fluid and smaller cysts. In order to be certain, it was necessary to go over the field twice, and each time to wash the intestines and the surface of the organs with large quantities of hot sterile salt solution. This was accomplished, and every portion of this cavity was seen, including the lesser cavity of the peritoneum, so that, so far as inspection was possible, every cyst was seen and removed by hand. The echinococcus cyst was now examined, and was separated from its intestinal adhesions. All that portion of the cyst wall which was free was removed, and only that portion closely adherent to the peritoneum of the rectovesical space was left. From this portion the cuticular membrane was removed with the greater portion of the connective tissue capsule. That portion of the connective tissue capsule remaining adherent to the rectovesical peritoneum was inverted upon itself and sutured. Owing to the extensive manipulation necessary to free the cyst, and the tearing of adhesions, it was deemed advisable to pack the cavity with gauze. The abdominal wound was sutured with catgut and silk, except at a point for the exit of the gauze packing. A sterile dressing was applied.

February 17.—Wound healed, except for drain.

March 2.—Wound almost healed.

March 19.—Wound healed, except for small sinus.

April 24.—Patient discharged cured.

Heincke[65] says that but few solitary echinococcus cysts of the peritoneum are known, and even of this fact there is an uncertainty, because none came to autopsy. Scheerenberg's case, which was thought to be a solitary cyst of the omentum, proved, after death, to have had two small cysts in the liver, besides the omental cyst.

Most[66] says that a single echinococcus cyst of the peritoneum has not yet been observed. The parallelism is exactly what has been seen in the omentum, where, of all the cases in which a solitary cyst was clinically diagnosed, only one came to autopsy, and in that case two cysts were found.

Gummiel's[67] case, in which an echinococcus cyst, was removed from the omentum, also had smaller cysts situated upon the fundus uteri.

Chroback's case,[68] in which a subserous echinococcus cyst filled the whole pelvis, and protruded into the vagina, was accompanied by a second cyst originating from the liver.

So it is with some reserve that I report this case as a single one of the pelvic peritoneum, and had not the very accident happened which did, and had I not been forced to carefully go over every organ and part of the peritoneal cavity, I would not now report it as such. I only now say that, in so far as our examination went, no other cyst could be seen or felt in the peritoneal cavity. It is not surprising that solitary cysts of the peritoneum or omentum are so rare, for the method of emigration from the intestine is actively participated in by the embryo, which, entering either lymph or arterial vessels, the peritoneal cavity, or the subperitoneal tissue, is thus easily distributed in these localities.[69]

Again, multiple peritoneal cysts are not infrequently the result of rupture of primary liver cysts.[70]

In my particular case the embryo may have easily traversed the retroperitoneal connective tissue and, locating in the pelvis, having developed toward the cavity, subsequently presented itself as an intraperitoneal cyst. As will be seen in the treatment of these cases, no single method has been pursued, and for the reason that cysts occupying the various organs or tissues necessarily present such varying conditions as to demand different methods of operation.

The older methods of puncture and injection into the cyst cavity of solution of corrosive sublimate (Bacilli and Lennet), of an iodoform oil emulsion (Billroth), of the tincture of iodine (König), have been generally abandoned, because of the danger of leakage through the puncture opening, or from the general intoxication which has resulted from the drugs employed. These two dangers, the leakage and the intoxication, are considered avoidable by some. Dieulafoy[71], who treats these cysts by aspiration alone, claims that the danger of leakage is not present when the fluid is removed as completely as possible, and quiet and freedom from pressure upon the cyst is avoided. He operated upon eight cases without accident. Franke, who strongly advocates the use of a 5 per cent. formaline glycerin mixture, especially where the cysts cannot be reached by operative measures, sees no hindrance to healing in the tissue necrosis induced by the formaline.

Again, the older method of incision and drainage has been abandoned on account of the difficulty of keeping the wound aseptic, and of the tendency to the development of hernia and cicatricial bands left between the abdominal wall and the adjacent organs. To shorten the time required to obtain a cure by this method (Kōrte, two and one-half months; Carré, three to six months), Richelot, Reclus Monod, Terrier, and others have resected large portions of the cyst wall, and, after having sutured the margins to the abdominal wall, have drained the cavity as in the operation of simple incision. The reduction in the time was marked. In Kōrte's cases the average time required was one month and twenty days.

To avoid the marked intoxication following the use of iodoform, Bobrow* made use of an indifferent fluid. He cleansed the cyst of its contents. He replaced its contents with the normal salt solution, and sutured the incision in the sack. He expected the presence of bile, blood, or serum in the cyst would be avoided, owing to the gradual absorption of the salt solution. He soon found it unnecessary to use the salt solution. It was quite sufficient to cleanse the sack thoroughly, and to close it by suture.

At about this time Delbet introduced the method of "Capitonnage."[72] This method consisted in emptying the contents of the sack, in removing its chitin membrane, and in incising as much as possible of the sack wall. After this was accomplished, the cavity was closed by invaginating its walls and suturing the apposed surfaces. This was the method employed in our pelvic cyst.

These two methods have undoubtedly succeeded in shortening the time of cure, and have diminished the danger of suppuration in the cyst or the neighboring cysts. They have also avoided the frequent and long-continued loss of bile in the cysts of the liver. Yet their relative value has been questioned by many surgeons. Delbet[73] considers capitonnage the normal method, and only in suppurating cysts and those with calcified walls does he consider the method inapplicable. Bullinger[74] and Kōrte[75] disapprove of these two latter methods, because of the danger of overlooking vital daughter cysts, and of the possible stagnation of slightly infected bile within the cyst cavity, and a subsequent acute infectious cholangitis. The same objections may be made against Jonnesco's[76] method of evacuation, removal of the mother cyst, dry cleansing, and suture of the cyst wall. Quenu[77] considers it a drawback to the operation of Delbet that the want of elasticity often prevents a complete closure of the cyst cavity. Tuffier[78] acknowledges the probability of leaving behind daughter cysts capable of further development, and advocates a curettage of the cyst wall, and washing with a solution of common sublimate. Jonnesco,[79] who strongly inveighs against all washings, whether aseptic, antiseptic, or irritant, as useless and dangerous, reserves capitonnage for large non-suppurating cysts in which the elasticity of the wall allows an approximation of the surfaces.

Another method destined to diminish the time, and to avoid the secondary infection, is the enucleation of the cyst.

Pozzi,[80] Palleroni,[81] Beckhaus,[82] Depage,[83] Carré,[84] and Posadas[85] have enucleated these cysts with subsequent tamponade or immediate suture of the cavity, left without drainage or fixation to the abdominal wall. Posadas, who has completed a series of thirty-seven non-suppurating cases, has had twenty-nine cases heal by primary union, three with suppuration, and five die. Posadas enucleates the mother cyst without puncture where small and not closely embedded in the parenchyma of an organ. In large cysts he proceeds in the same way, after puncture and removal of the contents. When cysts are situated entirely within organs which can be sacrificed, it is a question whether it is not wise to remove the organ and cyst together, rather than run the risk of hemorrhage and shock. Both Hahn[86] and Donat[87] have operated in this manner with a mortality of 25 per cent., as against 49 per cent. in the same organ in puncture and drainage (spleen).

With cysts presenting upon the anterior half of the upper or lower surfaces of the liver, or upon the lower segment of the spleen and kidney, it is customary to suture the sack to the parietal peritoneum, and to open the cyst after a complete union. Where the cyst wall is very thin—in fact, so thin that it will not hold its sutures—the cyst is firmly pressed against the abdominal wall, incised and emptied of its contents (Lindemann), after which one proceeds to adopt the method most suitable to the conditions. Undoubtedly the operation of choice is enucleation of the mother cyst, dry cleansing of the fibrous capsule, and a complete obliteration of this cavity by suture.

Those cysts presenting upon the surface of the liver, and, to a great extent, covered by peritoneum only, are most suitable for enucleation. In these, even, if the cyst be large, the amount of liver parenchyma denuded is relatively small and accessible to treatment by tamponade or suture. For these reasons, small, non-suppurating cysts situated in the liver, if accessible, should be enucleated. For those non-suppurating cysts, too intimately associated with the liver to warrant enucleation, and with walls sufficiently elastic to allow a closure of the cavity, the method of Delbet (capitonnage) is preferable to that of Bobrow or Jonnesco. Where suppuration is present, the method of partial resection of the cyst wall, as practised by Terrier and Körte, or possibly the method of Rasumowsky,[88] meet the indications with the greatest assurance of success. In the spleen, the kidney, and the liver, the enucleation of the cysts will always be attended with some risk of hemorrhage. In the liver we also meet the additional risk of the entrance of air into the veins. This has happened to both Israel and to Van Hochenegg,[89] with fatal results in a few hours. That these dangers are to be overcome can be seen by the manner in which hemorrhage has been controlled by hot air,[90] and by hard pressure before ligation (Krause).

For cases situated in the subphrenic space, originating in the spleen, the liver, or in the subphrenic connective tissue, the method recommended by Volkmann and Israel is the most applicable. When the cyst presents either beneath the twelfth rib posteriorly, or beneath the thoracic arch and xiphoid cartilage anteriorly, one may incise directly upon the most prominent area of the cyst. Where the cyst remains entirely intracostal, the trans- or per pleural method is to be adopted. As in an ordinary thoracotomy, with resection of portions of one or two ribs, one proceeds until the parietal thoracic pleura is reached. The pleura is usually found to be thickened and adherent to the diaphragmatic pleura, or free, and covering a serous or purulent exudate within the thoracic cavity. The pleural cavity may be intact, and contain either a movable or partially adherent lung. In the first instance, a simple incision into the cyst is alone necessary to empty it of its contents; in the second instance, where pus is present as a circumscribed, or as a diffuse collection in the thoracic cavity, this is first removed, and when the cavity is clean, then the diaphragm is incised for the subphrenic collection.

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* Bobrow was not the first to do this, though he was the first to carry it out methodically

Where the lung is movable, and the thoracic cavity is intact, the diaphragmatic and costal pleura, with as much of subserous fibrous tissue as is possible, are sutured, so as to close off the pleural cavity before incising the diaphragm. This is necessary to avoid a withdrawal of the diaphragm during inspiration, and the escape of fluid into the pleural cavity. If the lung is adherent, and occupies the line of intended incision, it must be displaced, and fixation of the diaphragm and the thoracic wall take place before entering the cyst. In reference to the technique, in dealing with these cases, should be mentioned Budinger's case, where, in order to determine the treatment of a subphrenic cyst, which was mainly intrathoracic, a temporary resection of four costal cartilages was first made, in the form of a flap, with its base above. After a careful inspection, a second resection was made, involving a portion of the sixth rib posteriorly, for drainage. The patient recovered rapidly and without incident.

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The Treatment of Itching.—M. B. Hartzell discusses the various forms of itching due to constitutional or local causes, and their prevention and treatment. No local remedy is so useful as carbolic acid. ℞ Acidi carbolici. ʒss.; glycerin, f ʒii.; aq. camphoræ, q. S., ad., ℥iv., is a useful lotion to mop (not rub) on the affected parts every four hours. Menthol stands next to carbolic acid, and is best applied as an ointment or paste. Resorcin is good as a lotion in moist forms of eczema. Thymol is often useful, especially in senile pruritus. In pruritus ani and pruritus vulvæ, spirits of nitrous ether painted over the parts with a camel's hair brush every second day will often act most favorably. Painting the vulva with compound tincture of benzoin, or with camphor-chloral has been recommended; when the itching is confined to the mucocutaneous border of the anus a 5 per cent. ointment of cocaine will produce complete temporary relief.—*Therapeutic Gazette*.

TREATMENT OF PNEUMONIA.

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Inasmuch as pneumonia is a self-limited disease of short, but variable, duration—that is to say, a specific infection which, from the perishability of its parasite, soon becomes exhausted—neglect of these facts in practice may lead to many therapeutic indiscretions. If the predisposing causes have been slight, and the patient hitherto otherwise sound, there will be a relative slight degree of infection; but if the previous health has been bad, or the antecedent poisoning has been great, or both combined, the gravity of the infection will be in proportion. The natural condition of two persons being the same, the seriousness of the infection will be in direct ratio to the proximate causation; the seed will grow, reproduce, and secrete poison according to the fertility of the medium in which it is planted. However, no two persons are exactly alike in make-up, for each is the particular product of what has gone before in his own life and that of his ancestors. Hence, with a given degree of infection and of poisoning, the patient may or may not be able to survive the ordeal, the alternative largely depending upon his constitution. In other words, the type of the disease, and likewise the results, are chiefly based upon the condition of the individual. A good majority of those attacked in early life, and, indeed, any time before the advent of chronic degenerative changes, recover from pneumonia under various forms of medication, and, what is more, sometimes despite the treatment to which they are subjected. According to my opinion and that of many others, the best method to pursue in the management of this malady is to place the patient under such favorable conditions as quietude of mind and body, abundance of sunlight, good ventilation, simple regimen, and trust the pneumonia qua pneumonia to the inherent capacity of the cellular tissues to work out in due time their own salvation. Considering the future welfare of the patient, the outcome will be as good as, if not better than, any attempt at specific medication. Moreover, experiments with specifics may in the hands of the incautious result in serious harm by overzealousness. Other things being favorable, an early and correct diagnosis will afford the best means for an ultimate convalescence. The recognition of unpropitious symptoms and complications as they arise, and the judicious giving or withholding of remedies will tax to its utmost the perspicacity of the attending physician. While many cases of pneumonia will recover without the use of drugs, a certain number will perish, owing to various causes that are beyond control, in spite of the most skilful nursing and prescribing; but between these extremes there exist numerous examples, wherein the life of the patient will depend upon the ability, judgment, and therapeutic resources of the medical attendant.

Ardent advocates of the specific treatment of pneumonia bring forward in favor of this style of practice enthusiastic arguments and testimonials of varying consequence. This form of medication is maintained to be as reasonable as the same methods of dealing with diphtheria, malaria, syphilis, and acute rheumatism.

The ultimate results of the treatment of acute rheumatism by the salicylates does not seem to me a very good reason for so treating pneumonia. Acute articular rheumatism is, without doubt, a self-limited infectious disease, though of relatively long and of indefinite duration, but the patient is infinitely better off in the end if he has been simply relieved of his pain by suitable external applications, and by opiates and antifebrin if needed internally, than when filled by sodium salicylate, for example, up to the point of saturation.

Syphilis has decreased in virulence in proportion to the reduction of the former overpowering doses of mercury that were administered. In fact, it too, is a self-limited disease, and, granted sufficient time, it will wear itself out as effectually without as with its traditional specific, and leave the patient in a better physical condition than after extended mercurialization. A tonic treatment at most is all that is required in this disease, together with the use possibly of an iodide, not as a specific, but as an intelligent means of favoring cellular activity and the extrusion of morbid accumulations. Although C. H. Fagge[1] concludes, on the whole, that a patient who has syphilis derives immense advantage from a course of mercurial treatment, provided that it is judiciously managed, nevertheless, he makes the following important statement, namely, "It is now an established fact that it is possible for not only the primary lesions of syphilis, but also the various secondary and tertiary eruptions to subside spontaneously without any specific treatment; indeed, this result sooner or later occurs in the large majority of cases when the patient is placed under favorable conditions as regards rest of body and mind, good diet, and pure air."

Nor is quinine, valuable as it is, absolutely essential in malaria, for also this malady is a self-limited infection, and if the patient is removed from its source it will of itself subside eventually. Austin Flint[2] remarks, in writing of malaria, "it is to be borne in mind, in judging of the effects of remedies in this disease, that it tends intrinsically to end after a few paroxysms in a certain proportion of cases," and further, he says in substance, that if there is such a thing as a specific in medicine, it is quinine, and while there is no foundation for the popular notion that its prolonged use in small or moderate doses is prejudicial to health, yet excessive cinchonism is not advisable, for permanent blindness and deafness have resulted from the use of quinine in enormous doses. William Osler[3] says that "after a few paroxysms, or after the disease (intermittent fever) has persisted for ten days or two weeks, the patient may get well without any special medication. I have repeatedly known chills to stop spontaneously," though he adds, "such cases, however, are very liable to recurrence." The much greater value, by the way, of draining the marshes and exterminating the mosquitos than of even so prized a remedy as quinine, should appeal to thoughtful physicians; for instance, in a similar case, while many medical men of a certain turn of mind were puzzling their brains about some specific for yellow fever, such as existed in Havana, another class of investigators were looking, and with success, for its cause and the means of its spread, whereupon further search for this specific became needless· there was no more yellow fever in Havana to be treated. This, however, is another subject, though one that appeals to me as fraught with deep significance. The treatment of diphtheria by antitoxin is likewise cited as a reason for attempting the specific medication of pneumonia. It does not seem to me, however, that there exists a parallelism between these two affections, and though my personal experience does not warrant an opinion upon antitoxin treatment, it would still appear to be debatable, in the estimation of many careful observers, whether or not this remedy is a blessing unalloyed. Some whose views with respect to the treatment of this malady are founded on a large clinical experience, assert that the apparent lessening of the death rate in diphtheria is mainly due to increased refinement of diagnosis, since many instances of the disease that are of a mild type, and were formerly not classified as diphtheria, are now pronounced positively to be diphtheria by means of the regular culture tests of the bacteriologist. Moreover, that antitoxin does not save the lives of those who are most seriously poisoned, and that the milder cases recover under other forms of treatment with less serious after consequences. The fluctuations which occur throughout very long periods, in the type and the prevalence of diphtheria, are shown by J. A. Glaser[4] in his exhaustive article upon this topic, and compared to more restricted statistics they are exceedingly instructive. Also DeMaurans[5] shows that "the mortality in 3,842 cases of diphtheria in Paris in 1895, was 9.4 per cent., and in 4,347 cases occurring in 1901, 14.49 per cent. In Berlin, also, the relative mortality, which, in 1895, was 15.7 per cent., and in 1896, 12.3 per cent., rose in 1897 to 13.9 per cent., and in 1898 to 14.2 per cent., in 1899 to 15.9 per cent., and in 1900 to even 17.2 per cent." Furthermore, Gottstein[6] shows that, "according to statistics collected by Bayeux from the total literature on the subject, 207,257 cases of diphtheria treated with antitoxin gave a mortality of 16.2 per cent., while the average of mortality in the period preceding the use of antitoxin in Hamburg, 1872-94, was 15 per cent., in Munich, 1888-94, 12 per cent., and in Basel, 12 per cent. The total statistics of Bayeux prove that even after Behring's treatment, one case out of six dies." Finally, there is no better illustration of the self-limitation of the infectious diseases, and the absence of an absolute necessity for their so-called specific treatment under proper management, than that of the renowned physician, the late Alonzo Clark in regard to typhus fever in the wards of Bellevue Hospital. "At one time," it is related, "he had 250 cases of this infectious and contagious disease under his care, and there were as many more under the care of his colleagues. The mortality was great. Although it was winter, the windows were removed, stoves were placed before the open spaces to warm the incoming air, and except for moderate stimulation, no other medicine was given. Not one of the 250 cases died, and in two weeks they were convalescent." Austin Flint[7] recounts a similar experience, to wit: "In a paper communicated to the New York Academy of Medicine, in June, 1853, by Dr. John H. Griscum, an account is given of eighty-two cases of typhus transferred from an emigrant ship at Perth Amboy, N. J., to wooden shanties. There being no hospital nor other accommodations in the town, two shanties were erected thirty feet long and twenty feet wide, boarded on three sides about four feet up, and over them old sails were stretched. Eighty-two fever patients were transferred to these shanties, of whom twelve were in a state of insensibility when removed. The medical treatment consisted of an occasional laxative or enema; vegetable acids and bitters were liberally administered, together with the free use of cold water, buttermilk, and animal broths. Of the eighty-two cases treated in these shanties not one proved fatal." Instead of looking forward hopefully to a time of more specifics, my prevision is that infectious diseases will eventually be things of the past, and, moreover, from what is now taking place by means of sanitation, there is good reason to predict so desirable a consummation. For example, cholera, typhus fever, bubonic plague, yellow fever, pulmonary tuberculosis, and even typhoid fever and malaria already, either wholly or in part, have been eradicated from many communities. Therefore, it is only a question of extension in time and intelligence when these scourges of the human race will be entirely extirpated.

If physicians would but test the effects of much of their medicine upon themselves, and meantime, being entirely frank, would carefully analyze their sensations, it is within the bounds of possibility that they would conclude that the deleterious action upon the system of this medicine frequently outweighs the good that can be therewith accomplished. At all events, it is my opinion that the use of remedies, in what is thought to be requisite dosage, such as creosote, creosote carbonate, sodium salicylate, mercury, carbolic acid, and pneumococcic serums are unnecessary, to say the least, in an acute self-limited disease like that under present consideration.

Pneumonia is an infection that may exhaust itself within twenty-four hours, or it may prevail into the second week, and, granting the prodromes of exudation, it cannot be averted, and, once started, it cannot be arrested artificially; moreover, it is for the best interests of the patient's future welfare to refrain from such futile endeavors. While we cannot say positively that something may not be discovered that will neutralize the toxic products of the pneumococcus, or check its future germination, without being equally or almost as injurious to the patient, still many experiments in this direction are, considering the natural history of the infection and the ultimate well-being of the person affected, superfluous, if not absolutely pernicious in their consequences. Moreover, it is one of the objects of this paper to show that in all probability the rise of temperature in an infectious disease such as pneumonia, is not only an index of the activity of the process, but also one of nature's ways of safely inhibiting the growth and reproduction of the parasitic microorganisms. In pursuance of this question of treatment, Fagge[8] remarks that "For several years past the conviction has prevailed that, as a rule, no active interference with the natural course of the disease (pneumonia) is needed. The principal share in establishing this reform in practice on a sound basis of observation must be attributed to the late Dr. Hughes Bennett of Edinburgh." Likewise, Niemeyer[9] says, "Indeed, it has been proved that, unless warranted by special indications, actual interference has an unfavorable effect upon the course of pneumonia." Furthermore, William Osler[10] writes that "Pneumonia is a self-limited disease, which can neither be aborted nor cut short by any means at our command. Even under the most unfavorable circumstances it may terminate abruptly and naturally, without a dose of medicine having been administered."

Although there are now nine consecutive cases of acute pneumonia soon to be reported from my recent service of two months at the New York Post-Graduate Hospital[11] of varying degrees of intensity and of complications, in patients ranging in age from fifteen to sixty years, which were so fortunate as to recover under methods of treatment herein advocated, nevertheless it would be rash in the extreme for me to maintain that a second series necessarily would have a like favorable termination. These results, however, may be placed beside those which are marshalled in support of a different argument; otherwise they point to nothing, except, perhaps, a successful meeting of the arising incidents. If pneumonia is attended by expectoration, which is not always the case, the sputa should be invariably disinfected, and, moreover, since the specific germs of the disease are voided also by way of the bladder and the intestines, the urine and fæces should be subjected to a similar procedure.

With regard to the diet, there is more danger of over-feeding than of any lack of nourishment. Considering that the gastro-intestinal functions are deranged, it is only hurtful to add to the system extra burdens of digestion and assimilation. Small quantities of pure milk, either plain, diluted with vichy or else predigested, every two hours, possibly fortified now and then by the yolk of an egg, alternating with beef tea and various broths, such as barley broth in particular, is a regimen that has proved satisfactory. When a patient happens to be sleeping naturally, by the way, rather than disturb him, his food should be for the time being withheld. Water must not only be freely allowed, but also frequently urged upon the patient, for it is to be remembered that milk is food, though fluid, and is adequate neither to quench thirst or effectually to flush the system, an important proceeding when there is in the body an additional poison to be expelled.

The local applications to the chest for pneumonia, such as hot poultices, or flannel and oil-silk jackets, are useless, so far as the disease itself is concerned, but ice-bags, though not much employed by me, are by William Osler and others highly commended. Oxygen, in a limited way, may be of benefit if given early enough and well diluted by atmospheric air when administered. As a last resort, on the other hand, while it lessens the cyanosis and sometimes also the distress of the sufferer, it fails to save him notwithstanding. One is not infrequently led to reflect how many poor dying mortals are worried, if not tormented, during their last moments by the well intended but senseless endeavors of the friends and attendants to get them to swallow, despite their feeble protests, both food and medicine. It certainly would be more humane and dignified to allow those who are manifestly dying to pass quietly away without such persistent and futile annoyances. Aconite and its congeners are worse than useless, in pneumonia at any stage, for they are actually harmful; they depress the action of the heart and thereby produce one of the very things we desire to avoid, namely, internal capillary stagnation.

With respect to the use of the lancet in this affection, little can be said as a result of experience by the medical men of this generation. Its former abuse gave rise to a reaction that may possibly have gone too far in the opposite direction. This certainly is the belief expressed by Dr. Alfred Mercer[12] upon this theme in his able and interesting dissertation. While there are some instances of mechanical obstruction to the right side of the heart that would be, and probably formerly were, benefited by an abstraction of blood from the venous circulation, the chief danger with the heart, as referred to by me elsewhere, is an acute degeneration of its tissues, due to the toxins resulting from an infection by the diplococcus, which calls rather for stimulation. If, however, this degeneration is extensive, there will not be much reserve power left in the organ to be brought into action, even by stimulation. Bleeding, in accordance with my conclusions, in these days may now and then be of advantage, but at least the average city private or hospital patient needs all the blood within his body for future contingencies. The most urgent symptom at the beginning of this affection is the pleuritic pain, though it is not always in evidence. Should the ice-bag or hot poultice prove inadequate at this juncture, morphine or some form of opium is generally recommended. My experience leads me to advise dry cupping in preference, and not with toy cups, but with a large common tumbler, which is usually effective. In regard to opiates, they should seldom be given, and never in large doses, to a patient suffering from pneumonia. Restlessness and even moderate suffering had better be endured for a few hours if it cannot be relieved otherwise, than to arrest or even diminish excretion, especially of the kidneys, which is exactly what drugs of this nature do, except in relation to the skin, to a greater or less extent invariably. Inasmuch as the kidneys are the chief eliminators of poisonous material collected in the system, and as they are often inactive in this malady, a drug that has a tendency to further check this function, such as opium, is and must be detrimental. Bouchard[13] says, "when we studied the toxic properties of urine in pneumonia in six cases, we found at once that it is more poisonous than normal urine; it is capable of killing in the proportion of nineteen cubic centimeters per kilogram of the animal, as a minimum, the average proportion being 38 cubic centimeters." Finally, patients ill with pneumonia, and more especially those of advanced age, now and then get a well intended relatively large dose of morphine, that produces comfort and quietude without doubt, but which at the same time, unfortunately, robs them of the few remaining fighting chances for life.

In the minds of a certain number of physicians an elevation of temperature seems to be something that must be lowered at all hazards; whereas, in reality it is one of the natural expressions of an infection, and short of well-defined hyperpyrexia, which is possibly a virtue in excess and therefore vicious, it is not harmful, but on the contrary advantageous. Bouchard[14] quotes that "Riess, experimenting upon animals suffering from infectious diseases, lowers their temperature artificially until they become normal; but the disease continues and death ensues." Although high fever in pneumonia reveals an extensive infection, still it equally reveals a power on the part of the patient to react to the poison. Fever of a moderate degree, on the other hand, indicates two quite different things, namely, a corresponding moderate infection or else an inability to react, such as we often see in secondary and terminal pneumonias. Lenhartz[15] teaches that, "the so-called pathogenic bacteria, which are recognized as the exciters of the infectious diseases, thrive best at the temperature of the body, while the non-pathogenic grow best at a far lower temperature." Hence the exceeding likelihood that an elevation above the normal body temperature tends to inhibit the growth of the parasitic pneumococcus. Bouchard[16] asks, "Can fever help the system to free itself from the infectious organisms?" and then continues, "we know that certain microbes cannot live beyond certain temperatures which do not kill a human being. The bacteria of malignant pustule, which cannot live in a temperature higher than 104° F, have no effect on birds, their normal temperature being above that point. Pasteur has shown that it is necessary to cool a fowl in order to render it able to contract this disease. This experimental argument is brought forward to show that the elevation of the temperature of the body in fever creates a physical medium that is unfavorable to the infectious organism."

Speaking of the fatty degeneration of the cardiac muscles in a dog subjected to a gradual elevation of temperature, until it reached 111.2° F. with a fatal termination, Bouchard[17] says, "I was led to think that the excessive elevation of temperature was the cause of the fatty degeneration, but Naunyn and Rosenthal found that no similar effect was produced in animals at the excessive temperatures observed in man suffering from disease." These same experimenters were able to keep rabbits alive for weeks ranging between 105.8° F. and 109.4° F., without ill effects being observed. "Excessive elevation of temperature," concludes Bouchard[18] "is therefore, not a source of danger from the point of view of anatomical lesion or from the point of view of denutrition. We may say, therefore, that it indicates the gravity of the disease, but does not cause it. Elevation of temperature announces but does not constitute the danger." Consequently, if the action of heat upon the heart muscles of the lower animals is comparable to what takes place in the human heart under like conditions, these experiments tend to show that there is certainly no danger from a short exposure to high fever in mankind. These foregoing quotations have been made at some length, because they bear out what has long been my conviction in regard to the fever of infection. My experience is that the cold sponge bath is generally helpful in case of nervous symptoms, and withal more or less of a stimulant, as well as a promoter of the secretions, but, as a rule, it is not so effective in pneumonia as in typhoid fever. The temperature for six days in one of the nine patients previously mentioned is here included, as several points of more than passing interest are involved. In the first place the fever was high, the infection being intense, and there was acute nephritis, but the patient reacted well and recovered. Moreover, neither the temperature nor the nervous symptoms were affected by such regular bathing as commonly influences typhoid fever. Lastly, by means of the subcutaneous introduction of 500 c.m.^{3} of a physiological saline solution, there was a temporary amelioration of symptoms, which probably would have been sustained by increase of elimination had that procedure been repeated. Furthermore, it is instructive to record that the white blood count at the time of highest fever was but 9,000 to the cubic millimeter. The temperature taken at frequent intervals is as follows: January 26, 6 A.M., 104.4° F.; 9 A.M., 104; 12 M., 104; 3 P.M., 104.2; 6 P.M., 104; 9 P.M., 104; 12 M., 104.4; January 27, 3 A.M., 105.4; 3.45 A.M., 105.4; 6 A.M., 105; 9 A.M., 105.4; 10.30 A.M., 105.2; 12 M., 105.4; 3 P.M., 105.6; 6 P.M., 105; 7.30 P.M., 104.4; 9 P.M., 105; 4.30 P.M., 105; 11 P.M., 105.4; January 28, 1 A.M., 105.4; 1.30 A.M., 105.2; 3 A.M., 105; 3.30 A.M., 105; 5 A.M., 105.2; 5.30 A.M., 104.6; 6 A.M., 104.6; 7.30 A.M., 105; 9.30 A.M., 104.6; 11.30 A.M., 104.2; 12 M., 104.6; 1 P.M., 104.8; 3.30 P.M., 104.8; 5.30 P.M., 104.8; 6 P.M., 104. At this juncture 500 c.m.^{3} of a physiological saline solution were given hypodermically in the right flank. Temperature at 9 P.M., 104; 10 P.M., 103.6; 12 M., 103.6; January 29, 1.30 A.M., 103; 2 A.M., 103; 3 A.M., 103.6; 5.20 A.M., 104.2; 6 A.M., 104; 7.30 A.M., 104; 9.30 A.M., 104.4; 10.30 A.M., 104; 12.30 P.M., 104; 2.30 P.M., 104; 3 P.M., 104.6; 6 P.M., 104.2; 9 P.M., 103.4; 12 M., 103.2; January 30, 3 A.M., 103; 6 A.M., 104; 9 A.M., 105; 12 M., 105; 3 P.M., 105.2; 9 P.M., 103; January 31, 1.30 A.M., 101.8; 3 A.M., 101.2; 6 A.M., 101. Here he became rational, and his temperature in the course of three days gradually reached normal. The great question in respect to the treatment of pneumonia centers about the heart of the patient. Acute degenerative changes in the cardiac muscles, due chiefly to the infective process, are prone to disable this organ and precipitate venous stasis and œdema of the lungs, which, if considerable, are serious complications. Pulmonary œdema calls for energetic dry cupping as well as for thorough stimulation. A good way to maintain the integrity of the heart is not to begin at once to goad it by stimulants simply because the patient has pneumonia. Alcohol, in the form of pure whiskey, or brandy, in small or moderate doses, rather as a food, and for the saving of strength, than as a stimulant, seems usually beneficial. Ammonia, strychnia, caffein, and nitroglycerin are valuable, but, at least in large doses, they must be reserved to arouse latent energy in emergencies. Too hard a preliminary run for a horse may find his muscles unequal to the supreme effort of taking a hurdle.

Digitalis is not a favorite remedy with me in pneumonia unless there is a previous valvular disease. It may be used with caution, and should be stopped if the function of the kidneys is thereby decreased, for one of the troubles of pneumonia is renal inactivity. Potassium acetate, or potassium iodide largely diluted, should be given when the kidneys are working sluggishly. Large doses of ammonia, of alcohol, and especially of strychnia, have turned the scale in favor of recovery when the pulmonary second sound was waning in force and things, in general, were unpropitious. Defervescence is not uncommonly a trying period in pneumonia, and, because of the previous inroads made upon the heart, calls for stimulation and, moreover, for caution in the getting-up of the patient. In one of my series of patients that was handicapped by a mitral stenosis, a grave complication in an older person, the heart, which was temporarily much disturbed, was set right by digitalis and, owing to her youth, despite a double pneumonia and pleurisy with a small serous effusion, she recovered. The diplococcus pneumoniæ, by the way, was found in the serum taken from the pleural cavity by aspiration.

It has become a custom in my hospital service to preface all other medication in this disease by 1-10 gr. doses of calomel every fifteen minutes until one grain has been taken, followed by magnesia sulphate, in the form of a syrup of lemon compound. This is seldom contraindicated, and it frees the intestinal tract from the existing products of fermentation. Another of these patients came with the previous history of alcoholism, and she was at once, for obvious reasons, put upon regular and fairly large doses of whiskey. Still another appeared with the opium habit, and we were obliged for a time to include this drug in small doses in the treatment. One of the series of patients, forty years of age, had apical pneumonia, but with little fever and no delirium. Another had phlebitis of the femoral vein following the lung lesion. Finally, there were two cases among this number that were interesting as examples of the good results of hypodermoclysis. The first patient, who had single pneumonia complicated by an acute nephritis, arrived at defervescence with a dry, brown tongue, and somnolence, alternating with wild delirium. His urine, in spite of various therapeutic endeavors, was but sixteen ounces in the twenty-four hours. He was, thereupon, given a subcutaneous physiological salt infusion of 440 c.m.^{3} in his right flank, and the next twenty-four hours found him with a moist tongue, clear mind and voiding 46 ounces of urine. The following three days there were 58, 45 and 48 ounces of urine passed respectively; his recovery was thenceforth uninterrupted. The second patient likewise had acute nephritis, but with double pneumonia. On the day of crisis he had a dry, brown tongue, and was wildly delirious. His urine amounted to only 16 or 17 ounces in the twenty-four hours. Hypodermoclysis of 400 c.m.^{3}, of a similar saline solution, increased the action of his kidneys to 43 ounces in the succeeding twenty-four hours, his delirium disappeared, his tongue grew moist, and thereupon he became convalescent.

Recapitulation.—To condense what the foregoing thesis endeavors to explain and to maintain, pneumonia primarily owes its shortness and self-limitation to the perishability of its micro-parasite; the type of the disease depends upon the condition of the individual; pneumonia simply as pneumonia requires no interference; diplococci thrive best at the normal human temperature; fever inhibits the growth of the parasite and is therefore beneficial; high fever indicates extensive infection, meantime varying degrees of reactive ability; low fever either inability to react or else moderate infection; specific medication is unnecessary in pneumonia, if not pernicious; it is imperative to disinfect dejecta and expectoration; aconite and its congeners are injurious; bleeding is seldom required; opium, checking renal activity, in large doses is contraindicated; in old persons opium is exceedingly dangerous; oxygen is useful but not indispensable; alcohol is valuable as food, and it conserves energy; strychnia, ammonia, alcohol and nitroglycerin in large doses, as stimulants, should be reserved for emergencies; subcutaneous infusion of a physiological saline solution is invaluable for renal elimination of poisonous accumulations; last, though not least, specific remedies at best are but makeshifts, prevention of infection is the *desideratum.*

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The Restriction of Scarlet Fever.—Guy L. Kiefer thus sums up the most important rules which the local health officer should enforce, in the order of their importance: (1) A thorough medical inspection of the schools; (2) Isolation of the patient in a hospital, if possible, followed by immediate disinfection of the premises and of all persons who have been exposed, and a careful daily inspection of such persons; (3) Isolation of the patient at his home, whenever transfer to the hospital is impracticable. Strict quarantine of the house for a period equal to the duration of the disease, but never shorter than the maximum period of incubation; (4) The employment of guards to enforce quarantine; (5) Thorough disinfection with formaldehyde of the house and its contents before quarantine is raised; (6) Thorough investigation into the possible source of infection of each individual case.—*The Physician and Surgeon.*

QUESTIONS OF PRIORITY IN THE SURGICAL TREATMENT OF CHRONIC BRIGHT'S DISEASE.

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Under the heading "The Cure of Chronic Bright's Disease by Operation," the Medical Record of March 22, 1902, contains, on page 467, a communication from Dr. A. Rose, the purpose of which, as enunciated in the concluding sentence, is to prove "that Edebohls was *not* the first who introduced the cure of chronic Bright's disease by operation." This is as far as Dr. Rose's sense of the historical proprieties carries him. He does *not* tell us *who* was the first to propose, and *who* was the first to perform operation upon the kidneys for the deliberate purpose of curing chronic Bright's disease. Instead, he cites, in a loose and general way, five medical writers, and makes the charge that I overlooked their claims, or rather the claims alleged for them by Dr. Rose, to priority in the matter. In making this charge Dr. Rose tells the truth as far as he goes, but fails to go far enough, and to tell the whole truth, as I hope to show farther on.

In simple justice to myself, I cannot remain silent under the accusations of Dr. Rose, lest my silence be misconstrued as an admission of the correctness of his charges. With an apology for the necessarily obtrusive personal character of what I shall have to say, I will plunge at once *in medias res.*

My priority claims in relation to the surgical treatment of chronic Bright's disease may be summarized as follows:

(*a*). I was the first to observe and to publish the curative effects of nephropexy upon kidneys affected with chronic Bright's disease.

(*b*). I was the first to undertake an operation upon the kidneys with the deliberate object in view of bringing about a cure of a previously diagnosticated chronic Bright's disease.

(*c*). I was the first to propose to treat chronic Bright's disease *as such* by operation upon the kidneys.

(*d*). I was the first to propose, the first to perform, and the first to report renal decapsulation for chronic Bright's disease.

(*e*). I was the first to publish a larger number of operations upon kidneys undertaken for the purpose of bringing about a cure of chronic Bright's disease.

The various communications bearing more or less directly upon the questions at issue, which have appeared from time to time, including those of all the authors cited by Dr. Rose, as well as those of one or two writers not mentioned by him, will be found enumerated in their order of publication at the end of this article. In my review of these communications, and in the further discussion of the subject, I will, as a matter of convenience and brevity, refer to these publications by number.

(1) Harrison. This publication is, perhaps, the most widely known and the most frequently quoted of those relating in any manner to the subject. It is specifically cited by Rose as one of the articles which he charges I have overlooked. That I have neither overlooked it nor failed to quote it correctly in its proper place will be shown under (15).

Harrison writes:—"Since the introduction of the more general adoption of direct exploration of the kidney through an incision from the loin or otherwise, a certain proportion of cases have been met with where it failed to reveal any obvious cause for the symptom or symptoms which led to the adoption of the proceeding. It has, however, been frequently noticed that such cases were often completely and permanently cured by what was done. Amongst others, Annandale was one of the first to draw attention to this fact."

Following this introduction of the subject, Harrison details three cases of his own presenting acute renal symptoms in which he undertook exploratory nephrotomy, either upon an erroneous diagnosis or without having ventured a positive diagnosis, and in which the symptoms disappeared as a result of the surgical intervention. He writes: "Looking back at the three cases I have briefly related, I believe that the first was scarlatinal nephritis, the second nephritis from exposure to cold and damp, and the last subacute nephritis following most probably upon influenza."

Harrison believes that the good results obtained in his cases were due to the relief of renal tension by incision or puncture of the kidney, or of its capsule, or of both. This constitutes a decided amplification and very material extension of an idea expressed a number of years previously by our own countryman, L. McLane Tiffany, in a paper entitled "Free Division of the Capsule of the Kidney for the Relief of Nephralgia." (*Annals of Surgery*, August, 1889, 104-118). Tiffany writes:—"It appeared to me likely that, from one cause or another, swelling of an irritated kidney might occur, which swelling being resisted by the capsule, could induce a sensation of pain." And again: "Division of the capsule of the kidney at once suggested itself as a therapeutic measure in nephritic colic." In reporting the history of his case Tiffany goes on to say:—"The capsule of the kidney was then freely slit open for a distance of three inches or more, the incision passing by the side of the deep scar referred to. The edges of the cut capsule gaped widely, which I considered evidence that tension had existed."

(2) Newman. The nature of Newman's cases and the indications upon which operation was undertaken are sufficiently evident from the title, and are tersely stated by Newman himself. He describes "four cases, in two of which he performed nephrorrhaphy for the cure of transitory hydronephrosis, and two other cases in which the same operation was resorted to for the relief of torsion of the renal bloodvessels, causing albuminuria and the presence of tube casts in the urine." They are not claimed by Newman as cases of chronic nephritis, but are cited as illustrating the transient congestive effects of intermittent hydronephrosis and partial strangulation upon a movable kidney, effects already well known, chiefly through the writings of Dietl, in 1864, and of Landau, in 1881.

(3) Harrison, in this paper, repeats his three cases already detailed in (1), gives an additional case of Hoeber, and cites Newman's two cases outlined in (2). He proposes incision in acute suppression of urine and in acute nephritis with tenderness on pressure over kidney and slow disappearance of casts and albumen.

(4) Wolff. One of Edmund Rose's cases, detailed by Wolff, is cited specifically by Dr. Achilles Rose, as proving that Edebohls was not the first "who discovered the effect of nephropexy on the kidney affected with Bright's disease." Dr. A. Rose quotes from Mongour (18):—"In Rose's case especially the kidney was effected by well-marked chronic nephritis, and the urine, examined several years after the nephropexy, revealed absolutely no signs of renal lesion." Unfortunately for Dr. A. Rose, Mongour (18) evidently quoted from my own paper (15), where is stated, on page 969: "One practically identical observation is recorded by Wolff as following a nephropexy performed by Rose. At the operation the kidney was found to be the seat of well-marked chronic nephritis, while examination of the urine made several years later showed both kidneys to be healthy." Karo (16), in translating my article (15) into German, adds a foot-note on page 82, to the following effect: "Edebohls has not understood Wolff correctly. Wolff simply mentions that the kidney was atrophic; there is no mention of nephritis. On admission the urine was 'slightly turbid, free from albumen.'" On again consulting Wolff's publication I find that Karo is correct, and that I originally misunderstood Wolff. My apologies are due to Dr. Rose for having, though unintentionally and only mediately through Mongour (18), led him into error; though why Dr. Rose preferred to quote at second hand from Mongour's publication in a foreign tongue, rather than from my own prior publication (15) in English, still remains to be explained.

The case in question of E. Rose, reported by Wolff, was operated upon on January 14, 1896. So that even if it had been a case of nephropexy upon a movable kidney affected by chronic nephritis, *which it was not*, it was antedated by four similar operations of my own which a reference to (5) will show to have been performed on November 29, 1892; March 10, 1893; May 11, 1893, and January 11, 1896, respectively.

The foregoing, taken in connection with what I shall have to say under (5), seems to me to prove clearly my claim (*a*), that I was the first to observe and to publish the curative effects of nephropexy upon kidneys affected with chronic Bright's disease.

(5) Edebohls. The scope of this paper is clearly indicated by its title. In it I report six cases of nephropexy performed upon movable kidneys the seat of chronic nephritis. The favorable experiences as regards the permanent cure of the coexisting chronic Bright's disease obtained in Cases I, IV, and V, led me to operate upon Case VI with the deliberate object in view of favorably influencing or curing the chronic nephritis. To quote from the original: "The fortunate effects (*i. e.* the complete and permanent disappearance of albumin and casts from the urine) in three of these five cases influenced me to regard the chronic nephritis of the sixth as a new indication, additional to other well-recognized and admitted existing indications, of nephropexy for movable kidney." And again: "In view of the favorable results obtained in the cases already cited, bilateral nephropexy was advised, both to relieve the symptoms due to mobility of the kidney, and with the hope of favorably influencing the nephritis. Both kidneys were anchored and the uterus curetted, January 10, 1898." As a result of the operation, the patient was cured of her chronic Bright's disease and remains cured to this day. The concluding sentence of the paper reads: "My own favorable experience warrants me, for the present, in regarding chronic nephritis affecting a movable kidney as an important indication for nephropexy."

The above is presented in substantiation of claim (*b*), that I was the first to undertake an operation upon the kidneys with the deliberate purpose of bringing about a cure of a previously diagnosticated chronic Bright's disease, and of claim (*c*), that I was the first to propose to treat chronic Bright's disease as such by operation upon the kidneys.

It is from this paper that Dr. Rose quotes to show that I overlooked previous publications on the same subject. He does not add that, in reality, there was no previous literature on the subject of which this article treats: "Chronic nephritis affecting a movable kidney as an indication for nephropexy."

Nor does Dr. Rose add that in my subsequent publication (15), equally well known to him, I give full references to the writings of Harrison, Newman, Wolff as reporter of E. Rose's cases, and Ferguson. In making the charge, therefore, that I overlooked the publications of these writers, apart from the fact that Ferguson did not publish until after the appearance of my publication (5), Dr. Rose, as I have already stated, tells the truth as far as he goes, but fails to go far enough and to tell the whole truth.

(6) Ferguson. The tenor of Ferguson's communication is summed up as follows in Edebohls (15), from which I take the liberty to quote: "Ferguson operated upon two kidneys, in the first of which 'no diagnosis was made, but a stone in the kidney was suspected and exploration advised,' while in the second, operation was undertaken upon the diagnosis of 'septic kidney.' On operation, both proved to be uncomplicated cases of acute or subacute nephritis. Nephropexy was performed upon both patients, and was followed by the prompt disappearance of albumin and casts from the urine. Ferguson's two patients were operated upon early in 1899. As a result of the outcome in both, though after a period of observation extending over a few months only, Ferguson, in June, 1899, seconded my proposition, made in April, 1899, to treat chronic Bright's disease surgically. Neither Ferguson's paper nor my own, however, has received much attention, and no other publications of the same tenor have come to my knowledge."

(7) Israel, in this important communication, details his own large personal experience in the surgical treatment of acute suppression of urine, renal colic and hæmaturia of renal origin, reporting fourteen operations with three deaths. As will be seen under (19), Israel resents the imputation of Senator that the tendency of this article is to lead to the surgical treatment of Bright's disease.

(8) Pousson. An industrious collection, from the literature, of twenty-five cases of nephrectomy and nephrotomy, including two nephrectomies and one nephrotomy followed by nephrectomy of his own, to illustrate, "le traitement chirurgical des certaines néphrites médicales." What Pousson understands under "néphrites médicales" is shown by his classification, which reads as follows:

1. Néphrites hématuriques.........	10 cases.
2. Néphrites compliquées de névralgie..............	2 cases.
3. Néphrites infectieuses subaiguëes, (under which heading he ranges the three cases of Harrison, (1)	4 cases.
4. Néphrites infectieuses aiguëes.....	9 cases.

Pousson's own cases are a nephrectomy for hæmaturia, a nephrectomy for "anurie calculeuse gauche," and a nephrotomy, followed six months later by nephrectomy, for "nephrite hæmaturique unilaterale."

(9) Pousson. Essentially a lengthy detail of his case of nephrotomy followed by nephrectomy already quoted in (8). It leads up to

(10) Pousson. Essentially a selection from the cases already reported in (8), and their rearrangement, with the object of proving the existence of a reno-renal reflex and the rôle played by it in pathogeny.

It will, probably, be urged that the above publications of Pousson are scarcely pertinent to the subject of the surgical treatment of chronic Bright's disease. I have introduced them, however, because I wish to refer to them in the discussion of later articles by Pousson, whose claims to priority are specifically urged by Dr. Rose. What Pousson himself has to say regarding these claims will appear under (20).

(11) Edebohls. This paper contains the formal announcement of my proposition to treat surgically all cases of chronic Bright's disease. On page 691 we read: "I am now prepared to go a step farther and propose surgical intervention for the purpose of attempting a cure of chronic nephritis, whether the affected kidney be movable or in place. The surgical intervention, as in my practice heretofore, is to take the form of a nephropexy with denudation of the kidney cortex when the kidney is movable. When the inflamed kidney is not movable, and operative fixation of the organ is, therefore, not indicated, I shall content myself with entirely denuding the kidney of its capsule proper and thus affording free opportunity for the formation of new vascular connections, on a large scale, between the bloodvessels of the kidney and those of its fatty capsule. The relief to the kidney circulation by the establishment of an abundant collateral circulation, which, I believe, has been the chief factor in the production of the favorable results I have thus far obtained in the cure of Bright's disease affecting a movable kidney, will thus be applied to all chronically inflamed kidneys, whether movable or not."

(12) Pousson. The brief note here given reads as follows: "M. Pousson has operated also upon three cases of chronic nephritis, once for 'nephrite hæmaturique' and twice for uræmic accidents. In the first case extirpation of the kidney has brought about cessation of the hæmaturia and a permanent cure now lasting for three years. In the other two cases nephrotomy relieved transiently the uræmic accidents, which recurred, however, upon the healing of the renal incision. Subsequent removal of the kidney caused their disappearance in one of these patients."

Two of these cases, and possibly the third, have already been reported in other connections by Pousson (8), (9), (10). It is evident from the above account that there was no question of operation for the cure of chronic Bright's disease in any of these three cases, unless, indeed, extirpation of the kidney, which was performed in two cases, be accepted as a legitimate operation for the cure of chronic nephritis.

(13) Harrison repeats the histories of his three cases detailed in (1) and (3), and contributes three additional cases. The new cases are:

Case IV.—Nephrotomy for acute pain in a kidney, the seat of nephritis. Harrison thinks the incision prevented the nephritis from becoming chronic.

Case V.—Puncture of a kidney and its capsule for suppression of urine due to acute congestion, the result of injury.

Case VI.—Incision and drainage of a kidney, the seat of cystic degeneration.

The relief of renal tension by incision dominates this as well as Harrison's two previous communications (1) and (3). The character of the cases operated upon is clear from the outlines presented above.

(14) Pousson. The brief, and rather unsatisfactory, report states: "M. Pousson has been led to attribute the urinary disturbances of 'les brightiques' to an excess of tension and to combat them by nephrostomy." "He has practiced this operation in five cases of parenchymatous, interstitial or mixed nephritis." Three of these cases are detailed in (12), a reference to which will show that they were not operations for the cure of chronic Bright's disease, while a further reference to (20) will show that Pousson himself does not regard them as such.

"In each of these patients the author operated upon one kidney only, basing his choice upon certain vague indications." Operation was performed upon one kidney only, even though "in three cases the inflammation involved both kidneys." One of his patients died within forty-eight hours after operation; four recovered.

(15) Edebohls. This article contains a tabulated report of all my operations, to date of publication, upon the kidneys of patients suffering from chronic Bright's disease, together with a fuller description of my procedure of renal decapsulation for chronic Bright's disease. The contents of this paper are offered in evidence of the validity of claim (*d*), that I was the first to propose, the first to perform, and the first to report a case of renal decapsulation for chronic Bright's disease; and of claim (*e*), that I was the first and, I may add, thus far the only one, to publish a larger number of operations upon kidneys undertaken for the purpose of bringing about a cure of chronic Bright's disease.

Twenty-eight kidneys, in all stages of chronic Bright's disease, were operated upon in nineteen patients. In fourteen of these nineteen patients operation was undertaken either for the sole purpose, or for the purpose amongst others, of bringing about a cure of chronic Bright's disease. In eight patients cures of chronic Bright's disease, lasting at the time of report from one to over eight years after operation, were obtained.

(16) Edebohls. Karo's translation in full of (15) into German was the occasion of calling attention to the error into which Edebohls had fallen in relation to one of E. Rose's cases, as already set forth in (4).

(17) Pousson. "During the past three years Pousson has operated six 'brightiques,' and presents to the Society two patients, one of whom can be considered as cured."

The brief report is as meagre and unsatisfactory as (14). Three of the six patients are apparently those whose histories have already been repeatedly given and referred to by Pousson in (8), (9), (10), (12) and (14). That they were not operations undertaken for the cure of chronic Bright's disease has already been shown. The two patients presented were operated upon on July 3, 1901, and August 7, 1901, respectively. The date of operation of the sixth patient, who died within forty-eight hours after operation, is not given. Pousson himself, as will be seen under (20), does not claim that in any of these cases he operated for the cure of chronic Bright's disease as such.

(18) Mongour. This paper read apropos of Pousson's presentation of his two cases (17), deals, in general terms, with nephrotomy as an emergency operation in cases of chronic nephritis. In the course of some historical remarks Mongour says: "Encouraged by these facts, M. Pousson conceived the idea of practicing nephrotomy to remedy the grave and menacing accidents of chronic nephritis," which friendly imputation, however, Pousson gently denies in (21).

(19) Israel. Israel's position in the matter under discussion is clearly defined by himself in this his contribution to the rather warm discussion which followed the reading of Senator's paper on "Nierenkolik. Nierenblutung und Nephritis" before the Verein für innere Medicin in Berlin, on January 20, 1892. Israel writes: "As is apparent from what I have just said, I have never attempted to cure with the knife any form of nephritis whatsoever. *On the contrary, my intervention had for its sole object the removal of the distressing or dangerous symptoms of colic and profuse hemorrhages arising in connection with nephritis.*" And farther on we read: "I wish to correct another mistake of my friends as well as of my opponents. Many have thought that I sought to inaugurate an era of the surgical treatment of Bright's disease. Such has been far from being my intention."

(20) Pousson. In the discussion following the reading of a paper by Mongour (18), Pousson defines his own position in the development of the subject in the following extracts:—"My friend and colleague Mongour overdoes it when he ascribes to me the merit of having been the first to conceive the idea of interfering surgically in cases of chronic nephritis." "The most important contribution to this subject is that of Edebohls of New York." "It is plainly evident that 'l'interpretation d'Edebohls' is quite different from that which prompted Harrison's and my own operations." "Personally I have operated only when pressed by grave and well-nigh extreme symptoms; much less with the aim of curing my patients than of giving them a chance in the struggle against accidental complications which had resisted medical therapeutics." "For my own part, I cannot help being favorably impressed by the eighteen observations of Edebohls. That skilful and honorable surgeon can neither deceive himself nor wish to deceive us; the operation which he has recommended 'dans la periode d'état du mal de Bright' it appears to me should be imitated. Less bold than he, I have operated only under the pressure of grave accidental complications."

This finishes my review of the literature more or less pertinent to the subject of the operative treatment of chronic Bright's disease, a subject as yet in its infancy. True and accurate history, even though recent, is admittedly difficult to write, especially when the historian's self is involved. I have tried my best to be fair to others as well as to myself; as to how far I have succeeded I must leave to the reader to judge.

The position of each of the writers above cited on the question at issue, that of the surgical treatment of chronic Bright's disease, may be stated as follows:—

E. Rose, as reported by Wolff, is eliminated from the discussion by what has been shown under (4).

D. Newman's cases of hydronephrosis and strangulated movable kidney (3) were not cases of either acute or chronic nephritis, and have no bearing upon the subject of the surgical treatment of nephritis, either acute or chronic.

R. Harrison (1), (3), (13); A. H. Ferguson (6); J. Israel (7), (19); A. Pousson (8), (9), (10), (12), (14), (17), (20); and others cited by the two latter, each report instances of surgical interference in the course of acute, subacute or chronic nephritis, undertaken in some cases upon an erroneous diagnosis, in other cases to meet pressing indications, renal colic, hæmaturia, suppression of urine, etc., *never* with the deliberate object of bringing about a cure of chronic Bright's disease. Israel's (19) and Pousson's (20) own utterances state this fact emphatically.

Harrison, (1), (3), is the only one of the four writers mentioned who published prior to the appearance of my article (5), in which I first advocated the surgical treatment of chronic Bright's disease and detailed a case thus treated. Harrison describes his cases as cases of acute and subacute nephritis. The relief of renal tension by incision of the capsule or by nephrotomy dominates all his communications, and he considers that the good results obtained in his six cases were invariably due to its agency. This in itself shows the character of the cases treated by him. My own unpublished experience in a number of cases in which I operated upon the kidneys either for the relief of acute suppression of urine, for severe hæmaturia, or for enormous swelling due to acute nephritis, bears out the correctness of Harrison's explanation in acute cases and, in a great proportion at least, of acute exacerbations of chronic conditions. In none of the forty-six kidneys affected with *chronic* Bright's disease, however, which I have operated upon to date was there the least evidence of the existence of renal tension. To quote from my paper (15): "It is not a question of the simple relief of renal tension, the beneficial effects of which in acute conditions of the kidney, described by Harrison in 1896, have since been noted by an increasing number of surgeons. In these acute cases the tight fit of the capsule proper is manifest, and the kidney bulges at once through an incision or puncture made through the capsule. In chronic Bright's disease, on the contrary, the capsule proper, although it may be abnormally adherent to the kidney, never compresses the latter, and may even sit loosely upon it. Moreover, on cutting the capsule proper, the edges of the incision do not gap. It is interesting to note that Harrison, in his very recent communication, thinks that puncture to relieve renal tension in acute cases of nephritis may prevent them from advancing to the chronic stage." This extract from my paper is offered also in further refutation of the charge made by Dr. A. Rose that I overlooked the writings of Harrison.

The theory, therefore, on which my operation is based is, as pointed out by Pousson (20), quite different from that which prompted interference in Harrison's cases as well as his own. Nephrotomy for the relief of renal tension, and renal decapsulation for the purpose of creating new blood supplies for a kidney disabled by chronic Bright's disease are two quite different propositions.

The position of Ferguson, finally, has already been fully stated in my review of the only publication of Ferguson (6) bearing upon this subject which has come to my knowledge.

It is a matter of fact that nowhere in the literature, if we except my own report (5) of 1899, is there any record of an operation performed for the cure of chronic Bright's disease prior to the publication of my paper (15) in December, 1901. Moreover, in all the operations reported by Harrison, Newman, Ferguson, Israel, and Pousson, one kidney alone was operated upon, whereas an operation for the cure of chronic Bright's disease implies, in the very large majority of cases at least, an operation upon both kidneys. Of the twenty-nine patients with chronic Bright's disease upon whom I have thus far operated, one kidney was operated upon in four, both kidneys in twenty-five.

Israel (19), as we have seen, vehemently resents the imputation of desiring to bring about an era of surgical treatment of Bright's disease. Such an era seems, nevertheless, to have dawned, at least in America. Since the appearance of my article (15) in December last, one surgeon has published a case of operation for the cure of chronic Bright's disease, and I have incidentally learned of twelve additional unpublished cases operated upon by eleven different American surgeons, my operation of renal decapsulation having been performed in each instance. I have but little doubt that a considerably larger number of cases, of which I have not happened to hear, have at this writing been operated upon. Personally, I have since the publication of (15) performed bilateral renal decapsulation upon ten more sufferers from advanced chronic Bright's disease, two women, one female child, and seven men, two of the latter being physicians.

From all I can learn all these operations are the direct result of my initiative in the matter. Should disappointment follow the present effort to bring relief and hope of cure to a large number of sufferers from an otherwise incurable fatal malady, it is morally certain that a large share of the responsibility for such disappointment will be laid at my door. It is natural, therefore, and but human that I should not object to be the recipient of whatever credit the future may show to properly belong to the originator of the surgical treatment of chronic Bright's disease.

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THE MODIFICATION OF BREAST-MILK BY MATERNAL DIET AND HYGIENE.

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In a former article the possibilities were presented of conserving the supply of maternal breast-milk in many cases in which it has been the custom to abandon it, and my justification for again presenting this subject must be found in further successful application of these principles and in the far-reaching and vital importance of the question.

I plead the cause of those infants who are deprived unnecessarily of their natural food, and consequently exposed to the insidious dangers so often encountered in the course of artificial feeding.

This is an age of bottle-feeding, of infant foods, of milk laboratories, home modifications, and pure milk commissions, and no one more gladly welcomes the advances thus made than the writer, or is more ready to avail himself of all that is best in them when there is no other way of nourishing the child, but he would protest against their use when it is not necessary, and against the growing belief that they are just as safe as the mother's milk for the child.

It is easy to feed some children who will thrive on almost anything. Success in another group is only to be attained as the result of long experience and the most painstaking attention to details. But what of the remainder? These recruit the lists of the marasmics or fall victims to intercurrent disease, or, if they survive, are—not always it is true, but very often—the subjects of chronic digestive disturbances. Very many women who have no organic impediment to nursing lose their breast-milk early or furnish it in quantity or quality apparently unsuited to the needs of their infants, and eight out of ten of these babies are put upon the bottle for the lack of a little rational treatment of the mothers.

For the purpose of exemplifying this subject, one cannot do better than to relate the history of a fairly typical case.

On the 16th of July last, which was in the midst of a protracted hot term, I was called, in consultation by a colleague, to see a nursing infant five weeks old. Ever since its birth it had vomited and had disturbed stools. These latter had never been yellow. They were green, loose and frequent, varying of late from five to eleven in the twenty-four hours. For a considerable period the child's temperature had varied from 100° to 101°, occasionally reaching 102° F. After a long trial of nursing alone, the quality of the maternal milk being under suspicion, a trial had been made of alternating the breast-feedings with a mixture of cream one part and water twelve parts, with no resulting improvement in vomiting or stools. The infant cried constantly night and day, drawing up its legs on the abdomen, passing considerable flatus, and presenting the picture which is usually called colic. The character and frequency of the stools (5-11 per day) had naturally caused alarm, and bismuth and other remedies had been faithfully administered without material effect.

The nurse and family were worn out by constant attention to the baby night and day; the relations and circle of interested friends were becoming restless, and pressure was being brought to bear, as usual, upon the family physician to abandon the attempt to feed the child from the breast and to place it entirely upon some other food. To assist in deciding this question the consultation was determined upon.

In the face of this history, which is given as it was obtained at the time, all will doubtless agree that the outlook was not very favorable for a continuation of maternal nursing, and the circumstances of the family precluded the employment of a wet-nurse. A careful physical examination of the child showed it to be in fair condition and revealed no organic disease. The mother proved to be a primipara, thirty-one years of age, of fairly good physique, with medium-sized breasts, which seemed to contain sufficient milk. She was anæmic and worn, but intelligent and interested. Her diet consisted of plain, sensible food, milk, a little coffee, and no tea. In view of this interrogation of mother and child the case seemed clearly to be one of the class in which the mother's milk is said not to agree with the child—a class in which breast-feeding is usually abandoned when a wet-nurse is not obtainable.

Despite the five weeks of gastrointestinal disturbances at the breast, the opinion was expressed to the family physician that the mother could be made able to successfully nurse her child, and the following suggestions were made and transmitted by him to the mother: That artificial food and medicines should be stopped and the child nursed every two hours from 6 A.M. to 10 P.M., and during the night once at 2 A.M. That the mother, in addition to her usual sensible diet, drink a bowlful of corn meal gruel three times a day, continue to drink milk freely, and substitute cracked cocoa for coffee. Instead of remaining all day in the house, she should begin to walk half a mile daily, and that this should be gradually extended to a mile or more, stopping short of fatigue. Iron should be taken after each meal and constipation relieved if it occurred. For the baby, lavage of the stomach once daily for the relief of the vomiting. An examination of the breast-milk showed a specific gravity of 1033 (normal 1031) and cream 2 per cent. Despite the low fat percentage, which tends to raise the specific gravity of the milk, this increase of specific gravity also suggests a proteid percentage higher than the normal.

July 20, four days later, the child was again seen. The stools continued frequent, green and watery. The temperature had once or twice reached 101° at night. Crying and vomiting continued as before. Iron had not as yet been given. Blaud's pills gr. v. were therefore begun.

July 26, six days later, the case was again carefully reviewed. The mother had found herself easily tired by walking, and had therefore been out but little. It was therefore suggested that she drive daily in the open air. The baby, which had thus far been carefully guarded in the house, was ordered to be kept upon the piazza as much as possible during the pleasant hours of the day.

July 30, after another period of four days, conditions had improved slightly. The temperature did not rise as high, the stools were less frequent, and the child was found to have gained 4 ounces. This served to encourage the mother, upon whom the evident anxiety of the nurse had reacted. As the nurse constantly picked up the child when it cried, it was suggested that she be dispensed with, and the child laid down after nursing and its crying disregarded.

August 3 (interval of four days), another gain of five ounces reported. Child had cried it out and now went to sleep when laid down. Vomits less, stools fewer and yellow. Mother's appearance decidedly improved.

August 9, child sleeps all night, waking for one nursing. Progress from this time on was steady and uneventful. Letters from the mother have reported: November 9, weight sixteen and one-half pounds: January 28, weight twenty-one pounds, at seven months; baby well and breast milk abundant.

This case, so unpromising at the outset, has been related in full because it proved to be a complete vindication of the principle that the quality (and quantity) of maternal breast-milk is dependent upon the diet and hygiene of the mother, and that an apparently unsuitable secretion can be modified successfully by an intelligent attention to details. This principle is not a new one, but it has not as yet been adopted and put into practice by the profession.

This case had been faithfully and conscientiously managed, according to usually accepted methods. The mother had been brought safely through her puerperium, her diet was plain and nutritious, her bowels kept regular, the nursing hours wisely adjusted, and her anæmia not greater than that commonly seen after childbirth, yet the mother was not nursing the child successfully, and the majority of practitioners would, doubtless, have agreed that it was useless to continue the attempt. In fact, only a practical knowledge of the results obtained in a considerable series of similar cases, where the measures advocated had produced a satisfactory modification of the breast-milk, would have given the writer the confidence to urge their trial in this case.

The recommendations in this instance were neither intricate nor subtle. Regular hours and intervals of nursing, which are of the highest importance, and the neglect of which is at the bottom of many of the disturbances of infancy, had been duly arranged by the family physician, and required only an earnest endorsement. The liberal diet of plain nutritious food and cows' milk was continued; further fluid food, in the form of an abundance of thin well-cooked and salted yellow corn meal gruel, was added, and the suggestion offered that cocoa made from cracked cocoa be substituted for coffee. Had the quantity rather than the quality of the breast-milk been at fault, results, indicated by a larger flow of breast-milk, would have been experienced earlier, but here it was more a question of building up the mother's health, and this was not to be accomplished at once. In fact, you will recall that, owing to fatigue when walking was attempted, the mother secured little out-door exercise and fresh air until driving was begun on the tenth day. This fatigue was, doubtless, enhanced by the anæmia, the treatment of which by iron and laxatives was not begun until several days had elapsed. When these omissions were rectified, improvement began very promptly, as evidenced by gain in weight, improved stools and longer periods of sleep, and these became more marked as the child was carried out into the air and allowed to rest quietly without constant and insistent attention. The daily washings of the infant's stomach, which were begun for the purpose of allaying the vomiting, did not seem to influence this materially, but were continued during the doubtful period, partly as a placebo, in the absence of other direct treatment of the child.

In a paper read before the Medical Society of the County of New, York, in April, 1901*, I outlined the work which I had been carrying out for some time, both in hospital and dispensary practice, which has proved to me conclusively that a failing or faulty milk secretion may be restored by measures similar to those enumerated above, measures so simple that they could and should be put into practice by all physicians who are confronted by such situations. The analogy between the nursing mother and the dairy cow is a homely one, yet one which is readily grasped by the simplest mind. A large yield of good milk is rarely if ever produced by an animal in poor condition and improperly or unsuitably fed. There is distinct relationship recognized by all intelligent dairymen between the food and environment of the cattle and the quality of the milk. This has also been demonstrated experimentally in other mammals besides the cow. The time has arrived when, with the decreasing ability of the human female to suckle her young, owing to the influence of various factors in our modern life, this question should receive more general consideration and investigation, for the successful rearing of infants and a decrease in the mortality of those under one year of age is of the highest importance to the commonwealth as well as to the family and the individual. This is all the truer because the tendency among civilized nations is towards smaller families and the enhancing of the value of individual lives. The tendency is much too great, both among the laity and the profession, to accept the view that an increasing number of women cannot nurse their children and consequently artificial substitutes are advised without intelligent or, at best, after only half-hearted endeavor to make the breast milk sufficient or suitable for the child's needs. This tendency is increasing rapidly under the influence of the fallacious belief that children can be reared as successfully upon the various forms of substitute feeding as upon that provided and adapted by nature. That this is apparently true, in a relatively small proportion of cases, may for the moment be admitted, but it is not yet true, and may never be true of the great majority of bottle-fed infants. For these bottle-fed children are more liable and more exposed to digestive and other diseases than their nursing contemporaries, and that is so because their nutrition is, as a rule, actually if not apparently below that of the child at the breast. Let me give a concrete example:

A coachman who drove me during the summer told me that although his wife had nursed their first child, their second child, put upon the bottle on account of some acute illness of the mother, had done so well that he had refused to allow his wife to nurse their last baby, and that this one was also thriving well. My inquiry, however, elicited the information that while the oldest child, which had been nursed, was living, the first of these artificially-fed children had, unfortunately, died of whooping cough. It evidently did not occur to him to associate its death in any way with its nutrition. Two weeks after this conversation he told me that he had been summoned to the city to bury the baby who had succumbed to an attack of acute gastro-enteritis. It would have been cruel to suggest to him that he was, probably, personally responsible for its death.

Compare, if you will, the appearance of many of the bottle babies which you see about you in this city with that of a normal breast-fed child of the same age. Think back over your own knowledge of the fatalities among children that have been artificially fed. Consider the children of much larger growth of whom, when called to see them for later ills, you have secured the history that they were always delicate and hard to rear. You have learned in most of these cases, if you have inquired, that they were not nursed.

It would seem impossible for any one to follow any considerable group of children, either in or out of institutions, without being convinced that the diseases of infancy are more fatal in bottle-fed children. This is a too well recognized cause of gastro-intestinal disease to require any argument. But what of diphtheria, measles, whooping-cough and broncho-pneumonia? Although artificial feeding may be easy while these children are well, it becomes notably more difficult when they are sick.

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*A plea for the conservation of breast milk in whole or in part.—MEDICAL RECORD, May 6, 1901.

The child, which was previously on the ragged edge, usually succumbs promptly. The fat, but flabby baby melts away rapidly. It is well recognized that varying my grades of rachitis, often of so mild a degree as to be overlooked, are to be found in a majority of the bottle-fed children in large cities. Be it understood that we are speaking of all classes together. If then there be acute-involvement of the pulmonary substance, the softer thorax and weaker muscles of such children are less able to withstand the strain thrown upon them by a respiratory rate of fifty, sixty, or even more, per minute, with the effort to maintain, with curtailed air space, the aeration of an already impoverished blood. These children are severely handicapped and less likely to survive the attack.

Shall we simply fold our hands in pious regret that these things be, and lay the blame on Providence, or shall we awaken to our duty of forestalling these accidents by measures which, when directed to the nutrition and health of the mothers, are distinctly, although perhaps remotely, life-saving for the children. These remote, but none the less real, dangers are not realized or duly weighed in deciding for and against early weaning.

The most common argument which is raised against the feasibility of this plan is that in the ranks of the wealthy and among women of highly nervous temperaments, who are under the pressure of social duties, many cannot nurse their children at all. This class, we must remember, is, however, limited. Many of them probably cannot nurse, but many others, doubtless, could if they were made to see and accept their duty. Few mothers would deliberately choose to subject their children to additional risks, however remote in point of time, if these facts were impressed upon them. The full cooperation of the mother is indispensable if we are to obtain satisfactory results in our efforts to build up and maintain the secretion of the mammary glands. The mother must be willing to sacrifice social dissipations and unsuitable food for the sake of her child. She must be willing to take rational exercise, abjure tea and be content to lead a placid, unruffled existence, eating such plain food and drinking such fluids as are suggested for her without reference to her special preferences. But it is not necessary that life should be made burdensome by monotony and confinement; this can be relieved by judicious management on the part of the physician and the use of one or more bottle feedings daily of properly adapted cow's milk, to allow for longer absences by the mother, for the purpose of exercise and simple recreation.

The maternal duty to her offspring does not terminate with parturition, and the vast majority of women are willing to adapt themselves to the new conditions, and welcome helpful suggestions to that end. The mother who nurses her child is a happier woman, and by nursing it, I believe, the bond of affection is, upon the side of the mother, materially strengthened.

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A Case of Scleroderma, Associated with Raynaud's Disease.—William Ewart lays especial stress on the treatment of this case, which resulted in steady and rapid improvement. The nutritional indication was the first to receive attention, and rest in bed and an easily digestible, liberal diet were ordered. Later the patient was allowed six ounces of port wine daily. Protection of the peripheral circulation next received care. The hands were oiled freely and covered with protecting gloves, each hand being kept night and day enclosed in a bag containing a hot-water bottle, surrounded with cotton wool. This broke through the habit of recurring cyanosis each morning. The oil used was a mixture of equal parts of almond and olive oil, with 5 per cent. of oil of eucalyptus. To influence the thickening and stiffness of the skin, passive movements and massage with oil were applied at intervals to the arms and hands and to the upper part of the chest and back. Later, diaphoretics and peripheral vaso-relaxants were given, skin massage applied, and voluntary movements of fingers encouraged. Then, to remedy the deficiency of sub-cutaneous fat, 2 oz. olive oil and ½ oz. whiskey were ordered nightly, but had to be reduced one-quarter to be retained, and was later increased. A four-grain pill, hyd. c. rh., was given every other night, to facilitate the digestion of the oil.—*Medical Press and Circular.*

Neurasthenia and Hysteria in Diseases of the Nose, Throat and Ears.—Among the conditions enumerated by E. B. Gleason are impairment, loss or perversion of the sense of smell, and disturbances of sensibility of the nasal mucosa. Anæsthetic areas are ordinarily continuous through the nasal vestibule with similar areas on the face. The pharangeal mucosa is frequently affected, but is not commonly anæsthetic. There is often a sense of constriction and sensation of a foreign body. The aphonic voice of hysterical women is so common as to be familiar to most practitioners. It varies from nearly complete inability to phonate to a whispering voice easily understood, and which becomes normal, at least for the time being, as the result of any strong emotion or excitement. In such case the appearance of the larynx, as seen by the laryngoscope, varies somewhat. When the mirror is first introduced, the cords are usually seen to come together as the patient attempts to phonate, and under such circumstances the voice, for the time being, is normal. However, if the inspection is continued for some time, the movements of the cords during attempted phonation are often seen to be jerky and irregular, or the appearance simulates that of paresis of a laryngeal muscle or group of muscles.—*International Medical Magazine.*

The Function of the Appendix.—E. P. Hershey concludes from his study of the subject: (1) That the appendix is in no sense a vestigial organ; (2) It is an exceedingly important secretory organ, its secretion serving to prevent fecal impaction in the cœcum; (3) We should at all times be thoroughly capable of drawing that fine distinction between therapeutic and surgical treatment that exists in all pathological conditions of the appendix; so that when we know the functionating power of the organ is irreparably gone, we should recognize that we have a most threatening condition within the abdominal walls; (4) Proper prophylaxis and therapeusis would in very many cases obviate the necessity for surgical interference; (5) If this organ is still believed to be vestigial in character, it must be admitted that nature has beautifully adapted it to its needs.—*Denver Medical Times*, February, 1902.

Alcohol in Carbolic-Acid Poisoning.—A. C. M'Donald reports the case of a young woman who had swallowed over an ounce of carbolic acid with suicidal intent. When seen ten minutes later she was in deep coma with imminent collapse. A tube was passed into the stomach, through which was introduced half a pint of alcohol. Strychnine was injected hypodermically. The alcohol was then pumped out, and the same operation repeated thrice in succession. This was followed by repeated flushings with warm water, after which four ounces of whiskey were introduced and allowed to remain. The tube was then removed. Brandy and nitroglycerin were given hypodermically, and in the course of six hours the patient was conscious. On the day following she appeared perfectly well, with the excepton of a severe pharyngitis.—*Fort Wayne Medical Journal-Magazine.*

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LATENT PNEUMONIA.

SEVERAL diseases whose approach is insidious, and whose development is slow, give no particular signs to warrant apprehension of a fatal result, until the patient has arrived at a stage in which treatment is of little or of no avail. Maladies of this order are artheroma of the aorta and valves of the heart, cancerous growths in various parts of the body, degeneration of the liver and kidneys, and some other deadly affections.

But while complaints in which the symptoms are masked and the incubation and course whereof is long protracted, are well known to medical men, there occur in many instances acute affections which by their eccentric mode of advance are a source of mystification both to those around the patient and to the physician who is called in when too late to be of service.

Such are measles, typhoid fever, pneumonia, pericarditis, peritonitis, and inflammation of the serous membrane in other localities. Cases of this description are of the greatest possible interest to the medical jurisprudent.

Dr. Harvey Littlejohn, Lecturer on Medical Jurisprudence at Surgeons' Hall, Edinburgh, has contributed to the *Edinburgh Medical Journal* for April a lucid article on this phase of pneumonia, in reference chiefly to the standpoint of medical jurisprudence. He first draws attention to the fact that in cases of pneumonia which run this course, that not only are the symptoms usually heralding an attack of the disease absent, but that the person affected may go about in a state of apparent good health, and that the existence of advanced pneumonia will not necessarily shut out the possibility of death having occurred from natural causes.

In no inconsiderable number of these cases, says Dr. Littlejohn, the post-mortem examination enables us to determine that death was due to natural causes, by finding the presence of a chronic disease unsuspected during life, and which had not interfered with the ordinary occupations and habits of the patient.

Dr. Littlejohn summarizes the result of his observations as follows:

1. Pneumonia may be completely latent during its whole course.
2. The form of the disease most liable to be latent is basal lobar pneumonia.
3. Alcoholic apical pneumonia is rarely latent during its whole course.
4. The disease may be latent even though the whole of one lung, or a considerable portion of both lungs, is affected.
5. In latent pneumonia, sudden death most commonly occurs during the stage of grey hepatization.
6. The condition is practically confined to persons addicted to excessive alcoholic intemperance.
7. Complete consolidation of the whole of one lung is not inconsistent with a person having continued to lead an active life up to the time of death.
8. Latent pneumonia is most frequent as a cause of sudden death during the winter months.
9. It is most common after the age of forty and in the male sex.
10. The explanation of the "latency" is to be found in the quantity of alcohol consumed after the onset of the disease; first, in masking the ordinary signs and symptoms by dulling sensibility, second by its stimulating effect, thus enabling a person to go about until he suddenly collapses and dies.
11. In medico-legal cases, the discovery of latent pneumonia may satisfactorily explain the death of an individual, and thus allay all suspicion connected with the case.
12. On the other hand, the existence of pneumonia, even in an advanced stage, will not preclude the possibility of an individual having died from other causes, natural or violent, and of his having been at the time of receiving an injury in a state of apparent good health. These conclusions will probably be accepted by physicians as, in the main, justified by their own observations, and from the medical jurisprudent's point of view be deemed worthy of serious consideration. Medical expert testimony in this country has for long been made the target for much invidious criticism, but when it is recognized that in a disease like pneumonia no characteristic symptoms may reveal themselves until the sufferer is almost at the point of death, then a fairer conception of the difficulties in the path of the medical witness will be had by the general public.

The larger number of medico-legal investigations—according to Dr. Littlejohn—and few will be found to controvert his statement—relate to cases of sudden or violent death, connected with which are often suspicious circumstances, tending to incriminate others. The forces of the law are put in action, and medical experts are retained by either side to give testimony. What wonder then if, for example, in a case of sudden death from latent pneumonia, in which foul play is suspected, the evidence of the medical experts should be of a seemingly conflicting character.

Unprejudiced reflection on the part of outsiders with regard to the probability of such occurrences might lead them to regard the medical witness with somewhat less prejudice, and not, as is too often the case now, to incontinently and unhesitatingly denounce him as a man willing to perjure himself for the sake of gain.

A New City Hospital.—Governor Odell has signed a bill authorizing the construction of a new hospital in the Borough of The Bronx, New York City. It directs the Sinking Fund Commission of the city to have bonds issued for $200,000 to be used in acquiring the site for the proposed structure, and for $300,000 for erecting and equipping the building.

QUARANTINE FOR YELLOW FEVER.

Dr. Alvah H. Doty, Health Officer of the Port of New York, will, within the next two weeks, go to Washington to discuss with Federal officials the subject of quarantine regulations, especially as they bear on yellow fever. He will—it is further stated—ask also that the Government do all in its power to bring about a conference of leading sanitarians, who have dealt with the fever, looking to a modification of the existing quarantine regulations.

This is certainly a wise action on the part of Dr. Doty, and it is to be hoped that he will succeed in his object, for such a conference should have the effect of procuring the opinions of those experienced in the disease, and tend to settle the question as to whether the majority of experts believe in a radical alteration in the existing quarantine regulations, in their modification, or in leaving matters in *statu quo*.

Dr. Doty himself argues that, as the mosquito is the only known medium of infection, quarantine regulations should be constructed from the mosquito standpoint alone. Thus Dr. Doty maintains that, when a ship upon which yellow fever has manifested itself is more than five days from the port of departure, removal of those infected removes the fever from the ship, provided that there are no mosquitos aboard. The Health Officer of the Port of New York is an adherent of the theory that the mosquito is the only mode by which yellow fever infection is spread, and consequently thinks that the quarantine regulations now in force are unduly rigorous. He vigorously combats the view—up to recent times held by most sanitarians and still maintained by many scientific observers—that fomites have any influence on the spread of yellow fever, and therefore opposes disinfection.

The quarantine rules necessary in Dr. Doty's opinion, and which were embodied in his address delivered before the American Public Health Association, are worded as follows:

"The treatment of incoming vessels from ports infected with yellow fever becomes very simple: if they are five days or more in transit, and all on board are found to be well after a careful inspection and the use of the clinical thermometer, the vessel, its passengers and crew shall be released without further detention or treatment. If the vessel has been less than five days in transit, all on board who cannot present satisfactory evidence of immunity should be removed and held for examination until the completion of a period of five days from the time of departure from the infected port, and then released only after a careful inspection. When yellow fever is found on incoming vessels, the procedure should differ only so far as it concerns the removal of the patient to a properly constructed hospital or apartment for treatment. . . . If the future shows that there are other means of infection, it will then be time enough to add whatever restrictions are necessary for the protection of the public health."

Assuredly, the regulations as now framed are troublesome and, to a great extent, cripple, commerce, and are, perhaps, too vigorous. Nevertheless, it must be borne in mind that a large number of experienced medical men, both in this country and elsewhere, are not yet convinced that the mosquito is the sole conveyer of the infection of yellow fever.

If, however, Dr. Doty can prevail upon the Government to bring about a conference of leading authorities on the subject, and the majority of these should decide that yellow fever can only be transmitted by mosquitos, it will then have been demonstrated, in a more or less conclusive manner, that the existing quarantine regulations are superfluous, and their modification will follow as a matter of course.

UNCULTURED MEDICAL STUDENTS.

The question as to whether a physician requires polish and culture in order to make his way successfully in the profession, is one that has often been raised, but never decided in an entirely satisfactory manner. There are so many points which must be taken into account when considering the matter, that to assert dogmatically that the medical man should be an individual, of wide knowledge and correct manners, would be to make a statement which does not apply to all members of the calling, wherever situated. But, before discussing the subject further, it will be as well to refer to an article which appeared in the *Columbia Literary Monthly*, for March, and which, indeed, has given rise to these remarks.

An editorial in that magazine bluntly declares, without beating about the bush, that the greater part of the medical students in the Columbia College are not only uncultured but frequently even uncouth, and contend that only students having the Bachelor of Arts degree should be permitted to enter the Columbia School of Medicine, premising that such a procedure would exclude the boorish and unrefined. In support of this view the fact is pointed out that at Harvard and Johns Hopkins the possession of a degree in arts is necessary to enter upon the study of medicine.

The editorial in the *Columbia Monthly* sums up as follows:

"The place of the Bachelor of Arts in social and intellectual circles of life to-day is an interesting one to note. His era is at hand. What has thus far been accomplished in the world has been accomplished without him; what remains to be accomplished will be done by him, and with more directness and speed than results of the past have been obtained. His starting point is the goal others have striven for. As one in such a position he has an advantage over his unschooled brothers, but when working together with these, he, in turn, also labors against obstacles.

"The science of medicine is founded upon broad principles, which should be understood before medicine itself is undertaken as a study. The college is the proper place to learn these truths. In medical schools tributary brooks and streams of knowledge should have already been left far behind, and the true current of work should take us with it from the outset. At the College of Physicians and Surgeons those who have made the correct start are retarded by those who have not, while the latter are at a disadvantage when compared with their fellows. This tends to a want of balance.

"Leaving aside, however, the question of fitness to do work, and turning to the wider sphere of the physician's effort, it must be admitted, to put it mildly, that culture and refinement are desirable in a doctor, and it must further be admitted that the greater part of the students at our medical schools are not only uncultured, but often even uncouth, thus being fundamentally unfit to become the highest type of their profession. A degree as the entrance requirement would go far to remedy this state. Unfortunately, many worthy men would thus be barred out, but the good resulting from such an injustice would far outweigh the injustice itself, and the benefit to the institution would be very great, although its number of students might be greatly diminished."

The foregoing quotations show that the writer of the article has, on the whole, grasped the right ideas, although his arguments contain some rather specious pleading and somewhat exaggerated notions with regard to the value of an A. B. degree.

In the first instance it is scarcely correct to say that the era of the man with an art degree has not yet come. In Germany and in Great Britain and in other countries of the European Continent he has arrived, and has already done great things in the professions—in a lesser degree in other branches of life.

However, the *Columbia Monthly*, perhaps, intended to confine its criticisms to the United States.

It must certainly be granted that opportunities of entering upon the study of the medical profession are too obviously easy in most parts of this country.

A youth desiring to become a doctor should, decidedly, possess a good general education, and should be well tested as to his acquirements in this respect before he is permitted to commence medical studies.

The day of the Bob Sawyer and Ben Allen type of medical student has passed never to return, and roughness of manner and coarseness of speech is no longer looked upon as the trade-mark of the medical man.

Nevertheless, although it must be conceded that a doctor is better in every way for a certain amount of polish and culture, would it not be carrying this view to too great lengths if in every medical school throughout the land the rule was made that a degree in arts must be had before medical studies could be commenced?

It must also be borne in mind that a degree in arts does not by any means necessarily confer culture, although it, undoubtedly, does tend to smooth the rough angles. In a university like Columbia, situated in the largest and richest city of the continent, the majority of whose medical graduates will presumably practice in New York or in some other large town, it would certainly seem eminently desirable that they, for their own sakes, should be men neither of uncultured nor of uncouth manners, and if the Columbia authorities are of the opinion that the most effective way of avoiding this state of affairs is to insist upon its medical students possessing a degree in arts, there can be no valid objection on the part of the general public to there views being carried into effect.

If such a course be decided upon, here is no reason why the subjects for the degree in arts should not include those which would be useful in the after-medical studies, and not be wholly restricted to Latin, Greek, mathematics and the like.

The MEDICAL RECORD has always ardently advocated a raising of the standard of medical education throughout the country, and has, in particular, urged that the preliminary examinations in arts should be a fairly rigid criterion of a man's general knowledge.

THE NEW YORK BOARD OF HEALTH AND THE SALE OF THERAPEUTIC SERUMS.

A PETITION has recently been presented to the Mayor of New York City, protesting against the sale of antitoxin and vaccine virus as at present carried on by the Board of Health. The petitioners request that the Board should be granted such adequate appropriations as might be required for its legitimate needs, thus relieving it of the distasteful task of engaging in competition with regular trade, and setting its officials free to devote themselves to more congenial as well as more useful descriptions of work—as, for example, scientific research, the testing of sera, and the diffusion of useful information regarding sanitation.

The argument advanced by the Board in defence of its action is that more vaccine virus and antitoxin is produced than is actually required, and that under powers granted for the disposal of this surplus, two special funds were created, one known as the fund for gratuitous vaccination and the other as the antitoxin fund.

The petitioners contend that the application for the appropriations in the estimates gives a mistaken idea as to the amount which is expected to be expended, and that the Board, in a large measure, depends upon the income which it anticipates deriving from the antitoxin fund, for the proper continuance of the work of the department.

In short, it is claimed that the Board has taken advantage of the powers placed in its hands by the section of the Charter permitting the creation of the special funds to enter upon a policy of commercialism, to the detriment of private manufacturers, and in direct opposition to the principles upon which such bodies were founded.

It is impossible to resist the conviction that it would be to the best interests of the Board if it were to confine its operations to its legitimate sphere of action, and wholly purge itself of any suspicion of commercialism.

The City of New York is surely sufficiently rich and public spirited enough to provide the Board with ample appropriations for all the work which falls within its province, and, by so doing, will avoid the odium of seeming to allow a most important municipal department to be conducted upon commercial lines.

The assertion that by these methods alone the purity of therapeutic serums can be guaranteed will not bear close inspection, for any reputed failure on the part of manufacturers in these respects can be easily remedied by the appointment by Government or by State of a proper system of inspection.

It is right and fair that both vaccine and antitoxin should be freely distributed to those who cannot afford to buy these safeguards to health, but, by selling such products at a cheap rate, the ordinarily understood principles of just trading are overthrown.

STREET NOISES.

It is a mooted question as to which of the cities of America—and incidentially of the world—is most afflicted with street noises. On this continent the race for the uneviable distinction is between New York and Chicago, and the partisans of each city declare vigorously that its rival is the chief offender.

However, no one will deny that the conglomeration of sounds to be heard both by day and by night in New York is distinctly unpleasant, as well as being in a high degree prejudicial to good health. A large amount of street noise is, of course, unavoidable, but many of the sounds by which the ears of the unlucky citizens of a large town are distressed, and their nerves racked, are wholly unnecessary.

The Betterment of London Association, recognizing this fact, have recently presented a petition to the London County Council, beseeching that body to take steps to mitigate the unbearable infliction of unnecessary street noises.

The London *Saturday Review* in commenting upon the action of the association, and wishing it success in its efforts, points out that there are many obstacles in the way of the complete realization of the hopes of the quiet and nerve-tortured inhabitants. For example, a habit is prevalent in London, which is also extremely common in certain parts of New York, that of elevated and hilarious youths and maidens, making night hideous by their rancous rendering of popular songs of the day.

The writer in the *Saturday Review* rightly remarks that it is but seldom the policemen put a stop to the unmelodious strains of these disturbers of the peace, and gives as a probable reason that the policeman is little appreciative of the agony inflicted upon nervous people by such sounds, and that unnecessary noise is not to him any more than it is to the classes from whom he comes, an abomination *per se*, but in reality an exquisite form of enjoyment. Nevertheless, when everything is said that can be said on the matter, all rational inhabitants of towns will undoubtedly concur in agreeing that there are many street noises which are unnecessary and superfluous, and to suppress them would be for the good of the entire community.

LONGEVITY IN MODERN TIMES.

It is somewhat paradoxical to say that, in these times, which are frequently dubbed the age of degeneracy, the human life should be constantly lengthening its span. *The Standard*, some time ago, made investigations into the question of present-day longevity, and, as a result, has published some instructive conclusions. In the seventeenth century mankind, throughout the civilized world, reached the meagre average age of thirteen years, while in Great Britain, at least at the present time, out of 1,000 people over 100 reach the age of seventy-five, thirty-eight reach eighty-five, and two attain to ninety-five; while one person in about every 5,000 becomes a centenarian, the general average being about thirty-eight.

According to the *Lancet*, the record for length of years is probably held by Michael Solis, who was living in Bogota in 1878, and who then claimed to be 184 years old. The case was thoroughly investigated in 1878, and the conclusion come to was that he was then 180. Solis was still living in 1878, so that if he died in that year he was 198 years of age.

Another remarkable instance of tenacity of life is afforded by Henry Jenkins of Bolton, Yorkshire, who was born in the year 1500, and who remained alive until 1669. This is also said to be a perfectly authentic instance.

Next in order came the celebrated Thomas Parr, who was born in 1483, and died in 1635, at the age of 152.

Women, contrary to a general belief, do not reach the extreme ages sometimes attained by the male sex. The oldest woman living at present is probably Mrs. Nancy Hollifield, a citzen of the United States, and a lady of color, who is now one hundred and twenty-one years of age. She lives in North Carolina.

A Hungarian lady celebrated, in 1894, the hundreth year of married life; this, it is needless to add, is a unique record. There is but a single instance of a marriage ceremony having taken place where both the contracting parties were centenarians. In 1772, according to the Parish register of Dublin, Pat Stephens, aged 109 years, led to the altar Mrs. Berry, who was only seven years younger.

The soldier is, as a rule, a long-lived man, the hardships incidental to his career do not appear to shorten his days—or, perhaps, it is only a case of the survival of the fittest. Nevertheless, the fact remains that the work-houses of Great Britain contain several old soldiers, who are centenarians; and frequently retired officers far exceed the limit set by the Bible.

THE HOUSING PROBLEM.

At the third session of the American Academy of Political and Social Science, which opened in Philadelphia on April 4, the above subject was dealt with by several speakers.

Mr. Robert W. De Forest of New York spoke on "Tenement-house Legislation: Reasons for It; Its Proper Limitations." Jane Addams of Hull House, Chicago, on "The Housing Problem in Chicago," and Nathaniel B. Crenshaw of Philadelphia on "Certain Aspects of the Housing Situation in That City."

In all large cities of this country, as in every center of population throughout the world, the housing problem must be confronted to a greater or lesser degree. The difficulty presents itself in New York City in an especially acute form, and various schemes have been devised by philanthropists and sanitarians to provide the working poor with comfortable and at the same time healthy homes.

Model tenements have been planned, and, in a few instances, constructed, by the benevolent, but, as pointed out by Mr. De Forest, while this is good as far as it goes, the benefits produced thereby are more than neutralized if other people not benevolent, who have no motive but gain for themselves, are permitted to build tenements which are not models. Therefore the first and foremost course to pursue, is to secure proper legislation, using that term, in its broadest sense, to include city ordinance as well as state law.

That builders only regard the matter from a commercial standpoint was clearly shown by the action of the Brooklyn builders in attempting to amend the existing Tenement bill to meet their views.

Such men ignore the principle of providing healthy habitations for the working classes, and care little for what may happen so long as money flows into their pockets. The defeat of the measure proposed by them was a notable victory for sanitary reformers, and should encourage the philanthropic citizens of other large cities to persevere in their efforts to ameliorate the lot of the immense army of tenement dwellers.

The Medical Record, in several articles, has dwelt upon the fact—only partially recognized by the majority of town dwellers—that a quantity of unsavory, ill-built, badly-ventilated tenement houses, the like of which are too common in New York, are a standing menace to the health of the inhabitants at large.

Tuberculosis and many other diseases will never be effectually stamped out until the disgracefully insanitary dwellings which cumber the ground in certain districts of New York are swept away, and in their stead buildings erected, fit for human beings to live in and not to merely exist.

BACTERIAL INVESTIGATIONS OF THE WATER OF PUBLIC SWIMMING BATHS.

It is an undoubted fact that the water in many public swimming baths is frequently loaded with an immense quantity of bacteria.

Dr. R. G. Glynn, at the Liverpool Medical Institution, recently read a paper on the subject, in which were made these statements. He had directed his attention to the following points: (1) The total number of bacteria present in the water of the baths at the beginning and end of the day; (2) The number and nature of the pathogenic organisms present; and (3) The source of the organisms. Samples of water were taken in sterilized flasks and plated on agar within an hour after leaving the bath; these plates were incubated at 37° C., and the number of bacteria present in a cubic centimeter of the bath-water was estimated. The majority of the observations were made at baths which were filled with fresh water every morning. This water was practically sterile, containing less than three bacteria per cubic centimeter. An hour after the baths were opened the water gave forty-six bacteria per cubic centimeter; these were mainly derived from the air and the walls of the bath.

During the eight hours of the night the number of bacteria rose from three to forty-six per cubic centimeter. On five different occasions the examination of the water in the plunge bath at 9 P.M., during the months of June and July, gave an average of 4,676 bacteria per cubic centimeter, the average number of bathers being 292. A calculation, based on the capacity of the baths, showed that the water removed from the skin of each bather contained between 4,000,000,000 and 6,000 000,000 bacteria, excluding moulds and others which did not grow at 37° C.

With regard to the organisms discovered in the water, streptococci were never found and staphylococcus aureus and citreus very rarely; staphylococcus albus was abundant in three varieties—pyogenes albus, epidermidis albus, and cereus albus. At the end of the day bacillus coli was present in the bath to the number of eight per liter fo each bather in first-class baths and forty-eight for each bather in the second class.

Dr. Glynn said that typhoid fever was probably never contracted in such baths as these, and the swallowing of water of the type analyzed was quite innocuous.

From time to time various complaints have been ascribed to infection in baths, but with doubtful accuracy, some who bathe constantly in the open complain of lassitude after swimming in a public bath; this should not be attributed to the quality of the water, but the temperature and defective ventilation of the bath-house itself. Public bath-houses, like all buildings in which large numbers of persons assemble, should be well ventilated and the temperature properly regulated.

MEDICAL NOMENCLATURE.

Many writers of the present day condemn the use of long-winded words in medical and surgical phraseology, and advance the plea for simpler and clearer language to illustrate, verbally, scientific terms.

While there is much to be urged in favor of this contention, compound words derived from Greek or Latin are in many instances more or less esential to a correct comprehension of the condition or scientific definition thereby indicated. It would be impossible always to express by one Anglo-Saxon word a large number of medical, surgical, and scientific terms.

Nevertheless, there are undoubtedly occasions when Greek and Latin are abused in medical nomenclature.

The *Medical Magazine*, February, quotes from the *’Ιατρικὴ Πρόοδος* in support of this view.

The Greek journal discusses the question as follows:

"One of the most difficult and thorny tasks of a writer in the Hellenic tongue is the translation of medical terms and names which are published abroad by tens daily, and which claim for the most part a Greek origin, though they are far from obeying the rules of the language. The worst of it is that very many such terms have already been introduced into the universal language of science, and have become so usual, that their purgation or modification would be a gigantic and most difficult work. A Greek author or translator thus finds himself in a most awkward dilemma, and is at a loss what to do with such words; for the foreign publications not only include words of defective or of improper formation but, what is worse, monstrous and mongrel productions, one-half of Greek and the other half of Latin origin, such as the terms fluoroscope hæmoglobin, oxyhæmoglobin, Mesocæcum, caboluria, etc.

Science, January 24, contains an exceptionally able article on the custom of coining immensely long words of Greek or Latin origin, the majority, of which perhaps not only fail to accurately and lucidly denote the intended meaning, but tend to obfuscate the brains of readers by their obscurity.

Huxley—and Tyndall in a lesser degree—was a striking example of a scientific man who could clothe technical language in simple dress.

The writer in *Science* truly says, "There is yet another reason against the excessive use of Greek-English words, in particular. Greek is not a remnant of extinct geography, but an existing land with a very active people and a living language. The terms which paleontology has borrowed from the Greek may be returned by the Greeks to us, and, as Ruskin points out, "What you, in compliment to Greece, call a 'Dinotherium,' Greece, in compliment to you, must call a 'Nasty-beastium,' and you know the exchange of compliments can't last long."

This is in line with our previous quotation from the *’Ιατρικὴ Πρόοδος*.

Greek and Latin are necessary for the interchange of ideas among the scientific men of the world, but quite unnecessarily cumbersome and almost incomprehensible words have been coined with this object in view. The protest brought forward in *Science* is not against the use but the abuse in the manufacture and use of such words.

News of the Week.

An Ambulance Service for the Mount Sinai Hospital.—When the new buildings at Madison avenue and One Hundredth street are taken possession of by the Mount Sinai Hospital, an ambulance service will be installed there. Hitherto the hospital has been without such service. An offer has been made by several friends of the institution of two electric ambulances and a sum of money, the interest of which will provide for the maintenance of the service.

A Gift to the Saratoga Hospital.—A full tier of sun parlors has been built for the Saratoga Hospital by Mrs. Henry B. Hyde of this city.

Pestilential Diseases About Canton.—According to reports from the United States Consul at Canton, China, the country in the neighborhood of that city is being devastated by epidemic diseases. He says that whole villages on the banks of North River in the vicinity of Shickwanfu are devastated by smallpox and typhoid. Fatshan (or Fachan, a large town near Canton) is suffering from cholera and plague.

The Annual Meeting of the Association of Military Surgeons of the United States, which will be held in Washington on June 5, 6, and 7, will have the largest attendance in the history of the organization. During the past year the membership of the association has increased by more than two hundred. An invitation has been extended to the armies of the world to be represented at the convention through their medical departments. A representative of the British army has been present at previous meetings, and this year, in addition, delegates will be sent by France, Japan and Mexico. Papers will also be forwarded from other countries, and the convention will thus assume an international character. The publication by the association of a journal devoted to military medicine, surgery, and hygiene, has done much to raise it in the estimation of foreign medico-military authorities.

Arrest of a "Nature Doctor."—A man named Reinhold, who calls himself a "doctor," and who runs a "nature-cure" sanatorium in this city, has been arrested for practising medicine without a license. The immediate occasion of the inquiry into his methods and consequent arrest was the death in his house of a young girl who had been under his treatment.

The Use of Borax as a Meat Preservative.—Several wholesale meat dealers in St. Paul were recently arrested, at the instigation of the retail dealers, and charged with using borax as a meat preservative. The evidence against them was conclusive, but through their attorneys they demurred to the charge and their cases were continued until April 29. A case similar to these is now pending in the Supreme Court of Minnesota, and it is expected that a decision will be had before the date of trial. The decision rests upon the point whether or not this use of borax is injurious to health.

Increase of Salary for Dr. Biggs.—The Board of Health of this city has raised the salary of Dr. Hermann M. Biggs from $2,500 to $5,000 per year, and changed his official title from Director of the Bacteriological Department to Medical Officer. His duties will be practically the same as heretofore.

Occupation for Epileptics under the City's Care.—Mr. Homer Folks, Charities Commissioner of New York City, has announced that he will put some of the more able-bodied epileptics and inmates of the Almshouse on Blackwell's Island on the Poor Farm on Staten Island, to help raise fresh vegetables for the city charitable institutions.

Trouble at the Mills' Training School.—The Board of Trustees of the Mills' Training School for Male Nurses at Bellevue Hospital lately passed an order assigning female supervisors to the training schools and placing them over the heads of the men who have held those positions. One female supervisor is placed over every two wards. This action, which, the authorities of the school say, was simply for the purpose of reducing expenses, caused great indignation among the students, and five resigned. An agreement to resign in a body if the former conditions were not restored was signed by a large majority of the students, but not by those in the graduating class, and consequently the threat of a general strike could not be made effective.

Feeble-Minded Wards of the City.—Ninety feeble-minded children, formerly kept at the Kings County Almshouse, have been transferred to Randall's Island, where all feeble-minded children will be sent hereafter.

The Brooklyn College of Pharmacy.—Ground will soon be broken for the new Brooklyn College of Pharmacy, in Nostrand avenue, between Clifton place and Lafayette avenue. The building will be fifty feet wide by ninety feet deep, three stories high. The basement will contain lockers, cloakroom, recreation room, etc. On the first floor will be a large lecture room, with a seating capacity for 300 students. The main entrance will be in the center of the building, with the trustees' and clerks' rooms on either side of the hall. The second floor will be occupied entirely by the pharmaceutical and chemical laboratories, which will be provided with the most improved apparatus. There will be two quiz rooms on the third floor, which may be combined into an assembly hall.

Precaution Against Yellow Fever in Havana.—In his latest report on the health of Havana, Dr. Gorgas refers to the precautions taken to prevent the introduction of yellow fever into the now clean city. Acting on the belief that the disease is propagated only by mosquitos, the Sanitary Department has put no restrictions upon goods, baggage, or fabrics of any kind coming from Vera Cruz or other infected ports. The only thing feared is that some person sick, or about to become sick, with yellow fever may enter the city, thus poisoning the Havana mosquitos. To avoid this, the Military Governor has issued an order requiring all non-immunes to report daily for examination, this examination being kept up during the period of incubation, in the case of each individual. There has been no case of yellow fever in the city for five months, and none of smallpox since July, 1900. It is satisfactory and reassuring to learn that Major Gorgas has been ordered to remain in Havana after the evacuation of Cuba by the United States troops, and continue his good work in preserving the city's health.

Cholera in the Philippines.—From the beginning of the epidemic up to April 21 there were 411 cases of cholera and 319 deaths in Manila, and 890 cases with 625 deaths in the provinces.

Work of the City Consumption Hospital.—The Commissioner of Charities recently gave out a statement of the results attained thus far at the phthisis hospital on Blackwell's Island opened on February 1. The whole number of patients admitted to the hospital to date has been 273. With few exceptions, all of the patients admitted were in more or less advanced stages of pulmonary tuberculosis. Of the 273 patients fifty-five have been discharged, fifty as improved and five not improved. The fifty patients who had improved, have, as a rule, either returned to their work or have gone to the country or the mountains at the suggestion of physicians. Twenty-eight cases have been transferred to other wards on account of surgical needs, or as showing no evidence of phthisis; seventy-six patients, who when admitted, were in an advanced stage of the disease, have died. There remain in the hospital 114 patients. Of these twenty are new cases not yet classified, forty are unable to leave their beds, and fifty-four are less advanced cases. Of these, twenty-five have shown decided improvement and show an average gain in weight of 6.75 pounds; thirteen show less improvement, but an average gain in weight of 1.9 pounds; sixteen have not improved, and show an average loss in weight of 1.31 pounds.

Association of American Physicians.—The seventeenth annual meeting of this society will be held at the New Willard Hotel, Washington, on April 29 and 30, under the presidency of Dr. J. C. Wilson of Philadelphia. The annual dinner will take place on Wednesday evening after the close of the meeting.

American Therapeutic Society.—The third annual meeting of this society will be held at the Academy of Medicine in this city on May 13, 14 and 15, under the presidency of Dr. R. W. Wilcox of New York. The secretary of the society is Dr. Noble P. Barnes of Washington; the chairman of the Committee of Arrangements is Dr. Thomas E. Satterthwaite of New York City.

The American Congress of Tuberculosis.—At this congress, to be held at the Hotel Majestic, New York, on May 14, 15 and 16, the following subjects will be submitted for general discussion: (1) Preventive Legislation, Embracing the Social, Municipal, and State Aspects of Tuberculosis. (What aid should be expected from the State in the cure and prevention of tuberculosis, and how shall this be secured); (2) Tuberculosis in its Pathological and Bacteriological Aspects; (3) The Medical and Surgical Aspects of Tuberculosis. (Embracing Sanitoria and Climatic Conditions, Light and Electricity; (4) The Veterinary Aspects of Tuberculosis.

An order has been issued by the War Department directing Major W. C. Gorgas, surgeon, U. S. Army, under whose administration, as sanitary officer, yellow fever has been eradicated from Havana, to remain in that city on special duty after the establishment of the Republic of Cuba and the evacuation of the island by United States troops. Major Gorgas will continue his investigations in regard to the relations between yellow fever and the stegomyia mosquito, and will no doubt assist the new-formed Havana Board of Health in an advisory capacity.

Pathological Society of Philadelphia.—At a stated meeting, held April 10, Dr. William Pepper presented a communication entitled "The Microscopy of the Blood Fifty Years Ago, with the Exhibition of a Specimen Mounted in 1852." He pointed out that even at that time much attention was directed to the study of the blood, and that leukemia had been described some six years previously. It was the general practice to make observations of the blood in the fresh state, and in the literature of the day Dr. Pepper could find no reference to a permanent preparation such as the one exhibited, and which was found among some possessions of his grandfather, Dr. William Pepper. The specimen was mounted on and viewed through a micro scope of contemporary form. Dr. M. Howard Fussell and J. Thompson Schell exhibited "A Large Ovarian Cyst," the part that was removed, together with its contents, weighing more than one hundred pounds. Dr. A. O. J. Kelly exhibited "An Enormous Vesical Calculus Successfully Removed by Suprapubic Cystotomy." The stone was ovoid in shape, light in color, as large as a good-sized fist or of two applied small-sized fists, and it weighed twenty-nine ounces. The operation had been performed within a week by Dr. J. B Deaver at the German Hospital and the condition of the patient was favorable. Dr. C. A. Herter of New York read by invitation a paper entitled "Experimental Glycosuria from Adrenalin Chlorid." He referred to observations made by others as to the development of glycosuria in lower animals from subcutanous and intravenous injections of preparations of adrenal gland and he detailed experimental observations of his own first with intraperitoneal injections of adrenal chloride, subsequently with local applications of this substance to the surface of the pancreas, and finally with applications of other reducing substances to the surface of the pancreas, all of which were attended with glycosuria, although such a result failed to follow the administration of adrenal chlorid by the mouth and the application of other substances to the gland, including those having oxidizing properties. Dr. A. C. Croftan referred to his own independent observations upon the development of glycosuria following the injection of adrenal extract, and to his view that the glycosuria was related, in part at least, to the presence of a ferment in the adrenal gland capable of converting the glycogen of the liver and the muscles into dextrose. Dr. Alfred Stengel reported some clinical observations in which intravenous injection of adrenalin chlorid in doses of two drams was followed by the appearance in the urine of a reducing substance not responding, however, to all of the tests for dextrose. In cases of typhoid fever in which adrenal gland had been administered by the mouth there was rise of blood-pressure of brief duration.

An Anglo-American Hospital at Cairo.—An Anglo-American Hospital is to be built at Cairo. The King and Queen of England have promised their patronage. Sir Edward Cassel will give $25,000 toward it, if the same sum is contributed from other sources.

Meeting of Legislative Committee of American Medical Association.—A conference was recently held in Washington of the legislative committee of the American Medical Association and the chairman of the legislative committees of a number of State medical societies, relative to National and State legislation affecting the interests of the medical profession. The chairman of the medical societies present represented the States of New Hampshire, North Carolina, Arkansas, New Jersey, New York, Massachusetts, Alabama, South Carolina, Minnesota, Michigan, Indiana, Pennsylvania, West Virginia, Maryland, Connecticut, Wisconsin, and several other states. A representative was also present from the Army, Navy, Marine Hospital Service, and Bureau of Animal Industry of the Department of Agriculture. The conference adopted committee reports which have for their object the securing of uniform legislation by the States and Territories which will permit a physician to practice in any state or territory, and the development of state medical organization to secure the enactment of legislation of importance to the profession. Dr. H. L. E. Johnson, chairman of the legislative committee of the American Public Health Association, made a report showing what had been accomplished in the way of National and State legislation. Surgeon-General Sternberg made a report relative to the proposed reorganization bill for the Army Medical Department, and also referred to the work being done by the medical corps in the Philippines. The conference declared itself favorable, with some modifications, to the bills now pending in Congress to increase the powers of the Marine Hospital Service and to change its name to the United States Public Health Service. These bills had previously received the endorsement of the conference of State health officers, which met in Washington some weeks before. Strong resolutions opposing the Gallinger antivivisection bill for the District of Columbia were adopted. Favorable action was taken on the Nelson bill to establish a department of commerce and labor; and on the Proctor bill for the payment of medical expenses incurred by officers and enlisted men while absent from duty by reason of sickness.

Pennsylvania Society for the Prevention of Tuberculosis.—At the annual meeting, held April 9, Dr. Howard S. Anders was elected president in succession to Dr. Guy Hinsdale, who had held the office for three years and declined re-election. Drs. J. Solis-Cohen, Benjamin Lee, S. A. Knopf, Wm. Moss, Samuel G. Dixon, Lawrence F. Flick, Mr. Talcott Williams, Mrs. Wm. F. Jenks, Mr. Samuel Castner, and Miss E. W. Redfield were elected vice-presidents; Dr. A. H. Davisson, secretary; Miss E. W. Redfield, corresponding secretary; Mr. Jas. L. Stanton, solicitor, and the Commonwealth Title Insurance and Trust Co., treasurer.

Philadelphia Pediatric Society.—At a stated meeting, held April 8, Dr. C. H. Weber exhibited "a case of aortic stenosis." The patient was a boy, about eleven years old, with recurrent symptoms of rheumatism, a positive agglutinating reaction with typhoid bacilli, but without other indication of typhoid fever, an enlarged area of cardiac dulness, a loud systolic murmur, and a marked systolic thrill in the aortic area. Dr. Robert G. LeConte read a paper entitled "Two Cases of Nephrectomy for Sarcoma of the Kidney in Childhood; Operative Recovery." In one of the cases marked improvement followed the operation, and life was prolonged for several months. The object of operation is either to save life when this is possible; otherwise to prolong life when recovery is not possible, or to relieve suffering and render death less painful. In some four cases out of seventy-five on record, life was prolonged for at least several years, and up to the time of report, Dr. M. H. Fussell reported "three cases of infantile scurvy." In all the condition closely simulated rheumatism, which is a rare affection in early childhood and infancy, and in none were the gums spongy or bleeding. In all, further, artificial food entered into the diet, and improvement speedily followed a change to milk-and-cream mixtures. Dr. Edwin Rosenthal read a paper entitled "Report of Six Cases of Surgical Erysipelas Treated with Antistreptococcic Serum without Benefit." The cases occurred in a limited epidemic, and recovery ensued in all, quinine and iron having been administered, and ichthyol having been applied topically after failure of the serum. Dr. Frederick Krauss read a paper entitled, "Report of a Case of Cerebrospinal Meningitis probably due to the Pneumococcus; Followed by Recovery." The good result in this case was attributed to the heroic doses of alcohol that were employed. Dr. Alexander H. Davisson reported "a case of sclerema neonatorum."

Threatened Closure of the Hospitals in Queens.—The hospitals at Jamaica and Flushing, in Queens Borough will have to close within a few weeks, it is said, unless the city comes to their aid. They formerly received appropriations from the various villages in the county, but consolidation cut off this source of income, and they are now dependent wholly upon money raised by private subscription and the proceeds of entertainments, and receive for city patients less than it costs to maintain them. St. John's Hospital, in Long Island City, is the only one that benefits by an appropriation in accordance with its needs.

Destruction of Rats in Manila.—Dr. L. M. Maus, U. S. A., Commissioner of Public Health in Manila, has reported to the Philippine Commission that between September, 1901, and February, 1902, 33,772 rats were caught by the official rat catchers and natives. Of this number 30,786 were examined for infection at the health board's laboratory. Two hundred and twenty-nine bubonic plague rats were found, or seven-tenths of 1 per cent. of the number examined. In January 16,776 rats were examined, and of these fifty-one were found to be infected, three-tenths of 1 per cent. for the month, leading to the belief that the disease among rats is gradually disappearing. No plague cases were reported in January, 1902. The last case was reported December 24, 1901. In 1900 the disease was most prevalent in March, when sixty-four cases occurred, while in 1901 the climax was reached in May, with 124 cases. Every house in which infected rats were found was remodelled, cleaned and disinfected.

The Late Prof. Paul F. Mundé.—At a recent meeting of the Medical Board of Mount Sinai Hospital, the undersigned having been appointed a Committee to draft resolutions on the death of Dr. Paul F. Mundé, reports as follows:

Whereas, Dr. Paul Fortunatus Mundé, after a faithful service of nineteen years at Mount Sinai Hospital, has been removed by an untimely death; and

Whereas, his Colleagues of the Medical Board had special opportunity during all these years to recognize in him the skilful physician, and to esteem him as a devoted friend;

Therefore be it Resolved, That the Medical Board of Mount Sinai Hospital place upon its minutes this record to show its appreciation of the great loss which the hospital has sustained; that it extend its sympathy to his family in their great sorrow; and that a copy of these resolutions be sent to them and be published in the medical press of the city.

(Signed) ALFRED MEYER, M.D.,
HENRY KOPLIK, M.D.,
HOWARD LILIENTHAL, M.D.

Fatal Blood Poisoning the Result of an Operation.—On April 6 Dr. W. D. Middleton, chief surgeon to the Chicago, Rock Island and Pacific Railway, and dean of the medical department of the State University of Iowa, died at Davenport, Ia., of blood poisoning, subsequent to an operation performed by him for appendicitis. The patient was in a gangrenous condition, and both Dr. Middleton and Dr. Braunlich, his assistant, were accidentally poisoned, and by late reports, the latter was said to be critically ill.

Cancer Research in Great Britain.—The British Cancer Research Fund has received three munificent donations of $25,000 each, one of which is anonymous, one comes from Mr. H. L. Bischoffheim, who for years maintained the Street Ambulance Organization of London, and the third is given by the Goldsmiths Company as a special memorial of the Coronation. This donation is accompanied by a stipulation that it shall be under the control of the Colleges of Physicians and Surgeons.—*The Hospital.*

International Conference on Syphilis.—The second International Conference on the Means of Prophylaxis against Syphilis and Venereal Diseases will be held under the patronage of the Belgian Government at Brussels from September 15 to 20. Governments and municipalities will be asked to send delegates, and invitations will be sent to members of the medical and legal professions, public officials, and sociologists who have given special attention to questions of hygiene and administration relating to prostitution and venereal diseases. The Permanent Committee consists of M.M. Jules le Jeune, Minister of State; Emile Beco, Secretary-General of the Public Health Service; and Dr. Dubois-Havenith, member of the Superior Council of Public Hygiene. All communications should be addressed to Dr. Dubois-Havenith, 19 Ru de Gouvernment Provisoire, Brussels.

Cancer in Germany.—Dr. Wutzdorff, one of the heads of department in the German Imperial Board of Health, has just published a paper containing important statistics with regard to the prevalence of cancer in Germany. His figures deal with (*a*) the statistics of public and private hospitals, and (*b*) with the statistics of the causes of death. The first part cannot, of course, be pronounced completely conclusive, since a large percentage of cancer cases are not brought into hospital at all. Still these figures, though incomplete, are most striking. It appears that in the year 1879 the number of cancer cases in German hospitals was 6,630 (2,732 male and 3,898 female), whilst in the year 1898 the number had increased to 24,166 (10,100 male and 14,166 female), that is an increase of 266 per cent. And since the total number of hospital patients had doubled in the twenty years, the real meaning of these figures is, that —as compared with other diseases—there were more than twice as many cancer cases in 1898 than in 1879. The "cause of death" list shows the increase of cancer from 1892 to 1898. In 1892 2.6 per cent. deaths were accounted for by 'new growth," and in 1898, 3.5 deaths per cent. of 100,000 inhabitants; 49.6 died of carcinoma in 1892, 70.6 in 1898—an increase of 18.5 per cent. in six years.

Effects of Cholera Inoculations.—Some interesting observations have been made by Major Buchanan and Captain Lamb on the effects of cholera inoculations, which may be thus summarized: (1) A preliminary infection of a dead vaccine a few days before the living material is inoculated has the effect of increasing the subsequent constitutional disturbance; (2) A slight increase in the amount of living material greatly increases the constitutional disturbance; and (3) A previous attack of cholera—within one month—decidedly lessens the reaction of a living inoculation. The chief inoculations for cholera are now at Goalundo, where the coolies for the tea gardens pass through, but the returns for cholera are optional with the employers, so that the information available is scanty.—*British Medical Journal.*

Obituary Notes.—Dr. Meredith Clymer died on April 20, at his home in this city, at the age of eighty-six years. He was born in Philadelphia and was a grandson of George Clymer, one of the signers of the Declaration of Independence. He was educated at the University of Pennsylvania, obtaining his medical degree there in 1837. He studied in Dublin, London and Paris, and then took up practice in Philadelphia, where he remained ten years. In 1851 he removed to New York and was appointed Professor of the Practice of Medicine at the University Medical College. During the Civil War he was a surgeon in the United States Volunteers, and Medical Director of the Department of the South. In 1871 he was made Professor of Mental and Nervous Diseases in Albany Medical College. He was a member of many medical and scientific societies and one of the five honorary members of the Association of American Physicians. He was a frequent contributor to medical journals, and acted as editor of the *Journal of Nervous and Mental Diseases* for several years.

Dr. Julius Wise died in Chicago on April 19, after a short illness, at the age of fifty-three years. He was a graduate of the Medical Department of the University of Michigan, in the class of 1872. He first practised in Memphis, where he was one of the most active workers during the yellow fever epidemic of 1878-79, and where he was Professor of Materia Medica and Therapeutics at the Memphis Medical College. Later he removed to Chicago. Although a practising physician, he was best known as a writer for the Jewish press, especially the *American Israelite.*

Dr. Nathaniel Marston Freeman of this city died suddenly on April 18, at the age of eighty-one years. He had practised medicine here for more than forty years, but retired several years ago.

The late Dr. Ervin A. Tucker. The Medical Association of the Greater City of New York has learned, with the deepest regret, of its loss by death of one of its most promising members, Dr. Ervin A. Tucker, one of the founders of the association.

By inherent ability, thorough preparation and hard work, Dr. Tucker had gained the front rank in his specialty of obstetrics, and had won the admiration and respect of his colleagues and his many friends. He seemed to be at the threshold of a most useful and distinguished career when his life closed. Be it hereby

Resolved, That we extend our deepest sympathy to the bereaved widow; that this note be entered upon our minutes, and that a copy be forwarded to the widow.

Edwin B. Cragin,
J. Clifton Edgar,
J. Milton Mabbott,
Committee.

The Cigarette.—Apropos of the tobacco war which is now raging in Great Britain, the *Lancet* once more takes up the subject of the harmfulness of the cigarette compared with other forms of smoking. The journal in question says:

"The cigarette is practically in direct contact with the air from the lighted end to the mouthpiece. Thus the smoke is invariably pulled while the products of combustion are complete. The pipe, on the other hand, is more like a retort in which destructive distillation and the formation of acrid oils are set up. One strong objection to the cigarette is that combustion is close to the nose and mouth. Thus air containing smoke from the lighted end, which is infinitely more pungent than the smoke drawn through the cigarette, is constantly inhaled. Much of the mischief from cigarette smoking arises from this fact. If smoke from the burning tip of the cigarette is purposely inhaled for a time, a sense of stupor sets in, while smoke drawn through the cigarette may be breathed the same way with comparative impunity. The same result is obtained with a cigar, but in a more emphatic manner. The use of the cigarette or cigar-holder is, therefore, calculated to obviate this source of mischief.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

MILROY LECTURE ON TYPHOID—THE DEBATE ON CANCER CONCLUDED—DISCUSSION ON ECLAMPSIA—DR. COPEMAN'S VACCINE WORK—THE LATE DR. LONG FOX.

LONDON, April 4, 1902.

Dr. Corfield delivered the Milroy lectures this year. He took for his subject typhoid fever, of which he has had most extensive experience, in both large and small outbreaks. Of course, he has often been exposed to the infection, but he has escaped, and he attributes his immunity to an attack of what was called "brain fever" when he was a boy. His first medical paper was on the "Alleged Spontaneous Origin of the Poison of Enteric Fever," read, in 1874, before the Epidemiological Society. He now prefers the term typhoid—the name used by his teacher, William Jenner, and which Louis pronounced almost without objection. It is certainly much better than "enteric," which has been so freely used by the Army Medical Department, for we do not call other general diseases by names denoting the organs in which their special lesions occur. It was only towards the middle of last century that the disease was differentiated from typhus, and typhoid, accordingly, seems a good name, and involves no theory. Dr. Corfield, like all Jenner's pupils, has the most profound admiration for his teacher's work, and seems unable to resist the glamour of his great personality. Thus his students seem at times to give their master more than his fair share of credit. Dr. Corfield evidently intends to be just to all, and quotes a number of authors who had helped to elucidate the matter. Of English predecessors of Jenner, H. C. Barlow and A. P. Stewart, especially the latter, it may be said, that had certainly nearly reached the goal when William Jenner began his work. He had the enormous advantage of serving as a resident medical officer of the London Fever Hospital when he began his investigations, and he used his opportunity with rare diligence and zeal, and so he was able to prove what others had asserted with more or less confidence—that typhus and typhoid are distinct diseases.

Dr. Corfield has disinterred from the library of the Royal Medical and Chirurgical Society a Latin volume by Dr. Christopher Mayer, published at Vienna in 1806. As there is no other known copy in our other medical libraries, your bibliographical enthusiasts may like to hear of so rare a work on fevers. It is entitled "Specimen Practicum de Remediis Efficacissimis in Morbis Contagiosis ac Pestilentialibus Adnexa Commentatione de Contagiis et Febribus Typhodeis." Perhaps some of your librarians may find a copy.

The third evening of the debate on cancer at the Chelsea Clinical Society sustained the interest raised by the two others. Mr. D'Arcy Power, though a surgeon, devoted himself at one time to microscopic appearances, but with no better result than others, so now, he said, he had been looking for an intermediate host. Influenced by the spread of typhoid in South Africa, it occurred to him that flies might carry cancer, and he had had three patients with carbuncle, who attributed their malady to fly bites. He had asked Mr. Lowne about the house fly, who told him there were two sorts—the common, which had harmless mouth parts, and the stomoxys, which was armed with a set of lancets. The common house fly was the larger and when at rest held its head downward. The stomoxys held its head erect, and had three interrupted whitish spots on its back. He asked those interested to inquire if their patients had any recollection of being bitten, and if those who had the opportunity would send him specimens of stomoxys.

Drs. Gaylord and Link sent a note on cancer in swine from your State cancer laboratory and some microscopical slides. You will probably know all about their researches, so I will only remark that they seem to think cancer in swine more frequent than we had supposed.

Dr. Hewlett referred to the increased consumption of meat, but held that that was only a question of over-nutrition, which might, in some cases, over-stimulate cells to excessive proliferation. Statistics of seamen were unfavorable to the salt hypothesis. The parasite view he thought also unproved, though all would welcome it if true, as it was more promising in regard to a remedy.

Mr. Eve said the cell was the carrier of malignant disease, and hope rested in serum-therapy. When a serum or cytotoxin could be found which would kill spermatozoa and arrest the movement of ciliated epithelium, we should be nearer a destroyer of cancer cells.

Professor Adami of Montreal sent an interesting communication, in which he pointed out the want of proof of the existence of those specific microparasites which we have heard suggested. The prevalent conception of parasites within the cells, he said, involved the idea of parasites acting within parasites, because, as shown by the study of syncytioma malignum, the tumor cells are themselves essentially parasitic in the organism. Long continued action might, perhaps, like other irritants, initiate aberrant and neoplastic cell growth, but beyond that they seemed to be asked to contemplate a most extraordinary state of things.

Dr. Payne offered this hypothesis as his contribution—that primary cancers represented either an initial lesion on the surface (internal or external), where the germ entered the body; or an abortive attempt at elimination, which lodged the germ at some point in its excretory path. The latter was what produced the predominant cancers in the female sex.

On the 24th ult. there was a discussion at the Medical Society on the "Treatment of Puerperal Eclampsia." Dr. Herman opened by directly controverting the teaching of the textbooks that emptying the uterus stopped the fits, and, therefore, this procedure should be the first thing in treatment. He pointed out that the most recent advocates of this procedure admitted that proof of its effect was defective, although it had been the positive instruction of at least three generations. He gave statistics from a number of lying-in hospitals to show that the fits continued after delivery about as often as they ceased. In pre-antiseptic times the reverse was the case in some hospitals. In recent times the mortality was about the same whether the uterus was emptied or not. As a prophylactic, he believed in inducing premature labor when there was much albumin in the urine. He had a good word for venesection during fits, and said, if delivery was undertaken in presence of convulsions, Cæsarian section was the best method. Dr. Herman further advocated the tepid bath as the most hopeful treatment in those cases of eclampsia in which death occurred through steadily rising of temperature and pulse. He related such a case which recovered under bath treatment after a temperature of 105° and a pulse of 170°.

Some differences of opinion were expressed, as might be expected, but Dr. Herman was not without supporters. Dr. A. Routh said the toxic condition of the blood, generally admitted was relieved when the child and placenta were extruded. The tepid bath sometimes failed, in one case it brought the temperature down from 107° to 101° several times, but the patient died.

Dr. McLann said the fits often diminished considerably after delivery, though they might not cease altogether. He mentioned that some early writer disapproved of rapid delivery.

Dr. Gow thought the process of inducing labor aggravated the fits, though they were relieved after the uterus was emptied. He thought morphine or chloroform better than more violent methods.

Dr. Gibbons said the poison could produce rapid degeneration of the vessels of the liver and other large glands, and the patient might succumb to the intensity of the poison. To dilate it he advocated saline injections. As a preventive, the urine of a pregnant woman should be more often examined, and if a large amount of albumen occurred, premature labor should be induced, though the patient appeared in good health.

Dr. Blacker would eliminate all the poison he could by v.s., even to 500 c.c. at a time, and dilate the remainder by salines up to about 1,000 c.c.

Dr. Handfield-Jones agreed, generally, with Dr. Herman, but he would not exclude operation in some cases even in the presence of fits.

The work of Dr. Moneton Copeman was made the subject of a question in the House of Commons. This was, apparently, at the instigation of the fanatics, and, of course, was misleading. The reply given on behalf of the Government was almost as misleading. The consequence is that not a few people, fed by the faddist press, believe that hasty experimentation has been carried out on children—an absurd notion. If the officials who prepare answers for the Government on such questions cannot comprehend them and frame correct replies, their places should be taken by those who can.

Bristol is mourning the loss of a most distinguished and venerated citizen—Dr. Edward Long Fox, consulting physician to the Infirmary, after twenty years' service on the active staff. He was an Oxford graduate and, in due time, an associated examiner at his alma mater. He was president of the British Medical Association when it met at Bristol (1894), and always took a lively interest in its work—in fact, it is said he was one of the few who saved it from bankruptcy when at its lowest ebb. But medical affairs could not occupy all his attention. Every good and noble work had his sympathy and help. He was a fine specimen of a genial, courteous gentleman, a kindly medical adviser and consistent Christian. His chief works, "The Influence of the Sympathetic in Disease" and the "Pathological Anatomy of the Nervous Centers," must be well known to you. He died on Good Friday, aged seventy years.

NURSING IN PRIVATE INSANE ASYLUMS.

To the Editor of the Medical Record:

Sir: The first steps toward the correction of any abuse or evil are publicity of the facts and the awakening of public interest; after this the pressure of public opinion is sufficient to bring about a reform.

I desire to call the attention of the medical public, through your columns, to an abuse which should surely be remedied. I refer to the lack of proper nursing and care of patients in private lunatic asylums in the vicinity. First, as to the facts:

Case I.—A lady of wealth and refinement, who became insane in Germany, was brought home by her family, attended by skilled nurses, and, for a time, was kept in her home. She was then sent to Asylum A, where she remained for three years. During this time her nurses and companions were women obtained from the Young Women's Christian Association of this city at a cost of $20 per month—decent persons, but wholly untrained in the care of lunatics, and incapable of giving that mental direction and help which a good trained nurse can give. Subsequently, on her removal to her home and on being put in charge of two skilful nurses, a marked improvement occurred up to the time of her death, which took place from an intercurrent disease. She was charged $100 per week at the asylum, though the food was that of a $10 boarding-house.

Case II.—A young lady, who became acutely maniacal, was sent to Asylum B for care. Her nurses were dismissed and she was placed in charge of an Irish servant and a young French woman, who had failed as a teacher, and was willing to take a place as nurse. Neither of them had experience, and the days were passed in constant struggles between them and the patient. For months this condition went on, though the family were anxious to have extra nurses and were ready to pay for them. They were charged $75 per week. The patient had to be fed on milk and eggs only.

Case III.—A lady, suffering from chronic mania, has been ten years in one institution, Asylum C. She is happy and able to be diverted. By accident I discovered that she was regularly locked into her room by her companion at 8 P.M., the door into this companion's room being thus closed till 8 A.M., while she was often absent. Considerable extra expense to the family was incurred, because the attendant had a large adjacent communicating room.

Case IV.—A lady suffering from melancholia had been well cared for by two trained nurses, and was improving when it was thought best to send her to Asylum D. On her admission her nurses were discharged, as the physician "preferred his own nurses." Two weeks later I found her locked in a room with a good-natured, ignorant Irish girl, who informed me that she had come to the asylum within a week and had never done any nursing before. As proper companionship is essential to recovery in melancholia, I remonstrated with the physician, but, no attention being paid to the protest, I removed her, and at home, under proper care, she recovered.

Case V.—A gentleman of means and high mental ability, who had an attack of mild melancholia, was sent to Asylum E. He had had a most faithful male nurse, intelligent, sober, and capable of managing him perfectly. Three days after his admission to the asylum, this man was unexpectedly discharged at night, and the patient was put in the care of a rough, dirty Swede, who had been hired that very day, and had never before acted as a nurse in an asylum. To my protest, the physician replied that he "could trust only his own trained nurses—others were liable to drink and disobey orders." Two weeks later my patient was found completely terrorized by this man, and complained bitterly of his treatment and lack of companionship. He saw the doctor for fifteen minutes daily, but was with the attendant all the time. The man's habits were filthy, and he was better fitted for a stableman than for a nurse. The patient offered to pay for the services of his former nurse, and to pay his board in addition to the $50 per week which he paid for his single room. This proposition was declined. Hence, I removed him to another institution, where he is being properly nursed, and *is recovering* rapidly.

Here are five cases in five different private asylums near New York, all of which have a good reputation. In all the same abuse exists—unintelligent care is the rule. In all these places the doctor in charge sees the patient once a day or every other day, as all have offices in New York. In all the food is plain but wholesome, and served unattractively and, usually, cold. In all prices from $50 to $100 a week are charged. Double the charge would have been cheerfully paid for skilful attendants in every case mentioned.

Secondly, as to the remedy:

It is well known that at Bloomingdale Asylum there is a good training school for nurses, from which graduates come out every year competent to take care of cases of mental disease. If it became imperative upon these asylum physicians to employ trained nurses of good capacity, they could be found and supplied. But since there is no demand made, excepting by patients whose statements are not accepted, or by relatives whose protests are disregarded, the present evils continue. Many physicians wash their hands of a patient as soon as he is consigned to an asylum, and if they do visit him, it is soon made clear that such visits are regarded as an interference by the doctor in charge. It seems evident, therefore, that public opinion should be aroused in this matter, and I hope this statement of facts *of my personal knowledge* may awaken such a demand for the reform of these abuses that good may come of this protest against an existing condition.

Yours respectfully,
M. Allen Starr, M.D.

ON THE TRANSMISSION OF YELLOW FEVER BY VESSELS.

SECOND COMMUNICATION—A REPLY TO DR. DOTY.

By EDMOND SOUCHON, M.D.,
NEW ORLEANS, LA.
PRESIDENT OF THE LOUISIANA STATE BOARD OF HEALTH.

To the Editor of the Medical Record:

Sir: Dr. A. H. Doty, Quarantine Officer of the Port of New York, published in the Medical Record of March 8, 1902, a paper entitled, "Regarding the Infectious Agent of Yellow Fever; a reply to Dr. Souchon."

Dr. Doty says that: "It can hardly be said that Dr. Souchon's communication, which appeared in the Medical Record of December 28, has in any way damaged the argument already claimed that yellow fever is not transmitted by personal contagion or by clothing, bedding, etc., nor has it proven that the mosquito is not the medium of infection of the disease."

But these are not the points at issue.

In our paper of December 28, 1901, on the "Transmission of Yellow Fever by Vessels," we took exception to Dr. Doty's statement that: "In accordance with the above views, the treatment of incoming vessels from ports infected with yellow fever becomes very simple: *if they are five days or more in transit*, and all on board are found to be well after a careful inspection and the use of the clinical thermometer, the vessel, its passengers, and crew shall be released without further detention or treatment.

"If the vessel has been less than five days in transit, all on board who cannot present satisfactory evidence of immunity should be removed and held for observation until the completion of a period of five days from the time of departure from the infected port, and then released only after a careful inspection. When yellow fever is found on incoming vessels the procedure should differ only so far as it concerns the removal of the patient to a properly constructed hospital or apartment for treatment."

Of course, we have read Dr. Doty's paper most carefully, and yet we fail to see in it a reply to the exception we took to his statement.

We contended that the practice recommended by Dr. Doty was unsafe, and we cited a number of cases of vessels in which yellow fever developed on the vessel after it had been more than five days out.

We fail to see that Dr. Doty has proven that these vessels treated as he recommended would be safe.

Dr. H. R. Carter in a recent paper in the Medical Record of March 22, 1902, adds to our list the following vessels as having developed yellow fever after having been more than five days out:

1888,	*The Riagino*	11 days out.
1890,	*The Avon*	38 days out.
1890,	*The Castilla*	12 days out.
1890,	*The Gran Canaries*	7 days out.
1891,	*The Gustave & Oscar*	7 days out.
1891,	*The Emily Postel*	16 days out.

The explanation of Dr. Doty that the first patient on the Bark *Excelsior* contracted the yellow fever in New Orleans falls to the ground when it is known that there was only one case of yellow fever reported in New Orleans that year, as proven by the rigorous investigations made by all the health authorities, specially those of Texas and of the National Board of Health, a graphic account of which can be read in the Report of the Louisiana State Board of Health, 1880-81, Vol. III., pp. 68 and following.

The development of yellow fever after disinfection does not mean that the disinfecting process has been imperfectly done. Those cases are due to the fact that during the stirring up of things on board, necessitated by the disinfection, some concealed cause of infection has been set free and has affected some non-immune.

We are as desirous as any one to relax quarantine regulations, but we cannot see our way to do so in the light of such practical facts, regardless of the cause, mosquitos or any other.

Edmond Souchon, M.D.

New Orleans La.

SPECIFICS AMD DISINFECTANTS,

To the Editor of the Medical Record:

Sir: In the Medical Record, March 15, 1902, is published an article by Andrew H. Smith, on "Specific Medication." On page 402 he says: "Not one of the recognized specifics would be employed outside of the body for its disinfectant properties." Of course, the statement is unintentional, as it only needs to be indicated to be corrected, but the correction should be made. Iodine, the active component of iodide of potash, was recommended by Joseph Jones as an application in post-mortem and dissection wounds. Lately, Carl Beck has advised its use in certain recent infections. Bichloride of mercury needs only to be mentioned. Both are recognized specifics in syphilis.

U. S. Bird, M. D.

Tampa, Fla.

Book Reviews.

Topographical Atlas of the Spinal Cord, by Alexander Bruce, A.M., M.D., F.R.C.P.E., F.R.S.E. London: Williams & Norgate, 1901.

Dr. Bruce's valuable and original work is in the form of a quarto, containing thirty-two photogravure plates, with over sixty different figures illustrating the accompanying text. The object of the author is to show the arrangement of the groups of cells at the different levels of the spinal cord. Some contributions to cell-grouping have been made by previous investigators, but no one before has done it so completely, systematically, and objectively. The ordinary plates illustrating these different groups have been copied from text-book to text-book without much, if any, change. A comparison of the cell groups shown here with those shown in Quain's "Anatomy," for example, shows that some changes and rearrangements were necessary.

The author has made sections through each segment of the spinal cord, and, having stained these, has made photographs with low and high magnifying power. Reproductions of these photographs are given on each plate, so that one sees first the general arrangement of the cells and of the gray and white matter, and then, under higher magnifying power, the exact grouping in the anterior horns.

Dr. Bruce's work is always of the most careful and trustworthy character, and the present book is one which will have permanent value in anatomical science, and should add greatly to the reputation of the author.

Photographic Atlas of Diseases of the Skin. By George Henry Fox, A.M., M.D. Parts V. and VI.

The illustrations in the fasciculi before us include sycosis, scrofuloderma, syphiloderma, papulo-squamosum, eczema papulosum, morphœa, pityriasis seborrhoica, chromophytosis guttata, psoriasis gyrata, pityriasis diffusa, and fibroma. Both morphœa and fibroma have two figures on the plate. The names "pityriasis seborrhoica" and "pityriasis diffusa" might be questioned by some as applied to the cases depicted. Both might, with equal propriety, it would seem, have been termed eczema seborrhoicum. The text, however, explains the matter. The plates are excellent, and the color reproduction is far superior to that of some colored plates brought out in recent years. The text is carefully prepared, and goes into treatment with formulæ and details.

The author and publishers are between them making a very attractive work.

The Pathology and Treatment of Sexual Impotence. By Victor G. Vecki, M.D. Third edition, revised and enlarged. Philadelphia and London: W. B. Saunders & Co., 1901.

This work is characterized by a strong personal element. While the author has quoted freely the views of others, his own firm opinions are put forward with the strength of conviction, and while one cannot always agree with his deductions, one must respect his honesty of intention. In the preface to the third edition, a critic of the first, whose "assault" is deemed harsh, is classed among those who have misunderstood the book altogether. We find nothing in the work which a physician should not read; but it is the class of work which undoubtedly obtains a large lay audience, no matter what the intention may be, and here would be the danger of any misunderstanding. Its popularity is proven by its circulation making necessary a new edition at this time.

Transactions of the American Otological Society, Thirty-fourth Annual Meeting, held at New London, Conn., July, 1901. Vol. VII, part IV, published by the Society, 1901.

This pamphlet, covering pp. 475-589 of the current volume, is edited by the Secretary of the Society, Dr. F. L. Jack of Boston, who has excellently performed his task. It contains an appreciative obituary notice of the late Dr. H. D. Noyes, written by Dr. Gruening, eight papers on otological topics, and a complete bibliography of otological literature for the year ending June 1, 1901, compiled by Dr. H. A. Alderton of Brooklyn.

Guide de L'Examen Gynécologique. Par L. Léon Archambault. Paris: A. Maloine, 1901.

This convenient little book of 116 pages is, as its title indicates, not a treatise on gynecological examination, but merely a guide to the same. It is profusely illustrated. The writer has previously paid special attention to the difficulties incident to gynecological examination, and has embodied his experience in the present volume.

A Textbook of Medicine for Students and Practitioners. By Dr. Adolf Strümpell, Professor and Director of the Medical Clinique at the University of Erlangen. Third American edition, translated by permission from the Thirteenth German edition by Herman F. Vickery, A.B., M.D., Instructor in Clinical Medicine, Harvard University, etc. With Editorial Notes by Frederick C. Shattuck, A.M.; M. D. Jackson, Professor of Clinical Medicine, Harvard University, etc.* With one hundred and eighty-five illustrations in the text and one plate. New York: D. Appleton & Co., 1901. 1,242 pp.

A new translation of this much used textbook cannot fail to attract the interest of a large number of English-reading students and practitioners, especially when it is remembered that seven new editions have appeared in Germany since the last American issue. In consequence of these many revisions, the work has been practically rewritten, but still retains all the vigor, balance, and hard sense of its predecessors. We notice particularly a complete change in the chapters on diseases of the stomach, which have been brought thoroughly up to date, and the author gives us therein one of the best expositions on the subject that has appeared in a general textbook.

The translators have added such information as seemed to be useful to American readers, the whole chapters on the plague and on yellow fever, together with numerous annotations, being inserted in brackets when by the editor, and signed if the translators are responsible.

Physicians Account Book. By J. J. Taylor, M.D. Philadelphia: The Medical Council, 1901.

The special feature of this book is that it combines in one volume both daybook and ledger. It is portable, and arranged so that any account appearing therein will stand every legal test in case of dispute. Its simplicity, completeness, and economical price cannot fail to make it extremely popular with the active practitioner.

The Standard Medical Directory of North America, Consisting of Twelve Departments, including Directory of Physicians of North America, Medical Colleges, Medical Service of the United States, Medical Societies, Medical Practice Acts, Medical Publications (including Books and Periodicals), Mineral Springs, Drugs and Medicines, Medical and Surgical Products, Manufacturers and Life Insurance Companies. Handsomely bound in red buckram, 824 pages, imperial octavo. Price, $10.00. Chicago: G. P. Engelhard & Co., 1902.

This new directory has a very attractive appearance with its clear type, convenient arrangement of matter, and clear red binding. Being the latest, it naturally aims to be the best of the general medical directories, but we cannot say that it has succeeded in its first edition. We recognize, of course, the immense difficulties of preparing an accurate list of over 100,000 names, and an occasional inaccuracy should not be too harshly commented upon. The reviewer can only tell of his own test of the work. When the book came to his notice he happened to want the address of a prominent surgeon in a Pennsylvania city, but on turning to that city could not find the name. This shook his confidence in the book, and he then looked for his own name; that, too, was not to be found. His confidence was now still further shaken, and he turned to the name of a friend; this name he found, indeed, twice on the same page, once under the man's first name, the second time under his middle name. It is only fair to add, however, that he then looked up twenty names of men in different parts of the country and found them all. There is one omission in the book that detracts considerably from its value as an aid in finding people, and that is an alphabetical list of all the physicians now grouped under states and towns. A man's town is often unknown, as well as his street address, and the function of a work of this kind is to supply just such information. We doubt not that subsequent editions of the directory will be improvements on the present in the way of accuracy and completeness, but even this one, for a first attempt, is not so bad.

The Practical Medicine Series of Year Books. Comprising ten volumes on the year's progress in medicine and surgery. Issued monthly. Under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. II. General Surgery: Edited by John B. Murphy, M.D., Professor of Surgery, Northwestern University Medical School. Chicago: The Year Book Publishers, November, 1901.

The vast amount of new knowledge which is being offered the profession in journals from all parts of the globe has necessitated the modern scheme of condensation in book form of this material, which for the busy practitioner would otherwise remain inaccessible, except, perhaps, in but small proportion. In the present issue, under the able editorship of Dr. Murphy, we have a particularly valuable digest of the year's advances in surgical diagnosis, pathology and treatment. He has selected what would be practical and useful for the many who are general surgeons rather than for those who are doing special work.

The book is divided in accordance with the different regions, and deals only with the recent articles, presupposing, quite properly, a knowledge of fundamental principles and ordinary procedures. He has edited the work of others as it has appeared without changing the conclusions or intent of the articles, except to condense. He has however, added a few editorial comments at the end of several sections when he wishes to emphasize special points, rather than with the purpose of criticism.

Nothnagel's Encyclopedia of Practical Medicine, Variola, Vaccination, Varicella, Cholera, Erysipelas, Whooping Cough, and Hay Fever. By H. Immermann, Th. von Jurgensen, C. Liebermeister, H. Lenhartz, G. Sticker. Edited, with additions, by John W. Moore, M.D., F.R.C.P., Professor of the Practice of Medicine in the Royal College of Surgeons in Ireland. Authorized translation from the German, under the Editorial Supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. 682 pages. Philadelphia and London: W. B. Saunders & Co., 1902.

The second volume of the American edition of Nothnagel's Encyclopedia gives a timely exposition of diseases which are of extreme interest and of widespread prevalence. Nearly a half of the volume is apportioned to the subjects of Variola and Vaccination, and the masterful discussion of the same merits the highest praise. The history is especially full, and is attractively told, while the scientific descriptions are exhaustive and convince the reader of the author's fairness and deep knowledge. To any doubter of the efficacy of vaccination, if he be open to argument, a perusal of this section would settle his opinion once and for all. To render the articles more complete, there have been included interesting chapters on the inoculation of human smallpox and on the pock diseases of animals.

Chickenpox is more concisely described, but is also excellent, and in it one can find all that is of ordinary interest in this quite benign and, therefore, less important disease.

Cholera Asiatica and Cholera Nostras occupy a full hundred pages and leave nothing to be desired. Especial interest will be attached to the methods of prophylaxis, and so successful are the means advised that to those engaged in quarantine work the reading will prove both interesting and an incentive to active precautionary methods, which, naturally, arises from the hope of a successful outcome of efforts to keep away this dread scourge.

To the surgeons the sections on Erysipelas and Erysipeloid will prove most acceptable. Thoroughness and graphic description characterize them both. Whooping-cough and Bostock's Summer Catarrh completes the volume, and are most excellent monographs, although adding but little to one's hope of combating these troubles in a way more successful than in the past. The excellence of the original has left little for the editor to add, but such that he has seen fit to incorporate shows good judgment, and will serve to make the book even more acceptable to the English reader.

Progress of Medical Science.

The Boston Medical and Surgical Journal, April 17, 1902.

Abdominal Hysterectomy for Uterine Cancer.—J. C. Irish holds that in cases of cancer involving the uterus alone, whether of the body or the cervix, abdominal hysterectomy is a very simple and attractive operation. It is attended with less than 5 per cent. fatality. The author protests against the pessimistic view so generally held that cancer of the cervix is an incurable disease. In the cases upon which he has operated he has had about 75 per cent. of permanent cures. These results, so exceptionally favorable when compared with operations for cancer in other parts of the body, are due to the anatomical relations of the uterus, and to the fact, except where the malignancy begins in an existing fibroid, that it attacks the endometrium which is isolated from everything else by the thick uterine muscle. The conclusion is that abdominal hysterectomy fulfils all operative requirements, and whatever advance is made in treatment must be in some direction outside of operative procedures.

The Nature of Cancer and Its Treatment.—In a paper on the "Treatment of Cases of Carcinoma Uteri not Justifiably Treated by Radical Operation." Albert H. Tuttle refers to a line of investigation which seems to him to open up the principal route for advancement in the treatment of this disease. He refers to hypodermic treatment with various chemicals, such as oils, alcohol, etc. His researches on *lunaria* embryos has inclined him toward the theory that cancer is the result of a change in the environments of a cell or group of cells by which their normal nutrition is affected and which results in their active proliferation, contrary to the natural laws of growth. By this abnormal multiplication they become a band of outlaws that war upon their neighbors, and finally end in the complete annihilation of the body. Once a cell or group of cells has broken loose from the laws that bind it to the animal whole, the progeny inherit the ban of the parent and continue to work out the war of destruction. This theory is borne out by the facts that the growth arises in certain organs at a time when their functional activity is diminishing or has already ceased. that it often starts at a joint subjected to continued irritation, and that hereditary influences play an important part in their causation. The method of treatment by hypodermic injections of antiseptic fluids is of possible value, and investigations and experiments along this line should be encouraged.

Journal of the American Medical Association, April 19, 1902.

The Diagnostic Value of Tuberculin.—C. M. Wood presents the following conclusions: Tuberculin, in doses of .005, carefully increased, when necessary, to .010, produced no bad effects in simple or complicated tuberculous or non-tuberculous cases. The characteristic tuberculin reaction is shown by a rise of at least two degrees in temperature, reaching its height in from six to thirty-six hours after the injection, typically at the eighteenth hour, and accompanied by at least two of the following symtoms: Chilliness, headache, nausea and muscular pains. The tuberculin test ranks in value with the Widal typhoid test, since in the former the technic is simpler; the materials are more readily obtainable and more permanent; the danger is no greater and the information obtained is scarcely less reliable.

The Paraffin Injection Treatment of Gersuny, with a Report of Cases.—R. M. Parker reviews the original experiments in this direction: He finds that most satisfactory results have followed the injections performed for the correction of unsightly deformities following cicatricial contractions resulting from wounds and loss of tissue through disease or operative measures, *e. g.* saddle-nose, etc. The paraffin employed should have a melting point slightly above the normal body temperature, *i. e.* between 99° and 104°F. If it is below the body norm, it will soon be carried away by the lymphatics, and if the paraffin is too hard it may cause necrosis. The preferable syringe to use is one made entirely of steel. The usual antiseptic precautions must be most scrupulously observed. A possible danger is that of lung embolism if the injection is made directly into a vein. The author thinks it justifiable to claim for the measure a permanent place in the treatment of appropriate cases.

The Etiology and Spread of Typhoid Fever.—According to Victor C. Vaughan, this disease is disseminated by man himself, through the air, through drinking water, is favored by certain conditions of the soil, is carried on the person or in clothing, and frequently by flies. Increased susceptibility arises from bodily fatigue and mental worry. The disease is more prevalent among the well-to-do than among those suffering from poverty. The belief that immunity to typhoid observed in advanced cases of tuberculosis is due to emaciation rather than to specific infection with the tubercle bacillus is supported by the observation that infants with latent tuberculosis fail to show this immunity. From a long series of experiments in the analysis of drinking water, the author draws the following conclusions: (1) Water containing a typical colon bacillus, which coagulates milk within twenty-four to forty-eight hours, readily reddens litmus, and produces an abundance of gas in glucose media, does not cause typhoid fever; (2) The more markedly a germ found in drinking water differs from the typical colon bacillus, and the more closely it approaches the typical typhoid germ, the more likely is typhoid fever to appear among those using the water containing this germ. He is not ready, even after fourteen years of investigation of this matter, to lay down any rules by means of which he can say just where the line should be drawn between the colon and the typhoid groups, and he still continues to speak of typhoid-like bacilli, and he has no hesitancy in condemning waters which contain these microorganisms; (3) He has never found in any sample of drinking water a typical Eberth bacillus. He does not say that such a germ may not be found in water, but does not believe that the typhoid bacillus preserves its typical characteristics for any great length of time when growing in water.

New York Medical Journal, April 19, 1902.

The Effect of Osteitis of the Knee on the Growth of the Limb.—From the study of a series of cases, Henry Ling Taylor comes to the following conclusions: (1) Gonitis in childhood usually causes lenthening of the affected limb when approximately straight, and this may persist for eight years or more; (2) This lengthening is mainly due to overgrowth of the femur, and may often be detected within six months of the onset. In adolescents and adults, after cessation of active disease begun in childhood, the femur and limb may be considerably shortened; (3) The tibiæ are usually equal in length in the early stages; afterward the affected tibia may be slightly longer for a time, but is more often shorter, even in the first two years; this shortening increases in the older cases, and after subsidence of inflammation; (4) With limbs of equal length and a duration of disease of several years, the femur of the affected side will be found longer, the tibia shorter than its mate; (5) The feet and patellæ show a difference in favor of the sound side after a year's duration and often before; (6) Stimulation of growth at the lower end of the affected femur, and more rarely and in less degree at the upper end of the tibia, is usually accompanied by retarded growth in other parts of the limb; growth in the femur itself is finally retarded, and the final result, after many years, may be considerable shortening of the femur tibia and limb.

Hæmaturia.—W. K. Otis reviews this subject in a general way, enumerating the tests for the detection of blood in the urine. Differential points are mentioned bearing on the question of the source of the blood. He divides the urinary tract into four portions: (1) From the external meatus to the compressor urethræ muscle; (2) The prostatic urethra; (3) The bladder, and (4) the kidneys, then pelves and ureters. Occasionally the hæmaturia will be intermittent. This is due to a temporary stoppage by a clot of the ureter on the affected side, so that all the urine secreted comes from the healthy kidney and is therefore clear; and this is almost pathognomonic of kidney hemorrhage. Sometimes, however, this condition is closely simulated when the lesion is in the bladder. When more blood is found in the morning, after rest, it indicates that the hemorrhage is, probably, of renal origin, for exercise increases vesical hemorrhage, but is, as a rule, without effect on that of renal origin. The microscope is frequently of great service in rendering a diagnosis possible in these obscure cases, and the presence of blood casts is pathognomonic. So also are the fibrin casts of the larger divisions of the kidney pelvis, so that all clots passed in the urine should be carefully floated out in water, in order to recognize, if possible, in what portion of the urinary tract they were formed. Long, round clots, resembling angle worms and about as thick as the ordinary lead pencil, are formed in the ureters, while frequently unmistakable casts of the pelvis or calices of the kidney will be passed, rendering the diagnosis absolute.

American Medicine, April 19, 1902.

Suggestions to Anæsthetizers.—George De Tarnowsky gives the following suggestions: Always reassure the patient before beginning an operation. Avoid or lessen the sense of suffocation by starting with a small amount of the anæsthetic, holding the cone six inches from the patient's face, and decreasing the distance by gradual degrees. Count out loud from 1 to 100, requesting patient to repeat the numerals after you. Push the anæsthetic as soon as the higher centers show incoordination. Always keep the lower jaw well forward, and only use the mouth-gag and tongue forceps when necessary. During complete narcosis watch the respirations, the pulse and facial artery, and the pupils. Consider lateral rolling of the eyeballs, deep sighing respiration, deglutition movements, and the hiccough which precedes the act of vomiting, as signals to push the anæsthetic. The precursory hiccough is always a positive sign of returning reflexes, by immediately pouring an ounce of ether on the cone and precluding air, it is always possible to prevent actual vomiting.

Ocular Affections Associated with Glycosuria, with Especial Reference to Central Amblyopia.—Walter L. Pyle says that diabetes mellitus or other disturbance of the carbohydrate metabolism may affect any part of the visual apparatus. The ocular changes may be produced by chemic or physical means, or indirectly through the associate general debility. The ocular affections may vary in intensity from a slight failure of accommodation to a formidable hemorrhagic retinitis and total optic nerve atrophy. Minor visual disturbances are often made worse by fatigue or increased cardiac action, and may improve after prolonged rest or decrease of vascular tension. The intraocular disturbances may be exclusively unilateral, and there is never seen, ophthalmoscopically, inflammation of the optic nerve. It is not common to find albuminuria coexistent with glycosuria, and the retinal changes may present a mixed picture, or a typical albuminuric retinitis may be present in a patient with diabetes. Central amblyopia may exist in glycosuria entirely independent of the toxic influence of alcohol and tobacco, or in patients addicted to the use of these substances, this may be the prominent factor in causation. In chronic cases of glycosuria, with the exception of cataract, the ocular symptoms are often present when the constitutional and urinary symptoms are not marked. The ocular symptoms may be the first to lead the patient to seek medical advice. The prognostic significance of the ocular disturbances is not definitely established, on account of the great difference in pathogenesis, severity and ultimate issue of the numerous forms of glycosuria. Even in well-marked cases not only many formidable eye-lesions improve, but the patient's general health may be restored. Again the ocular symptoms may remain stationary and the general health improve, or a case of diabetes may proceed rapidly to a fatal termination without showing marked ocular disturbances. Hemorrhagic retinitis and amaurosis preliminary to coma are the most serious symptoms. The ophthalmoscopic observation of greatest value in prognosis is the state of the retinal vessels, as this may be taken as an index of the patient's general vascular condition.

Medical News, April 19, 1902.

General Anæsthesia in the Plethoric.—M. L. Maduro advocates the following order in administering anæsthetics to plethoric subjects: Immediately after the nitrous oxide, give a few whiffs of ether, then give chloroform for an average of ten minutes, continuing with ether, graded with a small amount of air for the rest of the operation. No harm can come from such frequent change of narcotics. Spasm of the respiratory muscles during ether narcosis in the plethoric suspends thoracic movement, and leads to an overdistended state of the right heart. Chloroform relieves that distension, induces deeper and quieter breathing, and causes the pulse to become full and regular. This is only temporary, for chloroform given for any length of time will depress the heart, so ether given again will steady the pulse and cause the continuance of the quiet breathing. Gas is given at first because it is well tolerated and is safer and quicker. Pharyngeal stertor can be overcome by pulling the jaw forward, Some short-necked patients breathe more easily with the head slightly raised by a hard pillow; but the majority fare better with the head low and well extended. It is generally well to turn the plethoric patient's head to one side. The observation of these hints will usually do away with the dangers connected with administration of anæsthetics to the plethoric.

Clinical Expression of Chronic Myocarditis.—J. H. Musser declares that just as chronic myocarditis may exist without physical signs, so it may be devoid of clinical expression. Again, the symptoms may persist for years and be most distressing and terrifying. The cardiac symptoms compel the patient to seek relief. Heart tire as seen in cardiac debility, is out of proportion to the evidence of senile decay elsewhere. Weakness, out of proportion to the seemingly strong appearance of the patient, is characteristic. Tachycardia is the rule and the pulse is small and feeble. If symptoms of dilatation of the heart arise it is unusual to have anginal symptoms.

A patient with myocarditis may have one attack of angina terminating in death without premonitions of cardiac disease. In these cases there is often found extensive coronary artery disease, death being due to thrombosis. Oftentimes the symptoms of angina are attributed to some gastric disorder. In one case noted, there was intense pain in the jaws. Allied to the anginal paroxysms is the curious localized substernal distress. It is a most difficult problem to distinguish the true and false forms of angina. Myocardial dyspnœa is frequent. A very rapid heart is often due to myocarditis. Usually there is some arrhythmia. Patients with the syndrome-bradycardia, syncope, convulsions, and pseudo-apoplexy, rarely suffer from angina or from severe arrhythmia. Myocarditis may have no other clinical expression than arrhythmia alone. Various combinations of the foregoing symptoms are often met with in cases of myocarditis.

Philadelphia Medical Journal, April 19, 1902.

Four Cases of Æstivo-Autumnal Malarial Infection at West Point., N. Y.—Thomas W. Jackson believes that there is a greater prevalence of the æstivo-autumnal parasite in this latitude than is generally supposed. This tropical parasite may have been introduced by soldiers returned from Cuba. This infection is very resistant to treatment, cases being on record in which the parasites have, undoubtedly, existed for more than two years, in spite of treatment. In one of the cases reported in this paper the affection had persisted for over two years. Only one of these four cases originated in Cuba. From his experience in cases of this nature, the writer thinks that the occurrence of crescents should not be depended upon, solely, for the diagnosis of this condition. The type of fever in his cases was very varied, and illustrates the irregularity of the manifestations of the malignant parasite. Correct diagnosis is necessary, as treatment appropriate in cases of ordinary benign malarial fever is inadequate in infections of the tropical parasite. Diagnosis should be based less on the temperature curve than upon the microscopical findings.

The Prevention of Neurasthenia after Surgical Operations.—Charles W. Burr states that neurasthenia may develop, or if previously present become more marked, after an operation of any kind, but is more frequently seen after surgical treatment of any of the chronic affections of the internal or external genitalia in women. Post-operative neurasthenia may occur as well in men as in women. True neurasthenia may follow acute surgical diseases. In the cases in which immediate operation is necessary, prevention of this condition is impossible. All that can be done is to make a careful study of the patient and institute those measures that are best suited to lead to speedy recovery. Certain chronic diseases are always accompanied by neurasthenia, for example, varicocele. In many cases of chronic surgical disease it is well to put the patient to bed for several weeks before operation. The diet should be regulated. If she is chronically starved, forced feeding is indicated. In certain cases milk alone is the best diet, but in a majority of cases a generous varied diet is preferable. Massage and faradic electricity should be used. Sometimes operation can be entirely avoided. In others the shock of operation will be less, and recovery quicker.

The Bacteriology of Erysipelas.—G. E. Pfahler describes the organism which he has found in the tissues of eighty-six different cases of erysipelas. The diagnosis in each case was confirmed by another physician. In nearly all of the cases some antiseptic application had been made previous to the bacteriological examination. This was done to eliminate foreign organisms from the surface of the skin. The writer describes this organism as follows: Spherical cocci, about the size of the pneumococcus, usually occurring in pairs, often singly, and very rarely a chain of four is seen, which is, probably, an accidental arrangement of two pairs. As observed in the contents of the pustules, in the blood of the inflamed part and in the blood from the rabbit, it has been seen only in pairs, and at times appears to be encapsulated. It is found both outside of and within the leucocytes. It is readily stained by aniline gentian-violet, by carbol-fuchsin, and by Gram's method. It does not stain well with Löffler's alkaline methylene blue, nor with Gabbett's methylene blue. The writer believes that this diplococcus is the most common cause of erysipelas, or of a disease which at present cannot be diagnosed from erysipelas. Koch's postulates have been demonstrated with reference to this organism.

The Lancet, April 5, 1902.

The Supposed Infectivity of Desquamation in Scarlet Fever.—C. K. Millard opposes the current opinion that scarlet fever is infectious during desquamation, advancing the following reasons for his views: (1) Careful evidence does not support the old theory; (2) Infectivity begins prior to the onset of desquamation and frequently continues long after the latter has ceased; (3) Scarlet fever wards, though abounding in desquamating epithelium, are not a danger to neighboring houses; (4) The fact that the proportion of "return cases" does not appear to be increased among patients sent out from the hospital still desquamating,.

The Topical Application of Mucin in Certain Affections of the Nose, Throat, and Ear.—W. Stuart-Low finds this remedy of value in pale and dry conditions of the mucosa of the upper air tract. Its action is soothing and emollient. It moistens the surface, softens incrustations, facilitates their removal and prevents their re-formation. The author dissolves a tablet containing five grains of mucin, five grains of bicarbonate of sodium, and one grain of menthol in one ounce of sterilized warm water and sterilized warm lime water, equal parts. The remedy is applied, in spray, twice daily. The spray must be a coarse one, and it is a good plan to drive clean warm water through it frequently to prevent clogging. The same tablet may be given internally before and after meals to relieve concomitant gastric irritation and constipation.

The Lancet, April 12, 1902.

A Case of Nutmeg Poisoning.—R. A. Pitter was called to a young woman, who was said to be in a "fit." He found her collapsed and with the odor of nutmeg on her breath. It was learned that she had taken, for the purpose of bringing on the menses, a whole nutmeg grated in a wine-glass of gin. The monthly flow had been delayed two weeks and the patient feared pregnancy. Her general condition began to improve in about an hour, and her stomach was thoroughly emptied. She remained in muttering delirium for one night, slept heavily the next day and awoke fully recovereed.

Abiotrophy.—By this term W. R. Gowers refers to degeneration or decay in consequence of a defect in vital endurance. Illustrations of this are seen in baldness and early grayness of the hair. The muscular system shows similar changes, which we include under the general name of muscular dystrophies. Here, the fiber after development ceases to maintain its full nutrition; it wastes and ultimately perishes, while the connective tissue between the fibers takes on an overgrowth. The nervous system pre-eminently shows these "abiotic" changes. They are seen in such conditions as anterior poliomyelitis, spastic paraplegia, the optic nerve degenerations, Friedrich's disease, etc. The general object of the paper, says the author, is to call attention to the two forms of death, somatic death against which we ever strive and which we endeavor to postpone as long as possible. The other aspect of death—the termination of life of isolated structures in the body—is to us what we call disease. It does not of necessity involve the termination of general life, but it is not less to be striven against, although the strife must often be in vain. The discernment of these diseases which we may call "abiotic," the recognition of the symptoms, the course, and the conditions which indicate them is of extreme importance. We must endeavor to check their progress, for we seldom know the strength or feebleness of the tendency, or whether it can be hindered, but the discernment of the nature of these maladies will often enable us better to perceive why treatment fails, and it may save from useless prolongation of attempts to perform the impossible.

On a Case of Pneumococcic Gastritis and General Infection.—The case is reported by A. G. R. Foulerton. His patient was a man of twenty-six years, who had had a quinsy two weeks before. Three days before admission to hospital he had begun to bleed from the nose, and the hemorrhage, though slight, had continued. He had vomited considerable foul, dark matter He was intensely anæmic, and died in a condition of severe dyspnœa on the third day after admission. Autopsy showed the general condition of an infection, and bacteriological examination showed that this infection was due to the pneumococcus. A consideration of the pathology of the case suggests that the primary lesion was, perhaps, a pneumococcic infection of the right tonsil, though this was not proved. The infection of the stomach then resulted from the swallowing of the parasite, and the general infection followed the invasion of the stomach. The healthy stomach, with its strongly acid secretion, would in all probability be an extremely unfavorable site for the growth of diplococcus pneumoniæ, and it is not unlikely that a certain amount of gastritis, resulting from the swallowing of fetid pus from the ulcer on the tonsil was a necessary preliminary to the pneumococcic invasion of the gastric mucous membrane. The paper closes with some remarks on the infection of mucous membranes by the diplococcus pneumoniæ. Evidence has now accumulated to show that this microorganism tends to produce fibrinous exudation and destruction of surface tissue and the same tendency to extravasation of blood as when the pulmonary vesicles are attacked.

Post-Vaccinal Lichen Urticatus.—R. W. Marsden reports the case of a woman, aged twenty-four, who had been vaccinated one month before. History otherwise was negative. Then a feeling of itching at the former site of vaccination began, persisted for two days and was followed by a rash on the hands and arms. In general the rash could be described as of a papulo-urticarial character, the papular appearance being most marked on the backs of the hands and fingers, a feature which had, undoubtedly, occasioned the suspicion of smallpox. An examination of these parts alone was, in fact, very suggestive of this disease. There was, however, no rash on the face, no accompanying pyrexia, and no history of recent acute illness. The papules, which were also present on the feet, were bright red in color, about one or two lines in diameter, circular, and faded on pressure; they were softer than those met with in variola, and exhibited a tendency to run together in patches. On the palms and palmar aspect of the fingers they formed bright red, discrete, tender macules, not raised but still round, and especially in the former situation were as much as from two to three lines in diameter. On the arms and legs the spots were soft, flat-topped, in general rather of an urticarial character, varying in size from one to three lines, and everywhere accompanied by itching. Many spots had a narrow inflammatory areola, but the surrounding redness and œdema were best marked on the pinnæ. In the center of a few there was a minute scab, and on the surface of some others an appearance as though vesiculation was beginning, but both of these manifestations were attributed to the scratching, squeezing, or rubbing to which the patient resorted on account of the irritation. The further course of the eruption was absolutely unlike that of variola as there was no steady progress to vesiculation and pustulation—on the contrary, the spots tended to coalesce over considerable areas, forming a uniform erythema, and then faded.

British Medical Journal, April 12, 1902.

Urticaria Acuta.—Frederick S. Palmer reports two cases of this nature which have fallen under his observation which seem to be due to the eating of stewed rhubarb. The patients were both children. The type of the affection was severe and lasted three or four days. The convex elevations, with their pink areolæ, were scattered all over the body, but chiefly on the limbs. The irritation was intense. There was marked facial erythema, with a decided rise of temperature on the third day. The distressing symptoms were relieved by a dose of castor oil. No albumin was discovered in the urine.

Five Cases of Moniliform Hair, Associated with Alopecia Areata.—David Walsh describes the congenital condition of beaded hair known as monilethrix as one of great rarity. It is congenital and runs in families. The hair of the head is short and scanty, so that the patient is more or less bald. The eyebrows and any part of the hairy body may be affected. The writer notes several cases in which hair was found of moniliform type, although differing from the sharply-defined condition of monilethrix. In these cases the hair was not short and scanty, although alopecia patches were present. The peculiarity was found only in hairs which had turned or were turning white. It did not involve hairs on other parts of the body. The nodes were of irregular length, except in a few hairs of one case, which showed a fairly uniform beading, and the pigment had no distinct relation to the internodes—unlike monilethrix, in which the pigment is found gathered in the internodes, according to the writer. These cases suggest that a moniliform condition of the hair may be acquired and associated with alopecia areata.

Observations on a Series of Cases of Fracture of the Semilunar Cartilages of the Knee, Together with Other Cases of Operation for Loose Cartilage.—A. W. Mayo Robson states that in cases of rupture or fracture of the cartilages of the knee, although after replacement by manipulation, rest and ordinary treatment soon relieve, and if persevered in long may cure, yet in many of the cases relapses occur so frequently that relief by surgical treatment has to be sought. The operation is one of the simplest—an oblique incision is made from the inner border of the lower end of the patella downward and backward, down to and through the synovial membrane, so as to open the joint freely without dividing either the ligamentum patellæ or the internal lateral ligament of the knee. If the external cartilage be displaced, then the incision is, of course, on the outer side of the joint. On retracting the edges of the incision and flexing the knee the displacement at once becomes manifest. To seize the loose portion of cartilage and snip it off by means of scissors is the work of a few moments, after which the synovial membrane, capsule of the knee and skin are separately sutured. The whole operation is carried out under the strictest asepis It is both unnecessary and inadvisable to insert the finger into the joint or to syringe the articular cavity.

Deutsche medicinische Wochenschrift, March 27, 1902.

A Large Psammoma of the Brain.—M. A. Lunz reports a case of psammoma of the brain. The patient was a woman fifty-three years of age, who for two and a half years had suffered from epileptic attacks of cortical origin. The history was a negative one as regarded syphilis and alcoholism. Slight headache was present, but it was not constant and was shifting in its location. Examination with the ophthalmoscope showed a normal retina. Because of this, together with the presence of normal pupils, and the fact that the trouble had begun suddenly and was non-progressive, the diagnosis of a new growth in the brain was thought to be absolutely excluded, and the origin was thought to be cortical and either meningeal or osseous. Accordingly, craniectomy, after Wagner's method, was performed, but nothing abnormal was found. Following the operation the patient markedly improved, and the epileptic attacks decreased in frequency for a period of some months. Subsequently, however, they regained their former intensity. Fourteen months after the operation the patient died of bronchopneumonia. At autopsy a pachymeningitis chronica fibrosa of the right hemisphere was found. Situated in the superior portion of the right hemisphere was a grayish red tumor about the size of a chestnut which upon examination proved to be a psammoma. The case is remarkable on account of the size of the tumor and the length of time which it had been present without causing any of the pathological symptoms uniformly present in new growths of the brain.

Münchener medicinische Wochenschrift, April 1, 1902.

The Treatment of Erysipelas in the "Red Room."—Herman Krukenberg reports the treatment of eighteen cases of erysipelas by means of red light, in a room especially provided for this purpose. The results obtained were very satisfactory in that the duration of the disease was greatly shortened, in thirteen being less than two days; furthermore, systemic symptoms, such as fever and headache, were rarely observed. No general or local medication was given, except in three cases, in which alcohol was locally applied. In those cases in which the local lesions were sharply defined at the beginning of the treatment such a definition began to vanish after a few hours in the "red room" and the swelling markedly decreased. Four of the cases relapsed after removal from the red light, but were speedily cured by a continuance of the treatment. The author does not think that red light in itself possesses any curative influences over erysipelas, but that the benefit derived therefrom is due to the exclusion of the chemical rays of the sunlight. The streptococcus of erysipelas does not appear to be materially injured by daylight, and the explanation of the benefit derived from red light is probably to be sought in the fact that the chemical rays irritate the skin, and make it particularly susceptible to the action of the streptococcus. It is possible that the beneficial results obtained in the local treatment of erysipelas with ichthyol, iodine, and various plasters, is principally due, to the exclusion of the light thereby. This is shown by the speedy recovery of a case of facial erysipelas, which was treated in a dark room, in which, when illumination was necessary, a red light was used. A detailed description of fourteen of the eighteen cases treated is appended.

The Surgical Treatment of Puerperal Pyæmia.—F. Trendelenburg considers the surgical treatment of puerperal pyæmia in which the general infection takes place through septic thrombosis of the uterine veins. Cases of puerperal peritonitis and general infection by the lymph passages are excluded. The surgical treatment of pyæmia was first successfully undertaken by Zaufal in 1884, who operated upon a thrombus of the transverse sinus by cleaning it out and ligaturing the internal jugular vein. Trendelenburg proposes similar procedures in puerperal pyæmia—that is, a ligature of the involved veins, and a removal of the contained thrombi whenever that is possible. Although the technique of such an operation is very much more difficult and intricate than that involved in operations on the transverse sinus, yet it is by no means impracticable. The operation is to be performed extra-peritoneally, the external line of incision being that commonly used in ligation of the external iliac artery. The best location in which to ligate the hypogastric vein is just in front of its anastomosis with the external iliac vein. When the parts are laid open it must be decided whether the spermatic or hypogastric vein, or both, are to be ligated. This is to be determined by palpation, by the means of which the location of the thrombi may be ascertained. As to whether the initial incision should be on the right or left side must be determined by bi-manual examination previous to the commencement of the operation. Often the thrombosis is bilateral. Cases in which the veins above the hypogastric and spermatic are involved are, of course, not suitable for operative treatment. A case is reported in which the operation was successfully performed and the hypogastric and spermatic veins both ligated.

The Presence of Bacteria in the Bloodvessels as a Cause of Urethral Fever.—R. Bertelsmann and Mau report the study of three cases of urethral fever, in each of which identical staphylococci or streptococci were isolated from the blood and urine. In one of the cases, a detailed description of which is given, both staphylococci and colon bacilli were obtained from the blood on the day of the initial chill; on the two following days the blood was sterile. On the fifth day the same organisms were obtained from the urine. On the sixteenth day the urethra was again dilated, and on the seventeenth staphylococci were found in the blood. On the eighteenth day both staphylococci and proteus bacilli were isolated from the blood. On the nineteenth day staphylococci were isolated, in pure culture, from the urine, and on the twenty-first from the blood, in large numbers. The patient died on the twenty-second day, under the clinical picture of a septicæmia. At the autopsy the ureters were normal. The urethral walls were thickened and scarred, but otherwise normal. The prostate was hypertrophied, but otherwise normal. Endocarditis was present, and numerous emboli were found in the liver and kidneys. The staphylococcus previously isolated from the blood and urine was obtained from the endocardial, liver and kidney lesions. Great interest attaches to the periodical appearance and disappearance of the staphylococci in the blood. It is evident that at times the body is able to dispose of an infecting microorganism successfully, but at others it is readily overpowered thereby. The authors believe that certain cases of urethral fever are produced by the systemic infection of bacteria from the urine or urethra, in which cases the microorganisms may be isolated from the blood. In many cases the infecting bacteria .are quickly disposed of, but in others sepsis results. Great care should be taken in urethral dilatation, and special antiseptic precautions should always be observed. Urinary antiseptics should, whenever possible, be given previous to such dilatation. When, in spite of all precautions, urethral fever subsequently develops, all attempts at dilatation should be discontinued and other methods of treatment adopted.

Berliner klinische Wochenscrift, March 31, 1902.

Mechanical Influence of the Respiration and Circulation upon the Activity of the Body Organs.—Buttersack points out the mechanical influence of the abdominal muscles upon the activity of the abdominal organs, and shows how such activity is markedly lessened when the abdominal muscles are atrophied from non-use and disease. The movement of such muscles is directly influenced by respiration. Hence the activity of the abdominal organs is more or less dependent upon the force and character of the respiration. Respiration produces therefore a sort of automatic massage, which is an important factor in the maintenance of the physiological processes of the body. The favorable influence of massage upon pleural and peritoneal effusions has been definitely proven; that respiration in a certain measure produces such a massage cannot be denied, and its therapeutical employment should not be neglected. The mechanical effect of the circulation upon the activity of the body organs is an important factor in the maintenance and intensity of their physiological processes. The walls of the bloodvessels being elastic, the motion of the circulating blood is transmitted in a series of impulses to the surrounding tissues and organs. Such impulses act as an excitant to cell activity. The influences of this mechanism when operative within normal limits cannot fail to be beneficial; when, however, such limits are altered pathological effects result.

The Bacillus of Syphilis.—Max Joseph and Piorkowski report the discovery of a bacillus in syphilitic semen, which they regard as the probable etiological factor of this disease. Their researches were confined to the examination of syphilitic semen, since it seems certain that the causative factor of syphilis remains in this fluid long after it has vanished from other locations. Twenty-two cases of syphilis were thus examined, the lapse of time since the infection having been from five weeks to two years. In all of these a special bacillus was isolated, which is not found in normal semen or, so far as is known, in connection with any other disease. The original inoculations were made upon sterile normal placenta. After twenty-four hours growth at the incubator temperature small dewdrop colonies develop, some of which possess a grayish appearance, while others are nearly transparent. Microscopical examination shows that the latter are composed of staphylococci, while the former are made up of small rods, which have nearly the same form as diphtheritic bacilli, but are about the size of the bacillus subtilis. They stain readily with the anilin dyes. When stained they are easily decolorized by acids, and retain granis stain. The second generation of the microorganism grows well on ordinary agar, urine-agar, and blood serum. Subsequent generations, however, grow poorly, and degeneration and involution forms soon appear. The bacillus, however, resumes its original form when transplanted back on to fresh normal placenta. At first it was found impossible to cultivate the first generation upon the ordinary artificial media. Subsequently, however, this was in a measure accomplished by the use of blood serum. A peculiar feature of the bacillus is its polar staining property and the presence of metachromatic granules (Babes-Ernst bodies) in this location. Such granules are not seen in the involution forms, and are in all probability closely connected with the virulence of the bacillus. The cultural characteristics of the bacillus when grown in the second or third generation are as follows: milk coagulated and acidified, no gas formation, slight indol production, slight moist, white growth upon potato. These characteristics are best shown at the incubator temperature; they are, however, also present at the room temperature, but are more slowly developed. The sooner the semen is examined after infection the more numerous are the bacilli, nevertheless they were found in a case in which infection had occurred 5 grs. previously. This bacillus does not grow upon syphilitic placenta, and is agglutinated by syphilitic blood in at least a 1 to 40 dilution. The authors recommend the extension of observations along this line, as only in this manner can the relation of this bacillus to syphilis be definitely settled.

French Journals.

Myoma of the Leg.—Thévenot describes a tumor of the lower third of the right leg. This growth had been developing for thirty years in a farmer, aged fifty-four years. It was 10 cm. above the internal malleolus. Otherwise the patient was in good health. The tumor was absolutely painless, and freely movable under the skin and over the deeper parts, and it caused no annoyance. The patient applied caustics to cause its disappearance. This treatment produced ulceration and it became adherent to the overlying tissues. It was still movable on the lower tissues. There was pseudo-fluctuation. The excision of the tumor was very simple. It was the size of a fist and was firm, like a fibroma. It creaked under the scalpel, and when cut resembled a fibroma of the abdominal wall. The diagnosis of fibromyoma of the skin was made.—*Lyon Médical*, March 30, 1902.

Traumatism of the Brain.—Wiemuth describes these cases. In each case the skull had been fractured by the blow of a horse's hoof. In the first case there was a depression in the temporal region, in which a fist could be laid. Almost the entire frontal lobe projected. The bony splinters were removed and the parts put in place, and finally the breach was filled by means of an osteoplastic operation. The patient recovered. In the second patient there was a depression in the left frontoparietal region with contusion of the corresponding frontal lobe. For eight days after the operation the patient was unconscious and there were several clonic convulsions. When consciousness returned, there was motor aphasia, which, however, disappeared later. The patient was completely cured.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, March 30, 1902.

Tuberculous Lesions in Herniæ.—G. Chavannaz declares that the recognition of tuberculous manifestations in abdominal herniæ is of relatively recent date. The history of this affection has been established by Jonnesco. An interesting case of this nature was that of a young man, aged eighteen years. There was nothing suspicious in the family history. The personal history was negative, with the exception of an obstinate bronchitis, contracted three months before the patient entered the hospital. There was a right inguinal hernia with ectopic testicle. The hernia had existed since birth. At the operation, on opening the sac, there was discovered a certain quantity of serous liquid. The omentum enclosed in the sac was red, with some small, dry, hard granulations. Microscopical examination showed typical tubercles. This affection is rare. It can manifest itself at any age. It occurs more frequently in males. It occurs most often in cases of inguinal hernia. The prognosis seems relatively favorable if intervention is not too late.—*Journal de Médecine de Bordeaux*, March 30, 1902.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PEDIATRICS.

Stated Meeting, Held April 10, 1902.

Rowland G. Freeman, M.D., Chairman.

Sarcoma of the Lung.—Dr. Louis Fischer presented a microscopical specimen of sarcoma of the lung. The child from whom it had been taken had been first seen by him in July, 1900. The family history was good. A growth occupied that part of the thorax in which the heart is normally located. The respirations were irregular and sighing, and about 52 per minute. The temperature varied from 100° F. in the morning to 100.4° F. in the evening. There were constant and severe dyspnœa and cyanosis of the lips, and the mucous membranes were very pale. There was a curvature of the spine, from left to right, most marked in the dorsal region. The child had emaciated rapidly, and was suffering constantly. Dr. Beck examined the case with the *x*-rays, but, although the heart could be distinctly seen on the right side, the restlessness of the patient prevented any definite information being obtained concerning the nature of the tumor. An exploratory operation was done, but the child died shortly afterward. The specimen from the tumor was examined by Dr. F. S. Mandlebaum, who reported the tumor to be a spindle-cell sarcoma in active growth. According to the literature, these growths are decidedly rare.

Vaccination Packet.—Dr. B. Van D. Hedges of Plainfield presented this packet. It contained a bottle of liquid soap, one bottle of alcohol, some compressed Bernay's sponges, a small tube, containing sterilized needles, and some vaccination shields. The speaker said that many of the vaccination shields in the market were, in his opinion, distinctly harmful by causing constriction around the vaccination. To obviate this he made use of a simple shield, consisting of three or four layers of sterilized gauze, bound together at the end with strips of Z O plaster. It makes no lateral constriction, while protecting the vaccination wound from the ingress of germs.

Dr. John H. Huddleston suggested that the packet should contain a sterile slip, with which to rub in the liquid vaccine, a needle not being very convenient for this purpose. He could see no objection to this vaccination shield.

Dr. R. G. Freeman remarked that it had always seemed to him desirable to use the needle for rubbing in the vaccine, because of the ease with which it could be sterilized.

Dr. F. M. Crandall objected to the shield, on the ground that considerable time must elapse for the drying of the sore before such a shield could be applied. He had been using a large corn plaster for temporary use, the patient being instructed to remove it after three days.

Dr. Charles F. Collins said that he had discarded the ordinary vaccination shields. He took two pads of sterile gauze, about half an inch thick, and cut out a hole in the lower pad. The other pad was then applied over this, being held in place by strips of adhesive plaster. This made a perfectly asceptic surgical dressing, which could be applied without waiting for the vaccination to dry.

Dr. W. S. Stokes said that he applied a small piece of rubber tissue immediately after vaccinating, and after the vaccination had "taken," as the chances of infection were then slight, all that was necessary was the application of a simple gauze dressing or shield.

Dr. F. A. Kinch of Westfield, N. J., said that for a number of years he had been in the habit of using discs of pasteboard from which a segment had been removed. Such a disc, when moist, was readily bent into the form of a little tent, and, when held in place by plaster, formed a convenient protection for application immediately after vaccination.

The Progressive Principle in Infant Feeding.—Dr. Henry L. Coit of Newark, N. J., read this paper. He said that the so-called modification of milk for infant feeding dated back to the well-known mixture of Meigs, described in 1882, though the profession had been especially aroused by the enthusiastic advocacy of percentage feeding by Dr. Rotch of Boston. This mode of feeding, however, was open only to a favored few until Westcott introduced a method for simplifying the determination of the percentages. Many other attempts in this direction had been made since then, yet many practitioners still persisted in carrying around in their pockets a copy of some antiquated formula for an infant food, and if this failed in a given case the physician would straightway proceed to run the gamut of the proprietary foods. Simpler methods of percentage feeding were demanded by the profession of to-day. It could not be denied that an enormous amount of labor was required of those who would master this intricate subject as it now stood. The problem was difficult because the milk of the market is not a constant quantity. Milk could not be assumed to be an average product. It was the conviction of good observers that the violent agitation of milk by the centrifuge is detrimental. Some years ago he had suggested the use of a superfatted gravity cream of uniform strength, as this would greatly simplify the calculations and give accurate results. By this system approximate percentage modification could be placed in the hands of the nurse or mother. The chief points to be insisted upon were the known composition of the standards as follows: the cream, carrying the fat; the sugar solution, carrying the extra sugar, and the fat-free milk or whey, carrying the proteids.

Dr. Coit then took up the subject of the progressive principle in infant feeding. It had its chief justification, he said, in the fact that the great majority of the cases we were called upon to feed were not well but sick infants, and every baby is a law unto itself with regard to its food. Every feeding case should be seen at least once a month, even when apparently well. One should begin with very low percentages and gradually increase the strength of the mixture. It was not uncommon to meet with infants of ten months taking a diet suitable for one of four months, and these children presented obvious defects of nutrition. In the feeding of premature infants weak percentages must be used, and the strength increased with the greatest caution, it being remembered that very slight changes in the composition of the milk may profoundly affect the infant. In progressive feeding there were two points to be especially considered, *viz.*: (1) The present capacity of the infant, and (2) the normal capacity of the healthy infant that has obtained the maximum growth. This progression should be studied carefully from birth to weaning, and it was a good plan for the physician to write out, for his own guidance, a series of formulæ embodying the desired progression in the given case.

The Feeding of Children During the Second Year.—Dr. Thomas S. Southworth was the author of this paper. (Vide page 656.)

Beef Juice a Sauce Rather than a Food.—Dr. Leroy M Yale said that he was pleased that in both of these papers there had been due recognition given to the needs of the individual baby, and of the truth of the statement that there is no average baby any more than there is an average adult. The dietary should be just as carefully adjusted in the second year as in the first, even though the results of carelessness in this respect were not so immediately disastrous. He thought the tendencies of the child, as for example to gout, should be duly considered in arranging the dietary. It must be admitted that the hands of the physician were often forced by the parents' demands for an increase in the dietary. The physician looks for a distinct advantage in each change of the dietary, whereas the mother desires to add everything which will not distinctly injure her child. Much that Dr. Southworth puts in the dietary of the second year he would postpone until the age of twenty-one months, or even later. Up to eighteen months very few children take undiluted or unmodified milk with success. He believes that it is well to keep back the proteids until after this age. He entirely approved of all that had been said about fruits. He was timid about using the potato in the second year, except in those of robust digestion. The proteid value of beef juice was not equal to the standard of full milk in the same number of ounces. Its powerful stimulating effect was well known, and hence he used it as a therapeutic measure, giving it to the child when tired of milk or wearied by play to such an extent that he feared it would not take its other food. He looked upon beef juice as a sauce rather than as a food.

A Simple Method of Progressive Infant Feeding.—Dr. L. Emmett Holt said that he was quite in accord with the general principles laid down by Dr. Coit, and this was really what most people wanted. It should be remembered that the proteids must be low and the fat higher at the beginning, and that the proportions of both must be gradually increased. He did not think that Dr. Coit's method was very simple. His own method was as follows: Taking the formula, fat 3, proteid 1, and starting with milk sugar, one ounce; lime water, one ounce, and water enough to make twenty ounces, he added from time to time respectively 2, 3, 4, 5 and 6 ounces of 10 per cent. milk, giving the following percentages: fat 1, sugar 5.5, proteids 0.33; fat 1.5, sugar 5.5, proteids 0.5; fat 2., sugar 6., proteids 0.6; fat 2.5, sugar 6, proteids 0.8; fat 3, sugar 6, proteids 1.

Much trouble arose from bad habits of feeding. A meal that lasted an hour and a half with a music box accompaniment, and a nurse amusing the child and coaxing it to eat, was nonsensical, yet it was all too common. Again, it was a common complaint that the child refused cereals and vegetables, and would take only meat. All that was usually necessary was to avoid serving the several articles of food together; they should be served in courses, the meat being withheld until the child consented to take the other articles. He could not agree with Dr. Southworth as to the desirability of using the bottle in the second year. He found that such children would refuse to take milk without the bottle, so that not infrequently the parents were forced to let the child keep its bottle even when three or four years old. He preferred to teach the child to drink from a cup at the age of twelve or fourteen months. He did not approve of allowing green vegetables and potato before the age of twenty-one months. He had been very much interested in hearing what patients had to say about the criticisms made to them when abroad by English and German physicians. The English physicians were horrified at the amount of such an indigestible article as cream allowed to American babies, while on the other hand, the German physicians protested vigorously against the free use of beef juice. He thought one of the most common mistakes with cereals was in the matter of cooking. The popular cereals were those which are said to require only a few minutes' cooking, but he was in the habit of instructing his patients to cook these four or five times as long as the directions stated, and in order to do this and have the cereal ready for breakfast it must be cooked the night before.

Dr. F. M. Crandall said, regarding the feeding during the second year, that the laity and many physicians seemed to think that at this time the child was old enough to shift for itself. His own experience had taught him to postpone somewhat the giving of vegetables, and to make the feeding of the fourteenth and fifteenth months not very different from that of the latter part of the first year. The importance of milk as a basis of the diet up to the end of the first year could hardly be exaggerated. The giving of fruit was often neglected. Orange juice and baked apple were excellent, particularly in constipated babies. Such children could sometimes be very easily managed by boiling prunes with a few senna leaves. It was very difficult to induce some children to take a sufficient variety, every proposed new addition to the dietary provoking resistance on the part of the children. Children were often fond of a monotonous diet, just as they were fond of the same music and the same toys.

Dr. Charles G. Kerley said that he was accustomed to give all his babies full milk when one year old. He was not fond of giving beef juice as a steady diet to a child, as there was a tendency for it to cause looseness of the bowel with mucous discharges. It was for this reason that he had been chary about using beef juice in cases of summer diarrhœa—indeed, he had stopped many such diarrhœas by simply stopping the beef juice which had been given temporarily as a substitute for milk. He did not like the idea of giving a meal at 10 P.M.; he stopped this after the age of fifteen months, and found that the children could eat a more generous diet and do better on four meals a day.

Dr. Henry Dwight Chapin thought there was more difficulty met with in the feeding during the first than the second year. The modification of milk must be made exceedingly simple, and our effort should be only to secure approximate percentages. Cream obtained by the centrifuge was not as fine an emulsion as that obtained by the deep-setting process of creaming—in other words, that found in the ordinary bottled milk. All that was necessary to remember was that in the first nine ounces of the top milk the fats and proteids bear the ratio of three to one, and in the first fifteen ounces of such top milk the ratio is two to one. Beginning with low proteids, they should be gradually increased to the point of digestive tolerance.

Dr. Coit said that he had been charmed with the demonstration of progressive feeding given by Dr. Holt. He believed that milk sugar should be eliminated from the milk after the age of ten months, substituting a cereal which had been boiled in an open vessel (not a double boiler) for three hours. He objected to the double boiler, because the cereal would then be subjected to a temperature somewhat less than the boiling point. He soon accustomed the child to drink milk from a cup, and gradually increased the quantity of the cereal and proteid. In this way children of eleven months were taking bread and butter, and cereal with milk. Most potatoes found in the market had been dug before fully ripe, and hence the contained starch was indigestible. This had led him to postpone the use of potato until the end of the second year.

Dr. Southworth said that he favored the use of the bottle in the second year because of the larger quantity of milk that the child would take in this way, but at the chief meals it was the rule to get the child accustomed to the use of a cup.

Maine's Jumping Frenchmen.—On the northern frontier of Maine, between the United States and Canada, there exists a class of people locally known as "jumpers." Instead of imitating actions or repeating words, the sufferers from this condition are characterized by their inability to disobey any sudden, sharp order given them. If called on to jump, they will immediately execute this act. The condition has many resemblances to the great dancing epidemics of the middle ages, and almost seems like a relic of them. Like them, it spreads like contagion; and its manifestations are similarly the result of irresistible impulses, and are displayed among a class emotionally unstable and destitute of the self-control which is necessary in a well-ordered community. These "jumpers" seem to have no control over their nerves or muscles when taken off their guard or startled in any way, and while there is a certain drollery at times in their antics, the humorous element is, to thoughtful persons, overshadowed by the tragic possibilities. A "jumper" is liable to kill a man at an instant's notice, and be no more responsible for his act than would be a mad bull or a runaway locomotive.—*St. Louis Medical Review.*

RECENT MEDICAL LEGISLATION IN NEW YORK.

The Governor having completed his disposition of the bills left with him by the Legislature, on its adjournment, it may be of interest to know what new laws were enacted and what important bills failed relative to the medical profession.

Of course, the most radical bill was the one regulating and legalizing the practice of osteopathy in the State of New York and fixing penalties for the violation thereof. This bill, the supreme effort of the Christian Scientists, met with the same defeat that has attended it for several years past. The same fate attended a bill repealing the provisions of the school law, relative to instruction in physiology, hygiene and narcotics; and, also, an amendment to the penal code providing that dentists, as well as physicians and surgeons, shall not be allowed to disclose any information which they acquired in attending a patient in a professional capacity, and which was necessary to enable them to act in that capacity.

Chapter 243 amends subdivision 4 of section 145 of the Public Health Law, relative to admission to examination in certain medical studies, so that the regents may, in their discretion, accept as the equivalent for any part of the third and fourth requirement, evidence of five or more years' reputable practice, provided that such substitution be specified in the license, and as the equivalent of the first year of the fourth requirement evidence of graduation from a registered college course, provided that such college course shall have included not less than the minimum requirements prescribed by the regents for such admission to advanced standing. The regents may also in their discretion admit conditionally to the examination in anatomy, physiology, and hygiene and chemistry, applicants nineteen years of age certified as having studied medicine not less than two full years of at least nine months each, including two satisfactory courses of at least six months each, in two different calendar years, in a medical school registered as maintaining at the time a satisfactory standard, provided that such applicants meet the second and third requirements.

The same law, subdivisions 2 and 4 of section 190, was amended so that a member of the State Board of Pharmacy, if elected from the eastern section, must also be a member of an incorporated pharmaceutical society or association; and that the election of the members of the State Board of Pharmacy for the eastern section shall occur in the month of June of each year. The State Board of Pharmacy shall designate a date in said month and a place in the borough of Manhattan and a place in the borough of Brooklyn for said election, and shall give fifteen days' notice of said time and place to the societies in said section, hereinafter described At the time and place so designated in the borough of Manhattan three members for said section shall be elected, and no person shall be eligible for election, or to vote at such election, unless he be a resident of one of the counties of New York or Westchester and a member of the New York State Pharmaceutical Association, provided he be a licensed pharmacist or druggist, or of an incorporated pharmaceutical association or society in one of said counties, whose members are required to be licensed pharmacists or druggists. At the time and place designated as aforesaid in the borough of Brooklyn, two members for said section shall be elected and no person shall be eligible for election, or to vote at such election, unless he be a resident of one of the other counties in said section and a member of the New York State Pharmaceutical Association, provided he be a licensed pharmacist or druggist, or one of the incorporated pharmaceutical associations or societies in said other counties, whose members are required to be licensed pharmacists or druggists.

Unsuccessful efforts were made to amend the Public Health Law, as follows: A new section (41a) to Article 3, relative to the adulteration of and deception in the sale of drugs, chemicals and other substances; allowing merchants and retail dealers to sell carbolic acid, laudanum, spirits of niter and quinine in original packages put up by a regularly licensed pharmacist, properly labeled, and bearing the name and address of the pharmacist putting up the same, and may also sell the ordinary non-poisonous domestic remedies; providing that a regularly licensed and practicing physician an surgeon owning and conducting a drug store in connection with his practice as such shall be entitled to a license as a pharmacist or druggist pursuant to the provisions of this article, upon presenting to the State Board of Pharmacy satisfactory proof that he is legally and regularly authorized to practice as a physician and surgeon according to the laws of the State of New York.

In town boards of health, by Chapter 939, the citizen member shall be appointed biennially, instead of annually, as hitherto; but a bill failed to pass requiring local boards of health to enforce general vaccination of all persons when required to do so by the State Commissioner of Health, who was authorized to make such a requirement when in his judgment such action was necessary for the protection of the public health; as did, also, a bill providing that in all buildings and institutions owned, maintained, or controlled by the State, the plans for all water supply, sewerage, sewage-disposal, and garbage-disposal works, shall be subject to the approval of the State Commissioner of Health before being adopted or constructed.

The Public Health Law was amended, Paragraph 4 of Section 166 of Artile 9, so that any person who then being a bona-fide student of dentistry in this State under private preceptorship, was entitled to file on or before the 31st day of July, 1895, with the secretary of the State Dental Society a certificate of study under private preceptorship may at any time prior to the 1st day of January, 1904, upon sworn proof of such fact, file such a certificate with the regents, and thereupon be admitted to examination before the board.

These general amendments to the Public Health Law failed—regulating the sanitary condition of bathing establishments, relating to the filing of vital statistics with the county clerks, and relating to the discharge of sewage, and other waste refuse matter, into the waters of this State.

These efforts "to protect the public health" did not become laws—requiring the odorless consumption of garbage in every city; forbidding any person, association, corporation or company to sell, offer for sale or dispose of any proprietary or patent medicine or tonics, snuff, tobacco or headache, catarrh, or hay fever remedy having in it or containing cocaine; exempting from the law relative to poison physicians' prescriptions where such prescriptions are marked poison or for external use, and chemicals or acids used in the arts or in manufacturing if sold in quantities of one pound or more; prohibiting the gathering of glass or stone bottles from any public dump or garbage barrel;

making it a misdemeanor if any person distributes any free trial or trial samples of any medicine, drug, or chemical compound, by leaving the same exposed upon the ground, sidewalk, porch, doorway, or in any other manner that children may become possessed of the same; providing for a commission to investigate the nature and value of vaccination, anti-toxin, seropathy, and other alleged prophylactics, and to repeal Sections 200 and 201 of the Public Health Law; making more strict requirements in the law authorizing and empowering the State Board of Health and local boards of health to require vaccination or revaccination.

A law was passed providing for the construction of a building for hospital purposes and acquiring land for the same in the borough of The Bronx in the city of New York, the expense not to exceed $300,000. Another law provides for the reorganization and reincorporation of the Syracuse Women's Hospital and Training School for Nurses,and for a change of its corporate name to "Syracuse Hospital for Women and Children." Still another law authorizes the acquisition by the United States of lands in Erie County as a site for a marine hospital.

An important bill relative to the liability of hospitals, which did not pass, provided that no hospital incorporated under the laws of this State, sustained in whole or in part by charitable contributions or endowments, shall be liable for the neglect, carelessness, want of skill, or for the malicious acts of any of its officers, agents, or employes, in the management of, or in the care or treatment of, any of the patients or inmates of such hospital. It shall not be lawful for any such hospital to make or enter into any agreement whereby liability shall be incurred for such neglect, carelessness, want of skill, or malicious acts, and any such agreement shall be void. Nothing herein contained shall be so construed as to impair any remedy, under existing laws, which any person may have against an officer, agent, or employe of any such hospital for any wrongful act or omission in the course of his official conduct or employment.

Other hospital bills that failed were these: making eight hours a day's labor in the public hospitals of the city and county of New York; amending the act to establish a State hospital in some suitable location in the Adirondacks for the treatment of incipient pulmonary tuberculosis, in relation to the reception and maintenance of free patients; reappropriating $50,000 heretofore appropriated for establishing a State hospital for the treatment of incipient pulmonary tuberculosis; for the relief of the German Hospital and Dispensary in the city of New York, and to authorize a change of a lease from the mayor, aldermen and commonalty of the city of New York to the German Hospital and Dispensary in the city of New York to a grant, and to authorize the sale or leasing of the said property by the German Hospital and Dispensary in the city of New York; authorizing the city of Buffalo to issue $50,000 in bonds for the purpose of purchasing land as a site on which to erect a quarantine hospital; incorporating the Masonic Temple and Masonic Home and Hospital Association of Brooklyn, with Claudius F. Beatty, Walter T. Bennett, George G. Brown, John H. Brennan, Charles H. Cox, Elbert Crandall, Theodore E. Green, Richard Goodwin, Philip Herrschaft, Edwin F. Howell, Frank E. Haff, Robert J. Kenworthy, P. Frederick Lenhart, Andrew B. Martin, John T. Pinches, James H. Rollins, John Stewart, Horace Sawtelle, John E. Sparrow, Rufus L. Scott, Jr., Oliver E. Stanton, Alfred Sims, John B. Sabine, Josiah Smith, and Walter F. Sykes as the incorporators

Therapeutic Hints.

Dysentery.—
℞ Potass. et sod. tartrat. sat. sol .... ℥ii.
Tr. opii camphorat. .... ℥ss.
Syr. rheii aromat ....q. s. ad. ℥iv.
M. S.: ʒii. every hour, or until two or three evacuations are produced. In later stages, when there is much blood and tenesmus:
℞ Extr. opii .... gr. i.
Extr. hymiciaosi .... gr. ii.
Extr. belladonnæ .... gr. ⅛
M. ft. Suppes No. 1. S.: Repeat as required.

Gastric Ulcer.—
℞ Picrotoxin ....
Morph. hydrochl. ....āā gr i.
Atrop. sulphat. .... gr. ⅛
Ergotin .... ♏ xx.
Aq. Laurocerosi .... ʒiij.
M. S.: Four to six drops five to ten minutes before each meal. —*Clinical Review.*

Gastralgia.—
℞ Codein sulph. .... gr. iv.
Antipyrin .... gr. xl.
Tinct. bellad. .... ♏xl.
Elix. simp. .... ℥iij.
Aq. menth. pip. ....ad ℥iv.
M. S.: Teaspoonful every three to four hours.

Drugs are often given, not so much because the disease demands it, but because the patient does. He is not happy until he gets the drug, and too often he is not happy even then. —GOODHART.

Tuberculous Laryngitis.—
℞ Menthol ....
Ether sulphuric ....
Ol. pini sylvest. ....
Tinct. iodi. ....āā ʒij.
Tinct. benzoin Co. ....ad ℥ij.
M. S.: Ten drops on an oronasal inhaler. —*International Medical Magazine.*

Dysentery.—In acute cases give twenty grains of sublimed sulphur with five grains of Dover's powder every four hours. —RICHMOND.

Gout.—Bracing air, with relatively low humidity. Avoid exposure to cold, east and northeast winds. Egypt offers a suitable climate. Residence at the seaside is unsuitable for most cases, especially so for gouty eczema. —ARTHUR P. LUFF, *The Practitioner*, March, 1902.

Pediatric Suggestions.—(1) Give a baby plenty of water four or five times per day; (2) Give a baby a rockless bed to itself; (3) A baby should be held only to be nursed; (4) Massage and exercise a baby each day; (5) Give a baby a chance to lay naked and kick daily; (6) Never give a baby diluted alcohol, liquors, or coffee; it will acquire perverted appetites soon enough; (7) Teach a baby to hang by its hands and spring with its legs; (8) Don't advise a parent to give the baby a little soothing syrup, paregoric, or castor oil; in short, do no offhand prescribing at all; (9) If the mother is weak or anæmic, correct any lesion, and give her calcium hypophosphite 5 to 20 gr. per day; thus, via milk, nourish baby; (10) If the baby is constipated, give the mother sodium phosphate; (11) Ventilate sufficiently, and keep room temperature below 75° F.; (12) A cartload of sand makes a healthful plaything for a baby. —*Texas Medical News*, January, 1902.

Gonorrhæa.—
℞ Hydrarg. chlor. corr. .... gr. ⅛
Acidi carbolici .... ʒiss.
Zinci sulpho-carbolat .... gr. xxiv.
Boroglyceride (50 p.c. sol.) .... ℥ij.
Aq. rosæ ....q.s. ad. ℥viij.
M. Sig.: Inject after urination. —J. W. WHITE.

Tuberculous Meningitis.—
℞ Strontii bromidi .... gr. xv.
Chloral hydratis .... gr. vijss.
Syr. valerianæ .... fl. ʒvj.
Syr. menth. piper. .... fl. ℥ij.
M. S.: ʒj. q. ½ h. if necessary. —MALBA.

Tonsillitis.—
℞ Formalin .... ♏xv.-xx.
Potassii chlor. ....
Liq. ferri chl. ....āā ʒj.
Aq. menth. pip. ....q. s. ℥iv.
and
℞ Quininæ hydrobrom ....
Sodii benzoat ....āā gr. ij.
Salol .... gr. v.
M. ft. caps. No. j. Sig.: One q. 3 h.
—*Maritime Medical News*, February, 1902.

Medical Items.

Native Medicine in Annam.—According to a writer in the *Archives de Médecine Navale* for January, no native of Annam is allowed to practise medicine or surgery unless he has studied under a recognized master for at least ten years; but, notwithstanding this prolonged curriculum, the results, measured by Western standards, are simply deplorable. It is not that the Mongoloid medical students are accused of abnormal idleness or of excessive stupidity, for, on the contrary, they are said to be very industrious and, according to their lights, by no means devoid of intelligence. From their earliest days, however, they become imbued with the grossest superstition, complicated by a firm belief in astrology, and, naturally, it is next to impossible for genuine knowledge to attain to any useful dimensions in the midst of such exuberant weeds.

The Annamese pharmacopœia is made up of an immense number of exceedingly complex formulæ, and before the simplest of the medicaments can be prepared the compounder has to perform the most perplexing ceremonies in order to insure its efficacy. Among metals gold, siver and iron are in high repute as remedies, but the writer does not make the mode of their administration clear. Iron, he tells us, is used for wounds caused by cutting instruments. In the same connection it may also be noted that zinc is employed for combating colic as well as for assisting parturition. In the latter case, however, the attendant nails the metal to the threshold of the patient's room.

Earth is freely administered in many diseases. When freshly stirred up by rats it is believed to cure paralysis, cramps, and beriberi, and it is likewise thought capable of preventing the crying of infants in utero. As a comestible earth is freely consumed by well-to-do people throughout the country, but its votaries acknowledge that it has no taste or nourishing properties whatever. Habit, they say, is responsible for the practice, but pregnant women have been known to declare that the "little cats'-ear tiles," as the earth tablets are called, have as good a flavor as pig's liver.

The Annamese do not hesitate to consume the flesh of cattle that have died from infectious diseases, and also freely eat fowls that have died from cholera or diphtheria. Hydrophobia, in Annamese estimation, can be communicated to a human being if a mad dog should bite his shadow, but happily the liver of the animal is a sovereign cure! The "stercoraceous" remedies used by the Annamese are more repulsive, if possible, than those of the Hon. Robert Boyle, but, on the other hand, it is pleasant to find that strawberries fortify the five organs of circulation, cure consumption, and restore youth to old people.—*Lancet.*

An Epidemic Among Birds.—The Treasury agent, state that during the past season an epidemic has prevailed among the murres, of the Pribilof Islands, and that the birds, which are found there in vast numbers, have perished by thousands. The first intimation of disease was the presence of birds about the village of St. Paul, close in shore, so weak that they were readily taken by children. Later dead birds washed ashore in such numbers that 212 were counted in 150 yards, while steamers from St. Michael's reported passing through large quanties of dead birds. This recalls the epidemic which has twice prevailed among the Cormorants of the Commander Islands, greatly reducing their numbers.—*Science.*

Deaths in Michigan in 1901.—The total number of deaths from all causes during the year 1901 was 33,848 as compared with 33,320 during the year 1900. Death rates per 1,000 population were 14.0 and 13.9 respectively. These numbers include still births. There were 1,509 still births registered in 1901 and 1,433 in 1900.—*Michigan Monthly Bulletin of Vital Statistics.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended April 19, 1902:

		CASES.	DEATHS.
SMALLPOX—UNITED STATES.			
California, Los Angeles	Mar. 29-Apr. 5	9	
San Francisco	Mar. 30-Apr. 6	9	
Colorado, Denver	Mar. 28-Apr. 4	8	
Illinois, Chicago	Apr. 5-12	14	
Freeport	Apr. 5-12	1	
Indiana, Evansville	Apr. 5-12	5	
Indianapolis	Apr. 5-12	13	
Terre Haute	Apr. 5-12	2	
Kansas, Wichita	Mar. 29-Apr. 12	9 One case imported from Oklahoma.	
Kentucky, Covington	Apr. 6-13	7	
Louisiana, New Orleans	Apr. 5-12	One case imported from Mississippi.	
Shreveport	Apr. 5-12	7	
Maine, Portland	Apr. 5-12	9	1
Maryland, Baltimore	Apr. 5-12	1	
Massachusetts, Boston	Apr. 5-12	13	3
Brockton	Apr. 5-12	2	
Cambridge	Apr. 5-12	2	
Everett	Apr. 5-12	1	
Lawrence	Apr. 5-12	..	1
Lowell	Apr. 5-12	2	
Malden	Apr. 5-12	1	
New Bedford	Apr. 5-12	1	
Quincy	Apr. 5-12	..	2
Somerville	Apr. 5-12	3	
Michigan, Detroit	Apr. 5-12	18	
Ludington	Apr. 5-12	1	
Minnesota, Winona	Apr. 5-12	2	
Missouri, St. Louis	Mar. 30-Apr. 6	50	
Montana, Butte	Mar. 30-Apr. 13	7	
Nebraska, Omaha	Apr. 5-12	24	
New Jersey, Camden	Apr. 5-12	4	
Hudson County including Jersey City	Mar. 30-Apr. 6	30	9
Jersey City	Mar. 30-Apr. 6	24	
Newark	Apr. 5-12	42	10
New York, New York	Apr. 5-12	66	12
Ohio, Cincinnati	Apr. 4-11	16	
Dayton	Apr. 5-12	1	
Hamilton	Mar. 29-Apr. 5	5	
Toledo	Apr. 5-12	2	
Youngstown	Apr. 5-12	1	
Pennsylvania, Altoona	Apr. 5-12	2	
Johnstown	Apr. 5-12	1	
Philadelphia	Apr. 5-12	35	4
Pittsburg	Mar. 29-Apr 12	10	
York	Mar. 5-Apr. 5	7	3
Rhode Island, Providence	Apr. 5-12	5	
South Carolina, Greenville	Mar. 29-Apr. 5	4	
South Dakota, Sioux Falls	Apr. 5-12	3	
Tennessee, Memphis	Apr. 5-12	8	
Utah, Ogden	Mar. 1-31	4	
Salt Lake City	Apr. 5-12	1	
Washington, Tacoma	Mar. 30-Apr. 6	7	
Wisconsin, Green Bay	Apr. 5-12	7	
Milwaukee	Mar. 29-Apr. 5	1	
SMALLPOX—INSULAR.			
Porto Rico, Arecibo	Mar. 1-22	61	
Ciales	Mar. 1-22	6	
Fajardo	Mar. 1-22	1	
Humacao	Mar. 1-22	1	
Ponce	Mar. 1-22	12	
San Juan	Mar. 1-22	6	
SMALLPOX—FOREIGN.			
Austria, Prague	Mar. 15-29	13	
Barbados	Mar. 30	10	
Belgium, Antwerp	Mar. 22-29	10	4
Brazil, Pernambuco	Feb. 14-28		27
Canada, Belleville	Mar. 31-Apr. 7	1	
Quebec	Mar. 29-Apr. 12	48	1
France, Paris	Mar. 22-29		1
Rheims	Mar. 16-30	51	4
Great Britain, Birmingham	Mar. 22-29	1	
Dundee	Mar. 22-29	1	
Glasgow	Mar. 28-Apr. 4	13	
Leeds	Mar. 22-29	2	
Liverpool	Mar. 22-29	4	1
London	Mar. 22-29	389	61
North Shields	Mar. 15-22	7	
Sheffield	Mar. 15-22	1	
South Shields	Mar. 22-29	2	
India, Bombay	Mar. 4-18		19
Calcutta	Mar. 1-15		14
Karachi	Mar. 2-16	8	6
Madras	Mar. 8-14		4
Italy, Caserta	Mar. 24	Many cases	
Milan	Feb. 1-28	5	3
Naples	Mar. 15-22	7	1
Palermo	Mar. 15-29	37	4
Santa Maria Capuavetere	Mar. 24	Many cases	
Mexico, Mexico	Mar. 23-30	2	3
Netherlands, Rotterdam	Mar. 22-29	2	
Russia, Moscow	Mar. 15-22	18	3
Odessa	Mar. 22-29	2	1
St. Petersburg	Mar. 15-20	14	
Switzerland, Geneva	Mar. 8-15	1	
YELLOW FEVER.			
Dutch Guiana, Paramaribo	Feb. 1-28		7
French Guiana, Mana	Mar. 31	Infected	
St. Jean	Mar. 31	Infected	
St. Laurent	Mar. 31	Infected	
CHOLERA.			
China, Honan	Apr. 10	Epidemic	
Hongkong	Mar. 4	1	
India, Bombay	Mar. 4-18		41
Calcutta	Mar. 1-15		258
Turkey in Asia, Djiddah	To Mar. 27		38
Mecca	To Mar. 27		788
Medina	To Mar. 27		381
Rebux	To Mar. 27		1
PLAGUE—INSULAR.			
Philippine Islands, Manila	Feb. 1-22	2	2

Medical Record

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Original Articles.

INOPERABLE ROUND-CELLED SARCOMA OF THE UPPER JAW WITH METASTASES SUCCESSFULLY TREATED WITH THE MIXED TOXINS OF ERYSIPELAS AND BACILLUS PRODIGIOSUS.

By O. K. WINBERG, M.D.,
LAKE PARK, MINN.
WITH COMMENTS BY WILLIAM B. COLEY, M.D., OF NEW YORK.

A. Y., aged forty years, born in Sweden, veterinary surgeon, with good family history, and in excellent health, was struck over the right superior maxilla by the horn of a bull in the beginning of February, 1901. Two or three weeks later he had severe pain over the site of the injury, and to relieve this the canine tooth was pulled. The pain continuing, the patient went to St. Paul the middle of April and consulted Dr. J. E. Schadle, who made a diagnosis of sarcoma. The first bicuspid tooth was pulled and the antrum explored without any evidence of an abscess being found. Excision of the upper jaw was proposed, and the patient consenting to this, the operation was performed on May 9 by Dr. C. K. Wheaton of St. Paul, assisted by Drs. Rogers and Dennis. A letter from Dr. Rogers to Dr. Coley, describing the operation, states: "There was found a large tumor involving the antrum and almost the entire upper jaw. Ferguson's incision was made, but an attempt to remove the entire growth proved unsuccessful. Thorough curetting and cauterizing of the remaining portions was done. There was also a mass the size of a hen's egg underneath the ear on the opposite side. This was completely removed. The patient having recovered from the effects of the operation, returned to his home, Lake Park, Minn., on May 17, partially relieved from the pain." After a few days the sarcomatous growth again began to increase in size, invading the nose and extending along the palate into the pharynx, and also involving the parotid region. On June 25, he again went to St. Paul and consulted Dr. Schadle, under whose care he remained until July 18. Only palliative measures, however, were used to relieve the patient's deplorable condition. In a letter to Dr. Winberg, dated July 13, 1901, Dr. Schadle states: "I want to apprize you of the fact that my prognosis is very unfavorable. It will only be a matter of time with him. All I am able to do is to make him as comfortable as possible. The disease is undoubtedly sarcoma and will eventually destroy him." Before returning home the patient consulted Dr. Geo. D. Haggard of Minneapolis, remaining under his care from August 1 to 11. In a letter to Dr. Winberg, dated August 11, 1901, Dr. Haggard states: "On August 10, I took a section of the tumor and it was found to be spindle-celled sarcoma." Dr. Haggard further stated that the patient had difficulty in retaining food and also in obtaining action of the bowels. Dr. Haggard advised a trial of the Coley toxins, although others had strongly discouraged their use, considering the case altogether hopeless. The patient's condition in the early part of August is thus described from Dr. Haggard's notes of the case:

"From August 1 to 11 weakness was progressive. Having been able to walk daily from one to two miles, he now became barely able to walk from the door to the carriage. Pulse rose to 130. Jaundice, at first slight, became more pronounced; on the 5th of August dulness and tenderness appeared in the hepatic region. There was increase of nausea and vomiting. Stools were constipated and clay-colored; urine was dark with bile. From these conditions we decided that metastases had occurred in the liver. The condition of the face at this time was as follows: The right nasal cavity was occluded, the soft palate retracted and thickened by a tumor mass in its substance. This was ulcerated in the center, the ulcerated cavity being 1 x 1½ inches in size. The tumor extended from the right malar eminence to the bridge of the nose, with which it was even in height, and downwards to the edge of the maxilla. From the higher portion of the tumor at the side of the nose I removed a section and found it to be a large spindle-celled sarcoma. Some of this tissue I yet have. At this junction I made urgent recommendation that the patient return home and have a thorough trial with the mixed toxins of erysipelas and bacillus prodigiosus, warning him that he would only have this one narrow chance."

The patient returned to Lake Park on August 12.

The disease progressed rapidly; jaundice became more profound; the liver was enlarged. Pulse rose to 140–150, was irregular and intermittent. At this time speech became difficult to understand and the odor from the disintegrating portion of the tumor was such as to keep visitors from his room. His condition was such that I hesitated to use the toxins, but the patient still kept up his courage and muttered, "The practice of medicine is like fishing; sometimes a sucker bites and sometimes it does not. Let us try the toxins."

The first injection of ½ minim was made into the tumor on August 12, 1901. August 13, 1 minim was injected; the patient's condition grew worse. August 14, 1½ minims were given; the patient's general condition grew still worse and there was no apparent effect from the toxins. On the 15th the patient's condition was so desperate that no treatment was given. It was thought best to abandon the further use of the toxins. The patient threatened to get another physician if I would not continue. August 16, 1½ minims were again given. The urine became very scant. The patient had severe pain in the stomach and his general condition was even more alarming. On the 17th, 2 minims of a fresh bottle of Coley's mixed toxins, obtained from Parke, Davis & Co., were injected. The patient's eyesight began to fail; he had suppression of urine, and no nourishment of any kind could be swallowed or retained. The teeth had become so tightly closed that it was impossible to cleanse the mouth. The swelling underneath the left lower jaw had become the size of an English walnut, and the original tumor of the right superior maxilla had reached the size of an ordinary man's fist. August 18, pulse 155–165, weak and irregular; temperature 100.8°. At this time the patient was unable to see, and he was rarely able to make himself understood. Jaundice became greatly intensified. Large doses of nitroglycerin, gr. 1-50, digitalin, gr. 1-50, strychnia, gr. 1-25, were given every four hours, as symptoms of heart failure had appeared. At this time he was in a stupor. When conscious he said that he was prepared to die and implored me to either cure or kill him. During the night of the 18th he was able to swallow a little champagne. August 19, a tablespoonful of castor oil was retained, and the dose was repeated twice during the night. On the 19th of August four ounces of urine were voided and he passed some more in the afternoon. An injection of 2 minims of the toxins was given into the abdominal wall. On the 20th, 3 minims were given, also in the abdominal wall. The patient seemed slightly improved. Daily doses of the toxins were given, always, except first three injections, into abdominal wall, the amount being slowly increased, and the improvement, which at first had been very slight, became more and more marked. The jaundice gradually disappeared and was entirely gone at the end of three weeks, at which time the tumor in the left submaxillary region had also disappeared, and there was marked decrease in size in the primary tumor of the right superior maxilla. Improvement in general health was rapid and continuous. The toxins were kept up in large doses up to January 4, 1902; in all 103 injections having been given—twelve in August, twenty in September, twenty-one in October, twenty-two in November, twenty-four in December, and four in January. The toxins were always diluted with 15 cc. of water. The dose was increased as rapidly as the patient could possibly bear it. As an illustration of the marvelous rapidity of his recovery, may be mentioned the fact that on August 27, steadied by a cane, he walked to the gate of his place and removed a splinter from a horse. His weight at the time when the treatment was begun was 113 pounds. September 4, he weighed 124 pounds and had a voracious appetite. September 12, he rode thirty miles on a professional call, and since this time has attended to a very large veterinary practice, which often calls him away both night and day. On January 4 he weighed 143 pounds. On January 12, 1902, he made a trip to New York, solely to show Dr. Coley the result obtained with the toxins. On January 13 Dr. Coley presented the patient before the Surgical Section of the New York Academy of Medicine. At that time examination showed no trace of the tumor either in the neck or face or jaw; abdominal examination showed nothing abnormal.

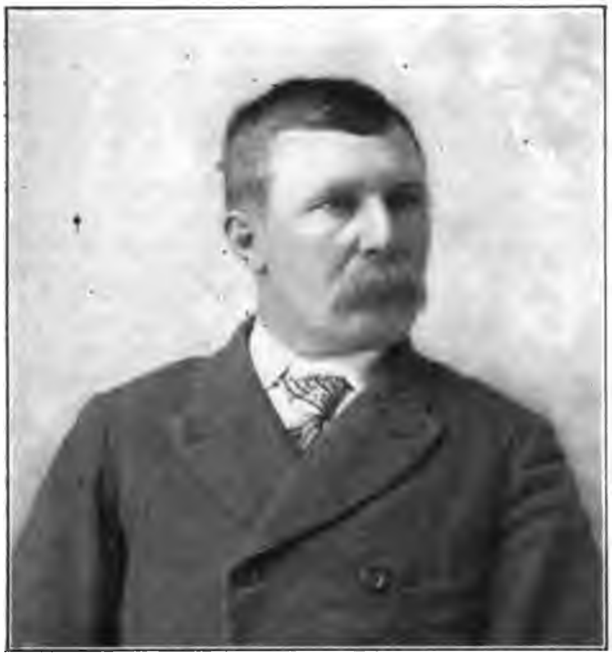

FIG. 1.—Patient before injury.

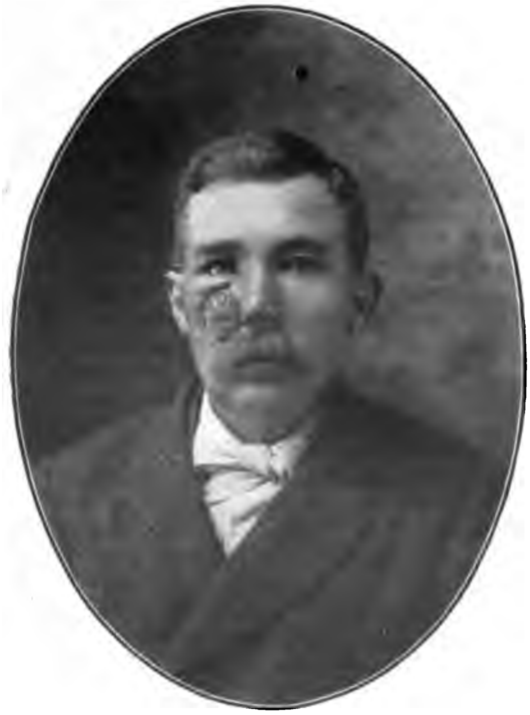

FIG. 2.—Sixty-third injection, November 14, 1901.

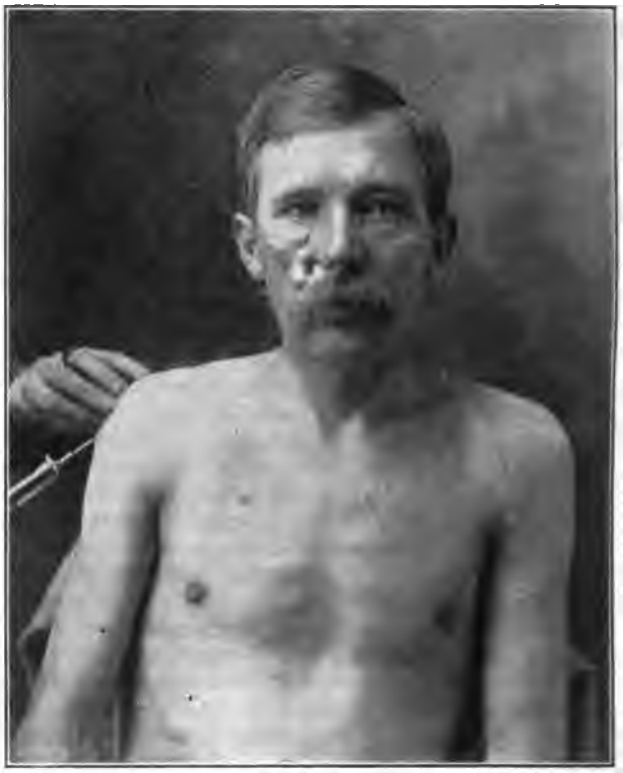

FIG. 3.—December 19, 1901. Injection needle being introduced.

(Comment by Dr. William B. Coley of New York, with reports of pathologists.)

Although this patient was not treated by me personally, the treatment was carried out under my direction. I must confess that had I been consulted before the treatment was begun, I should have advised against attempting it in such a desperate and apparently hopeless case.

Aside from the extraordinary recovery of a patient so near death from inoperable sarcoma, the case is remarkable from the fact that the cure was obtained by injections remote from the tumor. Therefore, the effect upon the tumor was entirely due to systemic rather than local action. Although I have personally had a few successful cases of inoperable sarcoma in which the injections were made remote from the tumor, in nearly all of the successful cases the injections have been local, directly into the tumor itself. I have always maintained, however, that the curative action of the toxins is systemic as well as local. This case fully demonstrates the correctness of this view and disproves the position taken by a number of writers that the action of the toxins is merely local in character, of the nature of an escharotic. This case is so extraordinary that it is most important that the diagnosis should be placed beyond question. Dr. Rogers of St. Paul states that the mass removed was examined by Dr. J. L. Rothrock and pronounced sarcoma—variety not stated. It was also pronounced sarcoma by Dr. Schadle. Microscopical examination was made by Dr. George D. Haggard of Minneapolis, and the disease pronounced spindle-celled sarcoma. All agreed that it was clinically sarcoma and absolutely inoperable. In addition to the foregoing, I have submitted sections to Dr. B. H. Buxton, and Dr. Jas. Ewing, Professor of Pathology of the Cornell Medical School, who pronounced it spindle-celled sarcoma, and finally to Dr. Wm. H. Welch of Johns Hopkins University.

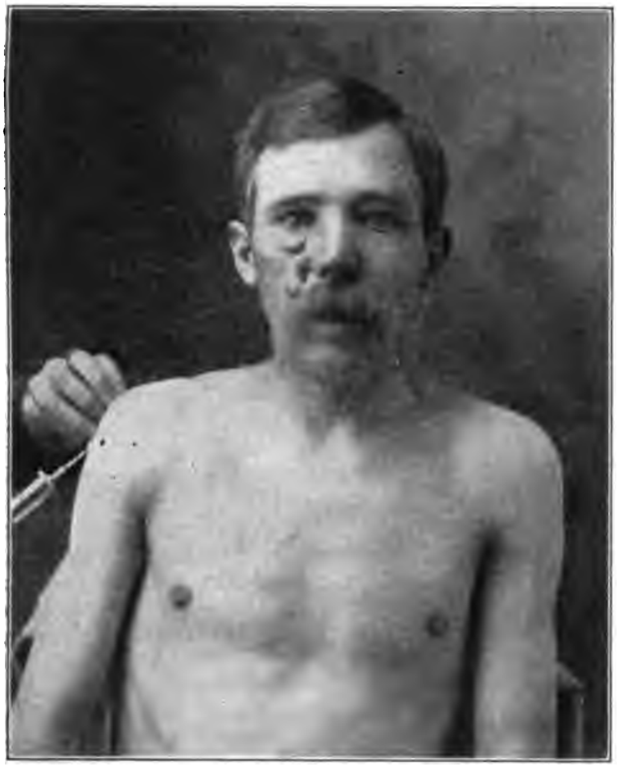
FIG. 4.—December 5, 1901.

The very complete report of Dr. Welch is given in full, and is, I think, sufficient to establish the diagnosis beyond question.

On November 27, 1901, I presented a patient before the New York Surgical Society, who had, in October, 1900, a small round-celled recurrent inoperable sarcoma of the parotid gland. This tumor had entirely disappeared under small injections (♏ss. to iij.) of the mixed toxins of erysipelas and bacillus prodigiosus, continued for eight months. The patient is still perfectly well, with no trace of tumor remaining. In this case there was a very thorough microscopical examination made by several pathologists, and the elaborate report of sections by Dr. William H. Welch will be found March, 1902, in *Annals of Surgery* (Transactions of New York Surgical Society).

These two cases, together with a report of sixteen personal cases of inoperable sarcoma, successfully treated and remaining well for periods varying from three to eight and one-half years, made before the American Surgical Association in Baltimore, May 7, 1901, would seem to be a sufficient answer to the recent statement of Dr. Conrad George of Ann Arbor (*Philadelphia Medical Journal*, January 11, 1902), that there is probably not a single well-authenticated case of cure of sarcoma by the toxin method.

Report of microscopical examination of section of tumor by Dr. William H. Welch of Johns Hopkins University:

"The section shows a tissue composed mostly of closely packed cells without definite arrangement. The predominant cells are fairly large oval, spherical, or irregularly polyhedral cells, with not very abundant cytoplasm, and with round or oval nuclei larger than those of ordinary lymphocytes. In addition, there are some fusiform cells and smaller cells of the lymphoid type. The cellular outlines are not readily made out. The intercellular stroma is scanty, but in places a fibrillated intercellular substance is recognizable.

"There is considerable fragmentation and distortion of nuclei, especially in certain places, and in one area there is necrosis of the tissue. Hemorrhages are present in a few places. Small acini and ducts of an acinous gland occur irregularly, distributed in different parts of the section. These are generally widely separated by intervening tissue of the tumor. They are lined by one or two layers of low cubical epithelium. Bloodvessels with definite walls are not readily made out, but vessels with an endothelial lining, immediately surrounded by the tumor cells, can be seen. *Diagnosis.*—Round-celled sarcoma of an acinous gland. *Remarks.*—There is, perhaps, enough diversity in the cells to

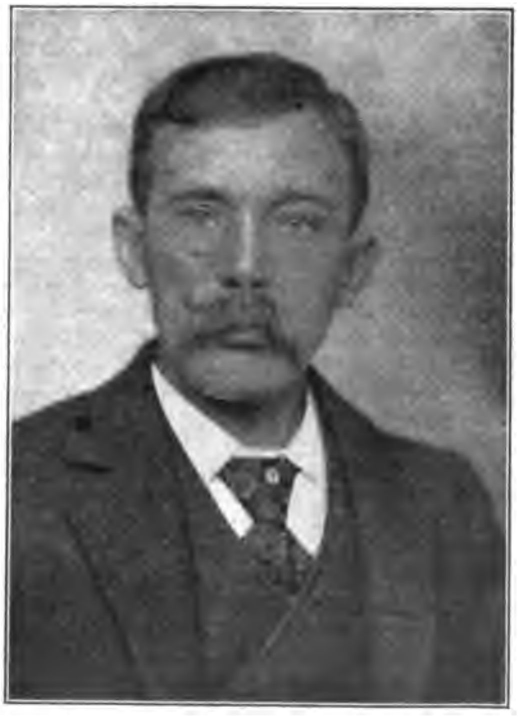
FIG. 5.—January 1, 1902.

justify the designation mixed-celled sarcoma, but round or oval cells greatly predominate. The tumor has the histological characteristics of malignancy. (Signed) William H. Welch."

THE INDICATIONS FOR THE SURGICAL TREATMENT OF CHOLELITHIASIS.*

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No apology is necessary for presenting to this society, composed in the main of general practitioners, a paper dealing with the therapeusis of biliary calculi. Not since the profession has had to determine and fix the indications for operative interference in appendicular disease, has a more important question been proposed than "What are the indications for surgical intervention in biliary lithiasis?"

The internists, for the most part, are still prone to rely upon medication, combined with hygienic and diatetic measures, for the treatment of attacks of biliary colic, and acute calculous cholecystitis; whereas the surgeons, lead by their repeated observance of the extensive and serious pathological changes, attendant upon long-standing cholelithiasis are urging a removal of the calculi by operative procedure, as soon as they manifest symptoms of their presence.

No one who has had much to do with this class of patients will deny the efficacy of medical treatment in certain cases; nor will anyone who has seen the extensive lesions that so frequently result from calculous disease of the gall-bladder doubt the propriety of early surgical interference in others. The question at once arises, therefore, when are we to employ the expectant medical treatment, and when the radical surgical procedures; and it is to this consideration that I desire to devote this paper.

It is conceded by all that the medical treatment of cholelithiasis brings about either: (1) An expulsion of the calculi from the biliary system: or (2) A subsidence of the disease into a latent state. A dissolving of the calculi *in situ* is acknowledged to be impossible.

It would be well to inquire apropos of the aim to bring an active type of cholelithiasis into a latent condition why it is "that individuals can carry calculi in their gall-bladders for many years with never a symtom of their presence?" For if we can understand how and under what conditions nature maintains a "state of latency" we will be better able to decide whether in a given active case this latent state can be restored, and when it is restored how it can be kept up? To help in solving this query let us turn to the pathogenesis of biliary calculi.

The formation of stones within the gall-bladder and ducts, which appears to be a transitory process for the calculi, are in the vast majority of instances of the same age (Naunyn, Hoppe-Seyler) is dependent upon two factors: (*a*) The stagnation of bile in the gall-bladder and ducts; and (*b*) The invasion of bacteria of a diminished degree of virulency into the biliary system.

The stagnation of bile in the gall-bladder is furthered by a diminished extent of contraction of the diaphragm, such as is brought about by tight lacing and thoracic breathing, and by pressure exerted on the cystic duct by neighboring viscera, *e.g.* floating kidney, or pregnant uterus, etc.

Such a biliary stasis permits of a sedimentation upon the mucosa of bacteria, which may have gained access to the gall-bladder. If these bacteria are of a high degree of pathogenicity they establish an acute inflammation of the gall-bladder; a condition that is known to accompany typhoid fever and some of the infectious diseases. Such a cholecystitis may affect an organ that has been previously healthy, or one that has been the seat of calculi. But if, as is usually the case, the invading bacteria are of a lower degree of pathogenicity they establish in the mucosa lining the gall-bladder a catarrhal inflammation which has been styled the "stone-building catarrh." This diminished virulency of the invading bacteria is due to the fact that the usual channel of infection of the biliary tract is by the bile; the organisms being excreted by the liver, where their virulency has, as a rule, been much lessened.

Due to this "stone-building catarrh," the epithelial cells of the mucosa undergo degeneration and desquamation. The degeneration results in the formation of cholesterin and calcium within the cells, and by their desquamation the cholesterin and calcium are liberated into the gall-bladder. The calcium there precipitates the bilirubin of the bile, and combines with it, forming bilirubin calcium. The cholesterin and bilirubin calcium are then deposited around the bacteria or other foreign material within the gall-bladder and thus calculi are formed. If the "stone-building catarrh" continues, so that degeneration and desquamation of the epithelial cells constantly takes place, the calculi gradually increase in size by a continued deposition upon them of cholesterin and bilirubin calcium. But if the stagnation of the bile is relieved and the bacteria resident within the gall-bladder are either carried away by the freely circulating bile, or become encysted by the deposition of cholesterin or bilirubin calcium around them, the "stone-building catarrh" ceases and no further increase in the size of the calculi takes place. From these remarks it is evident that the formation and growth of biliary calculi are dependent upon a chronic catarrhal inflammation of the mucosa lining the gall-bladder.

It is well-known that an inflammatory process increases the "irritability" of the affected part. When, therefore, the biliary mucosa continues to be the seat of a catarrhal inflammation, or when a reinfection of the biliary passages reestablishes an inflammation that had subsided, the increased irritability of the mucosa, induced by such inflammation, makes it more sensitive to the foreign bodies, such as calculi, that come in contact with it. This increased sensitiveness of the lining mucosa causes the pain in the gall-bladder and stimulates the viscus to expel these foreign and irritating bodies. If the attempt at expulsion is successful an attack of biliary colic is produced. It is to be especially noted in this connection that no fever and no local inflammatory reaction of the gall-bladder accompanies such pain or colic.

With the re-establishment of a free biliary circulation, and the encystment or expulsion of the calculi, there results a return of the lining mucosa of the gall-bladder to its normal state, and a consequent diminution of its sensitiveness. The calculi present within the gall-bladder no longer act as offending and irritating bodies, and the disease is said to be in a latent state. Here then is the explanation of the latency of calculi, and also of the cholecystitic pain and colic.

Nature brings about a latent state by restoring a free circulation of the bile and by the expulsion or encystment of bacteria within the gall-bladder, thus relieving the catarrhal inflammation of the mucous membrane lining this viscus. If we desire to reduce an active form of biliary lithiasis to a state of latency we must immitate the processes of nature. Furthermore it is to be especially noted that natural latency only takes place in a gall-bladder that is unaltered, except for the catarrhal inflammation of the mucosa. We must not expect, therefore, by our artificial methods to be able to bring about a latent state in a gall-bladder that is the seat of extensive pathological change. To establish a latent condition of the disease we rely upon the administration of alkaline waters, salicylates, and hydrogogue cathartics, together with proper diatetics and exercise. Much and lasting good results can be obtained from such treatment in those cases of calculous disease that manifest themselves only by cholecystitic pain and uncomplicated attacks of biliary colic.

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*Read before the Eastern Medical Society, New York.

Occasionally, however, in spite of the exhibition of such treatment, the pain continues and the attacks of biliary colic repeat themselves at frequent intervals. This indicates that the catarrhal inflammation of the mucosa has not been relieved. When from the severity of the pain, or the frequency of the attacks of colic, the individual becomes invalided and incapacitated for work, it is folly to persist along this line of treatment, when by a simple and safe operation the calculi can be removed and the inflamed mucosa healed. Such severe cholecystitic pain, or oft-repeated uncomplicated attacks of biliary colic, persisting in spite of the exhibition of proper internal medication with general diatetic and hygienic treatment, form the first indication for surgical intervention.

I have repeatedly made reference above to the phrase, "uncomplicated attacks of biliary colic," and it would be well here to define my meaning. As an attack of biliary colic is due to the attempts on the part of an irritable viscus to expel an offending foreign body, it should give rise only to pain, and the reflex symptoms depending upon the irritation of the sensitive nerves, the foreign body comes into contact with in the gall-bladder and ducts. Fever is always absent; in fact, the temperature is apt to be subnormal. The earliest and, perhaps, most frequent complicating symptoms of an attack of biliary colic are a rise of the temperature and distension of the gall-bladder. The interpretation of these symptoms is that an acute inflammation of the gall-bladder has taken place. Such a cholecystitis is due to a secondary invasion of the biliary system by virulent organisms. These latter reach the gall-bladder either from the intestines, in which case they are apt to be of the colon type, or are conveyed to the gall-bladder with the bile, being excreted by the liver, from the blood, in which case they are usually staphylococci, streptococci, or typhoid bacilli, or they may be directly conveyed to the gall-bladder by the circulating blood, this being probably a very infrequent method of infection.

The presence of such virulent bacteria in the gall-bladder, together with stagnant bile and calculi, provokes an acute inflammation of this viscus, to which the febrile process and distension of the organ are due.

The intensity of the local inflammatory reaction, and of the general toxæmia, vary in different cases. The mildest local reaction is a catarrhal inflammation of the mucosa of the gall-bladder, with serous effusion into its cavity, thus giving rise to an acute hydrops. Purulent, or gangrenous inflammation of the mucosa, accompany more intense types of infection, whereas the extension of the inflammation to the entire wall of the gall-bladder, to the bile ducts and their ramifications in the liver, to the peritoneum, to the liver itself, represent the most serious lesions that follow upon such a secondary or mixed infection of the gall-bladder. The mildest or most severe of these local pathological changes may accompany the very first indications of gall-bladder disease, as is well indicated by the following history:

Brune L., sixty years old, admitted May 11, 1900. Never had any previous attacks of biliary colic; never had been jaundiced. The present illness was of three days' standing. It commenced with sudden onset of pain in right hypochondrium. The bowels moved once after the onset of the illness; the color of the stool was not noticed. On admission the patient was not icteric; the temperature was 100.6°, pulse rate 126. There was a very large mass in the right iliac and umbilical regions, very tender to pressure. The gall-bladder region was not tender. This mass was everywhere surrounded by tympanitic resonance. The diagnosis was not positive on account of the low situs of the tumor, and its separation from the liver by an area of tympanitic resonance.

Immediate operation under local anæsthesia. Peritoneum was found much œdematous. In the right iliac fossa was an extensive fibrinous exudate, which led upward to the liver. This exudate covered over the gall-bladder, which was much enlarged, and led downward to the iliac fossa. The gall-bladder was isolated, aspirated of its purulent contents, then incised, and two large stones, the size of walnuts, removed. There were no other calculi in the ducts. Drainage and part closure of the abdominal wound. Uneventful convalescence.

It is the rule, however, that the severest forms result from long-continued bacterial action upon the biliary apparatus.

The general toxic symptoms accompanying such an attack of acute cholecystitis are rarely of an alarming character, and this is explained by the structure of the gall-bladder. For this viscus is a highly elastic organ, capable of considerable distention. It can, therefore, accommodate considerable quantities of the products of inflammation and of bacterial life and development, without these latter being under any marked tension. Inasmuch as it is the tension of the confined inflammatory and bacterial products that decides the rapidity of an amount of resorption, it is quite evident that the foudroyancy and degree of general intoxication will be, as a rule, of a low type in gall-bladder inflammations. It is to be noted, however, that as repeated attacks of cholecystitis result in alterations of the wall of the gall-bladder, the normal elastic tissue being replaced by dense cicatricial structures, its distensibility is gradually reduced, and hence the constitutional symptoms become more marked with each new attack of acute inflammation.

With the subsidence of the evidences of local inflammation and general toxæmia, it is usually presumed that the mischief produced by the invading bacteria is at an end. Unfortunately, such is not the case. For the bacteria that have secondarily gained access to the gall-bladder are rarely expelled from this viscus. Just as bacteria remain for long periods in the medullary cavity, and in the epiphyseal ends of the long bones, so do virulent bacteria that have secondarily infected the gall-bladder and ducts remain in these viscera. And, further, just as we find the bacteria in long bones, exciting, from time to time, fresh attacks of acute osteomyelitis, so do these bacteria in the gall-bladder excite, from time to time, fresh attacks of acute inflammation. In the interims between such attacks they are not inactive or dormant; but all the while they are producing marked local changes, and elaborating their toxins, which are being gradually resorbed into the circulation, and carried to the various organs of the body, there producing the characteristic lesions of chronic septic intoxication, as manifested by fatty degeneration of the liver, spleen, kidneys, heart, etc. In substantiation of this, I desire to call attention to the lesions frequently found in patients who have died from shock a few hours after an operation upon the biliary system of structures for long-standing cholelithiasis. As typical, I quote here the history and pathological findings of a case recently operated upon by me, in the surgical service of Dr. Gerster, at Mt. Sinai Hospital:

Betty L., thirty-one years old, admitted September 2, 1900. The patient had repeated attacks of biliary colic with cholecystitis for six years. Jaundice usually followed the attacks; on admission, the patient, an exceedingly obese woman, weighing three hundred pounds, was suffering from such an attack of colic with cholecystitis. Temperature was 101°, pulse rate about 100. The marked obesity made palpation difficult, but in the gall-bladder region could be felt a hard tender mass underneath the liver. Urine was negative. September 3, cholecystectomy. Numerous adhesions covered over a very deeply-seated gall-bladder. The gall-bladder was of hour-glass shape. Exposure of the viscus was exceedingly difficult on account of the great thickness of the abdominal walls and its deep position. The gall-bladder was aspirated of its purulent contents and then incised. Its lumen was divided off into three compartments, each of which contained calculi. The marked changes in the gall-bladder necessitated its extirpation, as proper drainage of its cavity was impossible. The dissection of this viscus from the liver was again very difficult, and had to be done entirely by the sense of touch. The cystic duct was fully ten inches from the surface and high up underneath the liver. Palpation of the hepatic and common bile ducts was made, but it was impossible to gain access to the retroduodenal part of the choledochus. Gauze tamponade of the bed of the gall-bladder, drainage and closure of part of the abdominal wound. The operation lasted two hours. Reaction was not good. In the early morning of the next day the pulse became very rapid and the temperature rose to 104. No signs of peritonitis. The pulse gradually became more rapid and feeble, the temperature rose to 106, and death ensued twenty-four hours after operation. The urine after operation contained 2½ per cent. albumin and many casts.

Post-mortem.—Liver was congested and soft, and showed fatty and acute degeneration. In the retroduodenal portion of the choledochus were two freely movable stones, one of which had caused an ulcer of the mucosa just above the papilla.

Kidneys.—Very large and soft; capsules adherent.

Spleen.—Soft and pulpy, and very large.

Peritoneum.—No indications of peritonitis.

It is this chronic septic condition that renders these patients so susceptible to shock, and accounts for their frequent collapse after even the simplest operative interference upon them.

Not to be compared to the cloudburst that spends its energy in the lightning flash and thunder peal, and leaves the skies clear and bright after its passage, is the acute attack of cholecystitis. For the acute inflammation is replaced by a chronic one, whose continuance is favored by the calculi and stagnant bile. As a result of this chronic inflammation, extensive alterations take place in the structure of the gall-bladder and bile ducts. Such changes are, ulceration of the mucosa, followed by cicatrization, and resulting stenosis of their lumena; fibrous degeneration of the walls of the organs, with resulting contraction and dilatation; chronic adhesive peritonitis uniting the biliary structures to the pylorus, intestines, omentum, and liver; deep ulcerations of the entire wall of the gall-bladder, with perforation into the peritoneal cavity or neighboring hollow viscera, thus establishing preternatural orifices of communication with these hollow organs. Together with these changes, the gall-bladder and ducts become filled with the products of exudation, serum, seropus, pus, shreds of gangrenous tissue and stagnant bile, and from the ulcerated and inflamed mucosa, a continuous resorption is going on, thus giving rise to chronic toxæmia, and producing waxy and fatty degeneration of the spleen, liver, kidneys, etc. These alterations are not the result of repeated attacks of acute inflammation; they are the changes that result from long-continued inflammatory processes. The exacerbations called forth, either by a fresh invasion of bacteria or by a renewed virulency of the bacteria already resident within these structures, only add to the local lesions and general toxæmia.

In view, then, of these facts, the writer maintains that the first attack of cholecystitis, accompanying calculous disease of the gall-bladder or ducts, calls for the abandonment of the medical treatment and a resort to surgical intervention in order to remove the calculi and cure the cholecystitis.

As to whether the operative interference should be undertaken during the acute attack, or in the quiescent period after the acute seizure, depends upon the intensity of the local lesions and the severity of the general toxæmia.

It has been the custom in dealing with acute attacks of appendicitis to determine the question of immediate operative interference by a consideration of the pulse rate, temperatures and local rigidity of the abdominal muscles. It would naturally be supposed that the same considerations would guide us in deciding whether or not to operate at once in acute calculous cholecystitis.

Such is not the case, however, and a reference to the anatomical structure of the two organs will at once explain why. The wall of the gall-bladder is very rich in elastic tissue, this permitting to the viscus considerable distensibility. The appendicular wall, however, is very poor in elastic tissue, and in consequence but little expansion of the lumen is possible. It is evident, therefore, that when the orifices of exit of these viscera are respectively closed, the elasticity of the former permits of its accommodating even large amounts of inflammatory exudation without these latter being under much tension.

In the appendix, on the other hand, the tension rapidly rises when even small quantities of exudation and bacterial products accumulate within its lumen. As it is to the rapidity of rise and the degree of the tension that the severity of the local and general manifestations are due, it is clear that the symptoms will be much more marked in appendicular than in gall-bladder affections. For the greater the rise in tension the more will be the amount of absorption of toxins from the inflamed viscus, and hence the higher the temperature and pulse rate, and the higher the pressure within the viscus, the greater will be the stretching of its walls, with consequently the more local pain and muscular rigidity. It is, furthermore, evident that whereas the highly-tensioned contents within an occluded appendix strongly favors perforation of its walls, the absence of such pressure within the gall-bladder renders this complication rather infrequent.

It is fair to expect, therefore, in gall-bladder lesions a relatively less intense character to both the local and general symptoms than is found in diseases of the appendix, and this is the reason why urgent operative intervention during the course of an attack of acute cholecystitis is comparatively unusual. It is only when the inflammatory process is very intense and characterized by high temperatures, or when there are large accumulations of inflammatory products within the gall-bladder; or when the bacterial infection spreads to the ducts and their ramifications in the liver, as is likely after repeated attacks of cholecystitis, that immediate operative interference must be resorted to.

The rule is for the first attack of acute cholecystitis to subside spontaneously. It recurs after a shorter or longer period of apparent quiescence. During these latent stages a continuous toxic resorption is going on, which gives rise to degeneration of the other organs of the body. With each renewed attack the toxæmia is increased and the local lesions augmented. The individual becomes emaciated and weakened, the gall-bladder, bile ducts and liver the seat of serious and extensive lesions; obstructive jaundice develops, and, finally, an infective cholangitis, which puts an end to the long sufferings of the miserable patient.

In view, then, of the constant changes that are taking place in the gall-bladder and ducts, which are the seat of calculi, when a secondary or mixed bacterial infection has once taken place, and in view of the gradually increasing toxæmia, resulting from a continued resorption of the products of bacterial life and development, with the deleterious effects upon the other organs of the system, are we justified in waiting until the last stages of the disease before proceeding to surgical treatment? Are we justified in waiting until that period when, from the numerous adhesions around the gall-bladder and ducts, the operations are rendered very difficult and of long duration? When the surgeon is compelled to remove the gall-bladder, or split open the ducts, and establish drainage of the latter on account of the extensive changes in the organs of the biliary system—procedures that become even more serious and taxing to the patients on account of their chronic sepsis.

It is the opinion of the writer, in view of our advanced knowledge of the pathogenesis and pathological lesions of calculous disease of the gall-bladder, that delay and procrastination to the later stages of the disease, before invoking the surgeon's aid, is unjustifiable and unwarranted. Operations undertaken at these periods are not operations of our choice, planned under favorable conditions; they are compulsory upon us, at any time of the day or night, in order to save the life of the patient, and the resulting mortality is proportionally high. For, just as in appendicitis, the interval operation, to remove a chronically-diseased organ, which contains no pus, and is not perforated, is a simple task, attended with but a very slight mortality, so is the early operation for removing stones from the gall-bladder comparatively simple, and attended with but 2 to 3 per cent. of deaths. But complicated and difficult as are the operations for perforated gangrenous appendicitis, with abscess formation, and diffuse peritonitis, just so are the operations upon the biliary system difficult and laborious when there are extensive peritoneal adhesions, with pus and impacted calculi within the gall-bladder and ducts; so are they deeply shocking to the patients, and followed by a high mortality, a mortality that is still further increased should there be multiple abscesses in the liver, cholæmia, or deep jaundice; even the great master Kehr having over 50 per cent. of deaths in these cases.

In my remarks this evening I have endeavored to bring some order out of the confusion that still exists regarding the indications for the employment of the medical and surgical treatment of biliary lithiasis. My conclusions may be stated as follows:

a. Indications for Medical Treatment.—Cholecystitic pain or attacks of biliary colic, in either case unattended with fever.

b. Indications for Surgical Treatment.—(1) Operations of choice—undertaken in the quiescent period; with the object of avoiding serious complications. a simple procedure, and followed by 2 to 3 per cent, mortality. (*a*) Severe cholecystitic pain, or oft-repeated uncomplicated attacks of biliary colic; persisting in spite of medical treatment. In virtue of which symptoms the patient becomes invalided. and incompacitated for work; (*b*) After the first attack of acute cholecystitis, associated with fever.

(2) Compulsory operations—undertaken at any time of the day or night; often amidst unfavorable surroundings, and in patients who are septic, emaciated, and of low vitality. Difficult and laborious procedures, and attended with high mortality—50 to 75 per cent. (*a*) Foudroyant and intensely acute attacks of cholecystitis. (This may be the first indication of calculous disease, but usually follows previous milder attacks.) (*b*) Hydrops, empyema, gangrene, or perforation of the gall-bladder, cholæmia, abscess of the liver, and diffuse peritonitis.

FUNCTIONAL AND PARALYTIC STRABISMUS.

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ALTHOUGH our knowledge of the etiology of strabismus leaves much to be desired, it cannot be denied that we are making good progress in the successful treatment of this distressing deformity, and in a better understanding of its nature. It is now thoroughly settled, thanks to the pioneer work of Javal, and in spite of the doubts of certain authorities, that there is, at least, a small, and perhaps a large, proportion of cases in which the amblyopia, dependent upon incorrect position of the macula and disuse of the eyes, may be wholly or in part removed, and that in a certain contingent of cases. binocular single vision may be produced by treatment. The curative value of the exclusion of the better eye in strabismus, for the sake of exercising the amblyopic eye,[1] is again demonstrated by Dr. Derby's paper in the MEDICAL RECORD, and in several that have preceded it, especially that of Dr. A. E. Davis, read before the American Medical Association, in 1901,[2] and is of great importance. Although at one time sceptical as to the results to be obtained, I have had a few striking cases of this kind in my own practice, which have been fully reported. The importance also of attempting to cure the strabismus by treatment with glasses, before an operation is undertaken, has also been fully shown by the later writers, since Javal here also led the way. While the hopes as to cure, by means of securing paralysis of accommodation by the use of atropin, without complete correction of the refractive error, have not been realized, we have, by the proper correction of the astigmatism and hypermetropia, usually found in convergent strabismus, reduced the number of cases to be operated upon by quite a large percentage. Davis[3] thinks this is 30 per cent., and with this view I fully agree. The profession having an interest in ophthalmic science know, from my writings on the subject, that I believe we have already made a great advance in the kind of operation to be performed, and that I now invariably, for non-paralytic or functional strabismus, divide both the interni in convergent strabismus, and both externi in divergent strabismus, having stretched them, before the division is undertaken, according to the rules laid down by Panas, who first suggested and performed this operation.

It is not very long since the existence of any cases of amblyopia, as a result of the squint, was denied. The two cases of Dr. Walter B. Johnson[4] and of one of my own, the latter quoted by Javal in his monograph on Strabismus, prove that this is occasionally the case at any rate. Whether or not it is always so, perhaps remains an open question. It is my opinion that there is a certain proportion of cases in which the amblyopia precedes the strabismus, and is one of the factors producing it. This is certainly true of the strabismus often seen when one eye has been operated upon for cataract, while the other is left amblyopic. Again, a high degree of hypertropic corneal astigmatism, or a high degree of myopia in one eye, might be a cause of amblyopia at birth or during infancy. Some of the former scepticism was due, I think, to the fact that strabismus was in many quarters supposed to be an effect of the weakness of the muscles, and the origin was not sought beyond their action. Indeed, the muscles themselves are often examined as if they were the primal cause of strabismus. Functional strabismus is no more caused by weakness of the muscles than is nystagmus. The old error of mistaking an effect for the cause is at the bottom of the erroneous theories about the origin of strabismus. Except in paralysis, the muscles are as strong in eyes affected with strabismus as they are in eyes in a proper state of parallelism. It is only the fixation power that is weakened or lost, and that is from what may be termed central causes. I am very far from denying that a muscle may become weaker after long disuse, or after it has been divided and haggled in an operation for convergent strabismus, so that the fibers are not again united. It may then have scarcely any power. We often see this in that form of divergent strabismus depending on a failure of an operation for convergent squint. After such a muscle is fished out and advanced and reattached, I have had occasion to see the growth of its fibers in cases where the operation was repeated a year after. But what I mean to affirm is, that in ordinary functional squint, the weakness and improper action of the muscles, whether it be more or less, is due entirely to the condition back of them which causes the strabismus. This is just as atrophy or shriveling of the muscles of one side of the body may occur as the result of a central lesion which prevents the muscles from action. It would be very absurd to speak of this condition as the primary cause of the inability to walk, or to use one side of the body, since that disability resulted as soon as the cerebral hemorrhage occurred, and is as great, if not greater, the moment after the hemorrhage which produced the hemiplegia, as it is when time has allowed the unused muscles to be lax and, perhaps, become atrophied.

To speak of monocular strabismus, excepting in paralytic cases, is a glaring fault in nomenclature. Among other evidences of the elementary state of knowledge as to the nature of strabismus, is the fact that so much is said directly and by inference, even to this day, of monocular strabismus, "of the eye which squints," and other terms to indicate that only one eye is at fault.

I long since[6] endeavored to show that all functional squint is concomitant, and I have repeated this observation in other places,[7] and that there is, consequently, no such thing as monolateral squint, where the muscle is not paralyzed. Yet, even men more or less expert in ophthalmology, in my clinic, often ask me as I am about to operate on a case of strabismus, "Which is the squinting eye?" Some of these inquirers really intend to ask, "Which is the eye that, as a rule, or generally, squints?"

Panas, proposing his new operation on both muscles at one sitting, said in his article: "The conception of the unilateral character of strabismus, while it is true of the paralytic variety, or that due to contraction of the muscle, is absolutely incorrect as to that which concerns concomitant strabismus" and he then gave the proper name of functional to concomitant strabismus.

Not many years since in the paper read before our State Medical Society, just quoted, I had occasion to speak of the scepticism in the minds of some of the experts in ophthalmology, as to the expediency of operating at all, or of giving very much special attention to strabismus. This scepticism was due, I believe, to the fact that strabismus had not then been everywhere thoroughly studied, as is now being done. It has given way, until all experts in ophthalmology no longer hesitate as to the proper treatment of strabismus; that is to say, in children, to first make an honest endeavor, by glasses and stereoscopic exercises, to cure the strabismus, and if this fails, in a few months, to resort to operation. In adults, or in inveterate strabismus, or in children having poor fixation, it is proper and better to operate first and continue the treatment by glasses afterward. In the days when fear of too great an effect prevented us from dividing both interni at one sitting, Agnew was wont to remark that it was immaterial as to which eye was operated upon at the first sitting. He fully realized the bilateral character of functional squint. It is interesting to note that there never was so great a fear of dividing both externi for divergent squint at one sitting as was the case with the interni.

I objected to the word "concomitant" in the definition of strabismus, for all strabismus, with the exception of paralytic squint, is necessarily concomitant; that is to say, if one causes a patient with convergent or divergent squint to fix with the squinting eye, at the same time covering the one that is *usually* in a proper position, it immediately turns in or out, under the shade, according as the squint is convergent or divergent. It is much better, in my judgment, to adopt the names of "functional strabismus," and "paralytic strabismus," as suggested by Panas, to describe the two great varieties of strabismus. Of course, the latter form may be monolateral, but the former, in the very nature of things, cannot be. The important point to be noted in functional convergent or divergent squint is as to which is the eye with which fixation is usually made. Generally, if the refraction and vision of the two eyes are of about the same degree, although there are exceptions to the rule, the subject will alternately fix with one eye and then with the other, but where there is a great difference in the error, the fixation will be habitually with the eye having better vision. Finally, and sometimes very early, if the strabismus be uncorrected by glasses or operation, the deviating eye, as is well known, in time loses in part or wholly the power of fixation.

An improper nomenclature often leads to misconceptions of the nature of an affection. It may prevent the adoption of better means of cure. Those who speak of "monolateral" squint are not only speaking against the facts of the case, but they are also preventing those whose knowledge, perhaps, is not so complete as their own from a full appreciation of the advantage of a bilateral operation for a bilateral affection. Great as was the work of Graefe in many departments of ophthalmology, that which he did in strabismus was not productive of good results. He was working on wrong lines, and he led men with less genius into error by his ideas that the squint could be better treated by what he called dosage of the operations—graduated tenotomy is a later term. This is not correct, and the theory was evidently based on the idea that a certain power of one externus or internus over that of the other was the fault that produced the strabismus. Even in Graefe's time it was the opinion of Donders that it is not the muscle that is at fault, except in paralysis, but fixed conditions of the eyeball, to which may be added, in exceptional cases, central disease.

In the interests then, of what I conceive to be scientific truth, I object to the use of the term, "monolateral strabismus," excepting as referring to the affection resulting from paralysis, as indicated above. While there may be an apparent monocular convergence or divergence of one eye in functional strabismus, it is always shown to be bilateral on the application of a simple test.

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HYDROPHOBIA AND THE PASTEUR METHOD—A REJOINDER.

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The Medical Record of November 23, 1901, contains an article criticising one of mine in the same journal of July 13. Parts of this criticism are marked with so much acrimony that I am constrained to say that after twenty years' work on the subject of hydrophobia any reply to accusations of foolishness and dishonesty is either needless or useless. The principal counts of the scientific part of the criticism, as I understand them, are:

1. That I deny that rabies is a specific disease.

2. That I deny that the muzzling of dogs is a preventive of hydrophobia.

3. That I err in asserting that the muzzling laws of England are as inefficient as they are in this country.

4. That in tabulating the statistics of Paris I misplaced the record of a year in the interest of my argument.

5. That I err in asserting that hydrophobia may follow the bite of a non-rabid dog.

6. That I have slandered Pasteur.

These points I will consider seriatim.

1. In respect to the assertion that I deny that rabies is a specific disease, I will say that it is an error of fact, or an inaccurate expression. In the article criticised, just after the "Table of Situation of Bites, et cetera," I have defined my view so plainly that I need not repeat it, and it surprises me very much to find a disputant with this clear explanation before his eyes attributing to me any such assertion as that "rabies" is not a specific disease. Everything depends upon definitions in such discussions. Twenty years ago a number of different things passed for rabies in dogs, and the diagnosis was founded upon clinical symptoms and appearances discovered in autopsies upon animals, the various and inconsistent characters of which are known to every one who is acquainted with the work and writings of Delabere Blaine, Youatt, Hertwig, Bruckmüller, Bollinger, Fleming, G. Colin, Bouley, Decroix, Lorinser, Galtier, Signol, and other authorities in the department of veterinary medicine. But since Pasteur came upon the stage most writers on the diseases of animals have agreed to call by the name of rabies that condition alone which is distinguished by the fact that material derived from portions of the nervous system of an animal presenting symptoms of rabies when inoculated in a specified manner upon a second animal will produce a certain series of symptoms, while material derived from this animal in turn is capable of producing a like condition in a third, and so on in series. Now, there can be no question that it is proper for students in a particular department of science to agree upon a definition, and after that those who wish to be understood in discussion must accept such definitions—at least *pro hac vice*. This is the present state of affairs in regard to the question: Is rabies a specific disease? The definition is, I think, weakened by the fact—seemingly unknown to many writers—that these conditions have been fully and completely met by a variety of materials derived from the animal and even from the vegetable kingdom, having no connection whatever with the disease in animals called rabies, as has been described, for example, in the Bulletin of the Department of Agriculture in the United States, and in the Bulletin of the Academy of Medicine of Paris, and elsewhere.

2. In regard to the statement that I deny that muzzling of dogs is a preventive of hydrophobia, I may also say that this is an error; for I explicitly say in the next to last paragraph of my article of July 13 that I favor the application of precisely this measure.

3. My critic characterizes as a "most glaring misstatement" my assertion that the muzzling laws of England are as inefficient as they are in this country. I am not surprised that one who could fail to understand me in the two points already mentioned should go astray in consequence of an expression which, I admit, would have been less vulnerable if more exact. What I meant, and what I mean is, that the muzzling laws in England have been and are—as the muzzling laws in this country have been and are—inefficient. I am acquainted with all the figures cited by my critic to indicate the opposite—and with many more, gathered not only from government records of Great Britain, but also from medical journals and other publications; and I find in them all, and especially in those he cites, such evidences of irregularity and inconsistency, and such warrant for contradictory inferences that I do not wonder at the opinion expressed by two of the most distinguished and capable British students of rabies and hydrophobia—Dr. Thomas M. Dolan and Sir George Fleming—that "to be beneficial it is obvious that the employment of the muzzle must be universal." This expression is stronger than any I have used, and it indicates how the greatest veterinary teacher England has ever known re-

garded such imperfect, occasional, and spasmodic applications of a muzzling law as is credited by the followers of Pasteur with accounting for the different figures for hydrophobia in England and in Germany as compared with France. Furthermore, the figures given in my previous article are perfectly conclusive as to the fact that the use of the muzzle cannot be looked upon as the only or chief reason why on one side of the Rhine—across which it is probable dogs can find their way—the cases of hydrophobia, according to the Pasteur Institute claims, should be numbered by thousands and on the other side by units, and one who holds with my recent critic in this matter might well reflect upon the inferences to be drawn from the conditions found in Constantinople and many Oriental towns, in which, though they are thronged with vagabond dogs, hydrophobia is so nearly unknown that distinguished authors have asserted that it never occurs there. Now, with these points clearly made, I will add to what I stated in my previous article, that a careful study of the conditions under which hydrophobia (I am not talking about "rabies") occurs in countries well supplied with hydrophobia notions—and especially with Pasteur institutes—leads me to believe that in them it is better for mankind that dogs roaming at large should be subjected to the inconvenience of a properly constructed muzzle than that human beings should run the risk connected with dog-bites, irrespective of the hypothesis of a specific virus—this view being founded upon the psychical effect of bites in civilized countries. To further elucidate the consistency of this opinion with that expressed above would be to impugn the intelligence of my readers.

4. The fourth point made by my critic is that, in tabulating the statistics of hydrophobia in Paris furnished by Dujardin-Beaumetz, I put 1885 with the years of the vogue of the Pasteur methods, which I am sorry to find he characterizes as a "deception," asserting himself that "the Pasteur treatment did not begin until November 1, 1885." For the few readers of the MEDICAL RECORD who do not know the facts already, I will state that the method referred to was first employed by Pasteur on the boy Joseph Meister—not on November 1, but on July 6, 1885, at 8 P.M.; that his report of the experiment was made to the Academy of Medicine on October 27; and that long before that date the daily papers of Paris had been exploiting his experiments in connection with this subject. In my article of July 13 I alluded to Pasteur's boasts in the Paris *Figaro*, and especially to one in that daily paper of May 19, 1884—a year and a half before November 1, 1885—which was cabled around the world: "From to-day anybody bitten by a mad dog has only to present himself at the laboratory of the École Normale and by inoculation I will make him completely insusceptible to the effects of hydrophobia even if bitten subsequently by any number of mad dogs." I will not weary my readers by refreshing their memories in regard to the way in which the French mind was inflamed on the subject of hydrophobia during a large part of the years of 1884 and 1885, except by reminding them of the fact that the lay journals of France, using material furnished by Pasteur, played in this a much more important rôle than the communications made by Pasteur to the Academy of Sciences or the Academy of Medicine.

I will not involve those whom I am now addressing in a new discussion of statistics; for I am quite willing to abide by an intelligent study of those I published in my previous article as compared with those contained in the article of my critic. It will be noted that I then cited figures furnished by followers of Pasteur, as being unlikely to be questioned by his other followers, and by my own statistics, which I have gathered, not by a study of newspaper clippings—as is intimated by my recent critic and has been previously intimated by a veterinarian of this city—but by extensive correspondence and through investigation and analysis of facts accumulated during a period now covering twenty years. It were a waste of time to dispute long with anyone who, having access to the literature of this subject could intimate that my methods of study have been childish, or could overlook the carefully prepared data I have presented in my many publications, while he accepts without question *ex cathedrâ* assertions of Pasteur in regard to matters about which he was utterly ignorant, as honest critics in his own country have repeatedly, and some not unkindly, pointed out.

5. The next criticism that I wish to comment upon is that which treats as "absurd on the face of it" the idea that the congeries of symptoms often called hydrophobia is about as likely to follow the bite of a dog that is not rabid as the bite of one that is. My critic does not quote me exactly in this respect, and I need only invite any intelligent person to consider carefully what I said on the subject in my article of July 13, 1901, adding, for those who attach great importance to the opinions of veterinarians, a reference to the conversion of that great English veterinarian, Sir George Fleming, to the opinion that hydrophobia may be acquired from the bite of a dog not rabid, as fully explained in the *Veterinary Review*, and in the *Lancet*, London, March 4, 1876, page 359, where the cases reported by Fleming are spoken of as having "All the definiteness of a designed experiment," and to the records by careful writers, too numerous to mention here, of hydrophobia followed by death from bites of perfectly healthy animals, many of which survived their victims.

6. As to the charge that I have "slandered" Pasteur, I do not wish to elaborate much the ideas I hold as to the worthlessness of the Pasteur method for treating hydrophobia; but, even at the risk of bringing upon my head further vigorous expressions of personal condemnation, I cannot refrain from recalling, to those who have not had time or inclination to follow this subject unremittingly and to every quarter of the globe, the fact that no believer in these methods can adduce a single country in which, taking a series of years, anything can be shown to indicate that it has lessened the actual number of deaths from this singular disorder; and it is a very impressive fact that in places like New York, Chicago, Baltimore and (recently) Pittsburg, no sooner has a Pasteur Institute been established than claims are put forth which imply that suddenly the danger of death—as indicated by the claims of rescues performed by these imitators of their great prototype—has risen to unprecedented figures. My recent critic asserts that, in my opinion of the Pasteur methods, I am out of harmony with the great body of my profession. Well, the reproach of being out of harmony with the majority has been endured before in the history of the world, and so long as the regions where the views I hold prevail furnish a relatively small number of cases of so-called hydrophobia, some comfort may be drawn from a comparison of this happy coincidence with what takes place around the infectious foci of Pasteur Institutes. That an opportunity for administering the Pasteur method should have been recently furnished in Berlin does not indicate that there is any exceptional number of unwise persons in Prussia. What in-

fluence such an opportunity will have in a country where the *Kaiserliches Gesundheitsamt* reported in six years (1889-1894) 2,713 rabid dogs that died or were killed, and 8,862 killed by the police, and in addition 1,639 vagrant and suspected dogs that were killed, with only ten deaths from hydrophobia, the future will show; but it is to be hoped that it will not be like what so elates the Pasteur followers in France and Hungary and Italy and even America! The latest information in regard to the customary result of establishing a Pasteur institute comes to me in the last bulletin of the Mexican National Board of Health, which reports that since the Pasteur treatment was introduced there in 1885 four thousand persons have been treated, of whom three have died. Think of the possibility of thousands of cases of hydrophobia in Mexico in that time!

As to the expressions: "slander" and "villification of Pasteur," and so on, I would remark that there is accessible to everybody within reach of a respectable medical library a carefully prepared article that I published in the MEDICAL RECORD, February 13, 1886, in which I went over in detail the steps of Pasteur in establishing a method for the treatment of hydrophobia, and in this I set forth the singular inconsistencies and irreconcilable differences in his various communications on the subject; but I also duly recognized the merit of his real scientific work, regretting that his essays in the field of rabies and hydrophobia should be so undeserving of a place with it. None of this I need repeat now; but I may add to it a reference of my readers at this time to the numerous instances in which honest men in France have lamented the scientific absurdities and the practical defects of Pasteur's work in the preparation of his most exploited preventives. I happen to have before me the scientific criticism of Frisch of Vienna, in regard to his experimental work; the expressed disapproval of Mauriac of Bordeaux that Pasteur should have founded his notions upon the erroneous figures supplied him by Leblanc, which exaggerate the hydrophobia mortality enormously; the exposure before the Society of Medicine and Surgery of Bordeaux of the nearly doubling of the figures representing the number of persons treated in the Pasteur Institute from the Department of Gironde, in which Bordeaux is situated; the systematic correction by Duluc of Bordeaux of other figures upon which the Pasteur claims rest with his expression of pain and amazement that, in October, 1884, Pasteur should have declined to give the Société Vétérinaire de la Gironde information which would enable it to make experiments in the preventive inoculations of dogs, and the lame excuse offered for this unscientific and inhumane attitude. No such complaint is a surprise to me; for I have followed the work of Pasteur contemporaneously since he began to meddle with the subject of hydrophobia, and I will now state without reserve that his doings and his sayings have impressed me repeatedly as unworthy of a candid and humane scientific man. Whatever may be his contributions to science and, indirectly, to the art of medicine—and they have been very great—in the field of hydrophobia he was an ignorant pretender. More than this, the methods he used to exploit and reserve to himself the material advantages of a mode of treatment which he repeatedly changed after declaring it "perfect" and "infallible," were those of a charlatan, for example his announcement to the New York *Herald*, January 1, 1886, that "no one in the world outside of M. Pasteur and his laboratory was capable of undertaking the treatment safely," and that "a hospital in Paris would suffice for the whole world." For years he and his followers maintained a sort of propaganda, and the world was flooded through the secular journals in both hemispheres with claims and boasts that had and have no warrant whatever in fact. The emptiness of these claims can be seen by the published and undisputed lists, with names and addresses and dates, of persons who have died of presumable hydrophobia after treatment in Pasteur institutes and from the actual statistics of hydrophobia all over the world before and since the Pasteur era. Still —as before—we find that persons, like the inhabitants of Constantinople, most exposed to the bites of vagrant and vicious dogs seem to enjoy a peculiar immunity against the consequences proclaimed by the followers of Pasteur, of which a striking illustration was furnished in England, where in its first zeal the famous "Royal English Hydrophobia Commission" estimated that preventive treatment would be required for 860 persons annually in England alone!

In contrast to this foolish, Pasteur-influenced estimate of the liability of the English to this disorder, I would cite an ante-Pasteur statement of Mr. Scoborio, Manager of the London Home for Lost Dogs, that 200,000 animals had been brought to their kennels, 95,000 of which had been taken up by hand by the police; yet, notwithstanding the frequency of severe bites, hydrophobia had "never occurred among Metropolitan police, as shown by the medical returns," adding, "at the Home, where a stream of 15,000 dogs per month passes through the premises, bites are a daily occurrence, yet not once during the last seventeen years has hydrophobia resulted from such injuries."

My whole attitude to this subject of hydrophobia and the Pasteur methods will, perhaps, be better understood if I call attention again to the fact that I am not talking about "rabies" at all. That is a subject about which I have some information, but which I never discuss in public, because I have thought it wiser to restrict myself to that of hydrophobia in mankind. I do not find fault with the definitions of those who have made rabies a special study; but when it comes to hydrophobia I must endeavor to maintain the opinion I have formed from long and painstaking study and observation, that this disorder is not the result of the inoculation of a specific virus, but either a symptom occurring in some one of a variety of diseases or a psychical manifestation, and that the cases which can be fairly classed under the latter head have very often followed the bite of a perfectly healthy dog; and I believe that anything which attracts unusual attention to this subject—either public discussions or injuries that may seriously alarm a person bitten—favors the occurrence of cases presenting the symptoms of what is called hydrophobia. For this reason I regret the establishment of Pasteur institutes, and would consent that dogs should be subject to the inconvenience of muzzling, although I do not believe, considering it as a purely academic question, that this measure could otherwise be justified.

Finally, I would like to repeat a remark that I made in a discussion of this subject five years ago: "Controversy in scientific matters is not unlike football of these days—it may be hard without being rude, and those who engage in it must be willing to give and receive assaults that are necessary to a fair decision and the truest outcome of the contest. In it all, the argument must be clearly distinguished from the individuals engaged in it. I hope, as you do, for the discernment of the truth; and I respect all who have the same hope, however I may differ with them now as to the question at issue."

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CANCER OF THE PROSTATE, COMPLICATED BY GENERAL FIBROID CHANGE OF THE URETHRA — URETHROTOMY — PROSTATOTOMY, BY THE BOTTINI METHOD—SUBSEQUENT PARTIAL ENUCLEATION.*

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A. E. M., seventy-six years of age, a farmer and stockraiser, came to me on November 1, 1900. For three years he has had great trouble in passing urine, and nearly all of the time has been obliged to use a catheter once or twice a day. His bladder is capacious. The largest catheter he has passed for a long time is No. 6, English, and this with a stylet.

Examination of the urethra shows dense organized stricture tissue, which extends from the meatus to the membranous urethra, and only admits a No. 9 French silk catheter, with the aid of a stylet.

Examination of the prostate, through the rectum, shows it to be a large nodular one. Some of these nodules are movable, others are dense and immovable. The prostatic enlargement extends upon each side far out along the pelvic bones. In the center the bladder may be palpated; there is no induration of its base. There is enlargement of some of the pelvic lymphatic glands.

Recently the patient has had complete retention, and has been often forced to pass the catheter every twenty minutes. Previously, he had residual urine to the amount of about ten ounces. The urine is alkaline, very purulent, and has a fecal odor.

The urethral obstruction became so great that he could not, when he came to me, catheterize himself at all.

I sent him to the California Hospital, put in a No. 9 French silk catheter, and allowed it to remain until November 7, washing out the bladder daily, as thoroughly as possible, through this small tube. The drainage was not continuous, the end of the catheter being stopped with a small cork, which was removed when the patient desired to urinate. Urotropin was given internally, in a daily dose of 1.5 gm. On November 8 the urine had become clear and acid.

A No. 14 French silk catheter was introduced and tied in, the stricture having dilated enough, meanwhile, for this to pass quite easily. The patient had not been passing enough urine, so he was given digitalis, with corn silk, in addition to the urotropin.

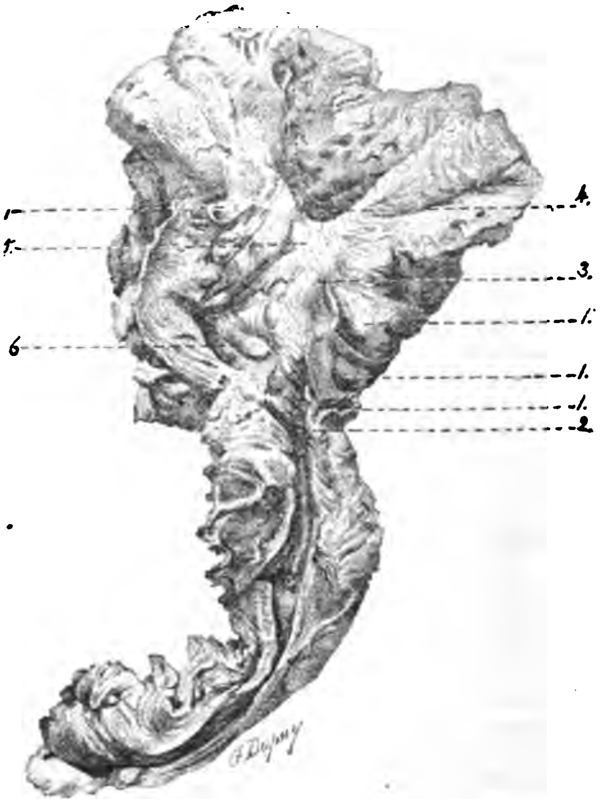
On November 14 a No. 16 F. could be passed easily; so the patient was allowed to catheterize himself until the 20th, when the very hard anterior stricture, which extended from the meatus to a point an inch posterior to it, was cut freely, under cocaine, and the catheter replaced and tied in until the 22d, when it was removed, and the meatus dilated daily, until the 28th. The deeper strictures were then operated upon, by the Fort method of electrolysis, using the 26 F. MacGowan electrolytic blade, after which a No. 17 soft rubber could be passed to the membranous urethra easily. But, in order to enter the bladder, it required the assistance of a stylet, for there was great resistance to its passage in the deeper parts.

On December 7 I used a large MacGowan electrolytic blade, 32 F., hoping to overcome the obstacle in the deeper urethra. Several attempts were made, at intervals of three or four days, in sittings of one-half to three-quarters of an hour, but without success.

This impediment appeared to be anterior to the prostate, and it was believed that if it were severed and dilated until healed it would be possible for the man to lead a comfortable catheter life, or for me to do a Bottini on him, for he decidedly objected to a prostatectomy.

On December 18 I did a combined internal and external urethrotomy. The hemorrhage from the former was so great that the latter was done as a safeguard, and advantage was taken of it to explore the membranous and prostatic urethra.

The prostatic enlargement was found to have encroached upon two-thirds of the membranous urethra, where a growth upon the left side, about the size and shape of a pecan nut, and roughly nodular, blocked the lumen of the canal. It felt as if it could be easily shelled out, and I was tempted to get rid of it in this way.



SCHEME.

No. 1. Cancer nodules.
No. 2. Membranous urethra.
No. 3. Urethral channel.
No. 4. Depression in bladder (post prostatic pouch).
No. 5. Healed groove made by Bottini cautery.
No. 6. Depression from removal of obstructive right lobe.

However, I suspected, from its appearance and feel, and from the results of the examination, per rectum, that it might be cancerous. I had promised the old man not to do a prostatectomy on him, and, as the Bottini instrument was at hand, I was desirous of seeing what effect, if any, this operation would have in removing, or causing the atrophy of, such an obstruction.

Examination of the urethra, nearer the bladder, and of the bladder neck, showed that there was, in addition, enlargement and obstructive growth of the prostate, intra-urethral and intravesical posteriorly, and also upon the left side.

Two incisions were made with the Bottini, one posterior, 4½ cm. long, and one 5 cm. long on the left side, through the impeding growths, the eye being used as a guide to the burning in the membranous urethra. There was more hemorrhage than I had ever seen following similar operations.

The perineal wound was packed, and a No. 22 drainage tube inserted into the bladder through the urethra. At midnight there was a free hemorrhage from the urethrotomy wound, filling the bladder with clots, which necessitated introducing a No. 40 perineal drainage tube, and the fastening of a No. 24 in the anterior urethra. The drainage tubes were removed on the fifth day.

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* Read before the Los Angeles County Medical Society, July, 1901.

The patient had some elevation of temperature while the packing was in place, and some sloughs from the Bottini burn came away about January 1, being accompanied by drenching night sweats, and by a bad odor to the discharges. The night sweats were controlled by atropia, the odor by a return to the use of urotropin, which had been stopped for a time, and strychnine, suprarenal extract, and digitalis used *pro renata* as cardiac and renal stimulants.

On January 3 he voided about four ounces of urine, and on the 5th about eight ounces. I encouraged him to make every effort to pass his urine by allowing the bladder to get quite full. The catheter was used several times a day through the perineal wound. The anterior urethra, being dilated by a No. 28 steel sound, healed nicely, with the full caliber.

On January 9 an inflammation of the left epididymis occurred, and was quite painful and troublesome for two weeks. This was simply a recurrent trouble from which he had suffered, at intervals, for several years.

On January 19 he passed about five ounces of urine. He had been up and about every day from the 1st of January. On the 28th and 29th he voided two or three ounces of urine several times.

The perineal wound was now healed, and it was evident that the Bottini operation had not been successful in removing the prostatic obstruction. The brave old fellow requested me to try again, and gave me permission to do whatever I saw fit for the restoration of the ability to empty his bladder voluntarily.

On February 4 I reopened the perineum, and again examined the obstruction on the left side of the membranous urethra. It was divided into two lobes by the Bottini incision, and was considerably shrunken, but was still so large that there was no possibility of burning it in such a manner as to effectively remove its pressure upon the urethra, therefore I enucleated it.

What appeared, upon the surface, to be quite a small mass, proved, when I got through the capsule, to be much larger, very adherent, and difficult to enucleate. The easiest parts to peel out were those through which the Bottini had passed.

It was not deemed wise to shell out the remaining obstructing portions of the prostate, for the part removed seemed to be cancerous.

My finger detected quite a good-sized channel through the obstruction at the neck of the bladder. It was thought best to enlarge this with the electrocautery, believing that, when the slough came away, enough of the impediment would be removed to permit of his urinating through the channel, which was now clear from the meatus to the neck of the bladder. So three grooves, two upon the base, beside each other, and one upon the left, were slowly burned.

The large perineal drainage tube was inserted into the bladder again.

On February 12 it was noticed that fecal matter came through the perineal wound. I found a small opening well to the left of the median line, about three inches up the rectum, communicating with the space from which the prostatic nodule had been shelled.

This was closed, on February 13, by dissecting up the rectum and its muscular structures from the surrounding tissues, and pulling it down until the fistula was visible. Lembert sutures of Florentine were passed from without inward, and tied within the lumen of the gut, the ends being left long, plaited together, and allowed to protrude from the anus. The gut was then returned to its bed, and held in place by terraced catgut sutures and a circular row of sutures of Florentine. The surface of the wound toward the urethra was also terraced in a similar manner.

Experience has taught me not to be cowardly with old men upon whom it is necessary to do surgical operations about the kidneys and bladder, for, with skill, cleanliness, and careful attention to maintain the functional activity of these organs, severe operations are accompanied with but little more risk than they are on younger men. I never had anyone to operate upon with much less promise of success than this old chap.

His recuperative powers seemed perfectly wonderful, for he was uræmic and very weak when he came to me, but his rectal wounds healed perfectly, the fistula healed tightly, his kidneys acted very well, the slough passed off from the Bottini burn at the neck of the bladder, and this granular surface also healed.

He passed water naturally, in full flow, on March 3, but he died on the 9th, from recurrent secondary hemorrhage, which came from the cavity in the prostate from which the cancerous nodule had been dug out.

The first hemorrhage was noticed during the night of March 2. It was slight, flowed into the bladder, and stained the urine. On the morning of March 3 another hemorrhage packed the bladder with clots.

These were pumped out by a Chismore aspirator, and three ounces of aqueous solution of suprarenal extract left in the bladder, as it was supposed that the hemorrhage came from the Bottini wound. The patient was also given suprarenal extract, 5 gr. every two hours, for twenty-four hours.

This controlled the hemorrhage, but it recurred on the morning of the 5th. He became markedly uræmic, and died, after a severe chill, with a rise of temperature to 105°, on the morning of March 9.

Examination of the bladder and the prostatomembranous urethra shows, first, the presence of cancer nodules widely disseminated; second, a large, smooth, roomy groove through the obstructions of the urethra left by the healing of the channels on the posterior and left side of the vesical neck. This groove is lined with scar tissue, which is smooth, thin, and so perfectly flexible, that if I did not point out to you the spot burned, I think none of you would be able to select it as a scar following a burn. Third, my experience with this patient, also with another man with cancer of the prostate—who lived for several months after I did a Bottini prostatotomy upon him, with marked benefit—and a third patient, now living, who has prostatic cancer that may be observed with the cystoscope—who suffered with complete retention and difficult catheterization for nearly a year, yet who voluntarily empties his bladder completely and comfortably up to the present, since I did a Bottini upon him last March—leads me to believe that this form of operation is a feasible one, and to be recommended for trial by others in cancerous prostatic obstructions of the bladder neck, but of no use, for obvious reasons, if the obstruction is far forward in the membranous or prostatic urethra.

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GONORRHŒAL RHEUMATISM.

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The etiology of this disease has, for many years, given rise to much discussion, without adding any reliable information on the subject under investigation.

The disease is recognized by many able writers as a toxæmic effect of the gonococcus upon the general system, either by its presence in the circulation or by that of the toxins of this microorganism. They maintain that the specific urethritis is the local manifestation of the microorganism, and the accompanying arthritis is a localized product of a general infection. They go as far as to claim that the synovitis is in no way related to rheumatism, and even discard the name under which the disease is generally known, calling it gonorrhœal arthritis instead of gonorrhœal rheumatism. The reason set forth for such views is, that the articular inflammation concurring with gonorrhœal urethritis is different from that of ordinary rheumatism. These writers seem to ignore, what is universally conceded, that the clinical features of a mixed disease are entirely different from the typical features of the diseases forming the complication. The fact that an articular inflammation associated with gonorrhœa is dissimilar to an ordinary synovitis furnishes no grounds for believing that these conditions have no inter-relation. It is claimed by these authorities that gonorrhœal urethritis causes the articular disease, and yet they cannot explain its mode of action in producing the two forms of inflammation. If the pyæmic theory is accepted, why are the joints alone involved? Why are not other tissues invaded? Why is the arthritis sometimes non-articular and sometimes polyarticular? Why should the large joints be more liable to invasion than the small joints, and why is the knee-joint so much more frequently involved than others?

A general pyæmic infection should not be so restricted in its operations. It is claimed, in behalf of the pyæmic theory, that gonorrhœal arthritis does not require for its production the usual exciting causes which invite rheumatic attacks, but can anyone name any special exciting causes which invariably give rise to an attack of rheumatism? Gonorrhœal rheumatism occurs most frequently in the early part of middle life; so does rheumatism. It occurs more frequently in males than in females; this is also the case with rheumatism. Gonorrhœal rheumatism occurs only in about 2 per cent. of gonorrhœal cases. If the gonococci, or their toxins, provoke the articular inflammation, it seems strange that they do so in only one or two cases in a hundred of gonorrhœal urethritis. According to the testimony of many trustworthy observers, the same forms of articular inflammation have been known to accompany urethritis not produced by the gonococcus. This weakens the theory of pyæmic infection, and strengthens the contention by many writers of concurrent rheumatic disease, as a dominating factor.

Furthermore, it is very rare to find pyæmia or septicæmia resulting from inflammation of mucous membranes, and, if it should, other contiguous structures would be likely to suffer as well as the joints.

Is it possible that gonorrhœal pyæmia will produce gonorrhœal rheumatism, and, at the same time, never cause pyæmic disease in any neighboring tissues or organs? It is true that the pyæmic theory is now more generally accepted than any other, but the clinical evidence upon which it rests will not bear a critical examination. It would seem, in the absence of any positive evidence to support the theory of pyæmia, that accidental rheumatism, as an intercurrent complication, would be a logical inference in the determination of factors in gonorrhœal arthritis. There is much more evidence in favor of this theory than that of pyæmia, but the tendency of most writers to reason from the standpoint of an unwarrantable bias leads them to ignore every argument which refutes the theory of gonorrhœal inflammation. They claim that the gonococcus has been found in these inflammatory lesions, but they overlook the fact that, in the majority of cases, it has not been found; and, furthermore, its presence does not prove that it causes the lesion.

The writer does not claim that all cases of arthritis in gonorrhœal disease are rheumatic, nor that the gonococcus never exerts any provocative influence over the arthritic inflammation. The main contention of this paper is, that the variegated clinical history of rheumatism shows that it is a potent factor in many localized lesions, and there is no justification in a sweeping denial of its relationship to gonorrhœal arthritis.

The symptoms of gonorrhœal rheumatism, during the course of gonorrhœal arthritis, are a sense of uneasiness, aching, stiffness, or lancinating pain in one or several of the joints. The knee is oftener involved than any other articulation, especially the left knee. Other joints may become consecutively or simultaneously involved. The articular inflammation usually develops in the later stages of gonorrhœa, and often after the urethral discharge has almost entirely ceased. The articular symptoms arise gradually, without any alteration in the external appearance of the joint. As long as the affected part is at rest, there is not apt to be much pain, but the least movement provokes it at once. The inflammatory process is of a subacute type, and it never announces its advent with a chill, as generally happens in pyæmic attacks. When the inflammatory attack reaches its culminating point, the joint may become distended, and give rise to considerable effusion. The articular inflammation may run an indefinite course, and last weeks or months. In these cases, if the effusion is of a fibrinous character, anchylosis may result. In the treatment of this disease we must not lose sight of the fact that we have to deal with a mixed form of disease. We have the gonorrhœal element confronting us, and we also, probably, have a rheumatic element to claim our attention. Besides these conditions, we may also be required to treat the general health of the patient. If there is a urethral discharge, it must be treated. If there is a rheumatic condition, it must be treated. If there is an impaired state of the health, this, also, must engage our attention.

The local treatment of the articular inflammation will not differ materially from that of any inflammation of the joints. We must allay inflammation, stimulate absorption of effusions, and restore normal functions of the articulation. There are many methods of accomplishing these objects. For the urethritis we may resort to installations of permanganate of potash, with the internal administration of codliver oil, with five grains of iodide of potassium to each tablespoonful of this preparation. A tablespoonful to be given four times a day, after meals and at bedtime. The iodide of potassium may be increased or diminished according to the requirements of the particular case. This disease, with its painful accompaniments, has a depressing effect on the vital processes, and rapidly impairs nutrition. The iodide of potassium, by its eliminating properties, removes the cause of the pains, and the cordial of codliver oil compound improves nutrition, tones up the nervous system, and, by regulating the kidneys, allays the acridity of the urine. With such a constitutional corrective, and suitable diet, and mild antiseptic injections or irrigations, this disease is readily subdued. Besides the general restorative action of the above remedy, it directly increases the excretion of urine and uric acid, and renders the urine less irritating to the inflamed mucous membrane of the urethra. This preparation is, therefore, intended to meet both the rheumatic and gonorrhœal conditions of this troublesome disease.

It is palatable and efficient in the doses named. A tablespoonful after each meal and at bedtime being the average quantity required for successful results.

Folliculitis (Acne) Exulcerans Serpiginosa Nasi (Kaposi).—E. Finger reviews the literature relating to the five cases of this rare cutaneous affection which have hitherto been reported and adds the observation of another case. The first manifestation was a small papule, which appeared on the tip of the nose and rapidly ulcerated, apparently as the result of scratching. It was regarded as syphilitic in nature and for three months was treated accordingly. Such treatment, however, was without avail and the lesion increased rapidly in extent. When Finger first saw the patient the ulceration completely surrounded the right nasal orifice and involved the corresponding alaqual nasi and the contiguous portions of the septum and upper lip; the mucous membrane of the right nares, to a distance of about one c.m. from its orifice, was also involved. The ulcerated area was surrounded by an inflammatory zone, and was covered by a yellowish thick exudate, under which course granulations were seen. An ordinary acne eruption, with numerous comedones was more or less abundant upon the face, chest and back. Local treatment only was used. This consisted of 2 per cent. boro-vaseline. Examination at the end of three weeks showed that the ulcerated area was gradually healing from without inward, but that on the neighboring sound skin several new papules had appeared, which gave evidence of beginning ulceration. Five per cent. boro-vaseline was ordered, and, in addition, the ulcerated surfaces painted daily with a 2 per cent. solution of carbolic acid. In one month from this time all the lesions had entirely disappeared, the ulcerated surfaces being replaced by cicatricial tissue. A microsscopical examination showed that the process was simply inflammatory in nature and follicular in origin. No giant cells were found. Bacteriological examination showed the presence of numerous microorganisms, especially staphylococci. No tubercular bacilli were found. This case increases the evidence which goes to show that occasionally there occur serpiginous ulcerative cutaneous lesions of follicular origin, which are neither syphilitic nor tubercular in character.—*Wiener klinische Wochenschrift*, March 6, 1902.

On the Mode of Action of Narcotics.—C. R. Marshall says that if the anæsthetic action of a substance is dependent upon its solubility in fat-like compounds, then we may formulate the following theses: (1) All chemical, for the most part indifferent substances, which are soluble in fat and fat-like bodies, must be narcotic to living protoplasm, in so far as they can diffuse into it; (2) The action must appear earliest, and be most powerful in those cells in the chemical composition of which these fat-like bodies preponderate and play an essential part in the function of the cells—mainly, therefore, in nerve cells. The relative strength of action of such narcotics must depend on their mechanical affinity to fat-like substances, on the one hand, and to the other components of the body, *i. e.* mainly water, on the other; therefore on its partition coefficient is a mixture of water and fat-like bodies. This theory does not explain the action of nitrous oxide, whose action is physical, not chemical, and which rapidly diffuses into the tissues. Owing to its slight partition coefficient in favor of oil, it tends to accumulate in "lipoid"—containing cells. Whether we shall ever succeed in getting to the bottom of sleep and narcotic action is still a matter of opinion, but, the author says, we must welcome every addition to the subject, and this theory of partition coefficients is assuredly one.—*The Medical Chronical.*

Ichthyol in Pulmonary Tuberculosis.—J. D. Astrachan reports favorable results obtained by the use of ichthyol in pulmonary tuberculosis. The therapeutic effect of this substance is due to the sulphur which it contains. When ichthyol is broken up in the intestinal canal, the sulphur set free forms new compounds, which possess a marked bactericidal action. The author has treated twenty-one cases of phthisis with ichthyol; of these two were in the first stage of the disease, ten had suffered with the disease for from four to five years, four from five to seven years and one for thirteen hours. Two were cases of "galloping" phthisis, and two were cases of chronic bronchitis with an existing hereditary tuberculosis. All of these cases were markedly improved except the two cases of acute phthisis, which were apparently not influenced by the treatment. Two of the cases were apparently cured. Very soon after beginning the administration of ichthyol the hæmoptysis, cough and night sweats diminish, the appetite and general condition commence to improve, and the patient begins to increase in weight. Ichthyol may be administered either in pill form, combined with magnesia, or in liquid form, dissolved in water and glycerin. The dose should not exceed 4.0 daily. It is best to begin with small doses and gradually increase until the maximum amount is taken. The daily quantity given should be divided into three doses, one of which should be taken after each meal. The author describes in detail three of the cases which were treated by him in the above manner.—*Allgemeine medicinische Central-Zeitung*, March 1 and 5, 1902.

A Case of Fusiform Dilatation of the Œsophagus without Intrinsic Stenosis.—George A. Peters reports this case of a farmer, aged thirty-five years. There was no history of cancer in the family. About five years previous to this observation the patient suffered from regurgitation of food. This was never sour. The eructation was not true vomiting. There was sometimes a troublesome hiccough, and there was evidently a spasmodic element in the case. Finally a gastrostomy was performed with gratifying results at first, but in about six months the patient became nervous and anxious for further intervention. The writer made a diagnosis of hour-glass contraction of the stomach. Operation showed this to be an error. The sac, which received whatever was swallowed, was situated above the diaphragm. The patient died within eight hours from exhaustion and failure of circulation. Post-mortem examination showed that the stricture was extra-œsophageal and due to the tight clasping pressure of the pillars of the diaphragm. There was no sign whatever of intrinsic stricture. There was no scarring. The stricture was due to the hypertrophied condition of the pillars of the diaphragm, with or without a degree of spasm in this muscle. —*The Canada Lancet.*

An Unusual Case of Subperiosteal Hemorrhage of the Orbit Following an Uncomplicated Delivery.—Edgar S. Thomson describes this case. The patient was one week old when brought to the hospital. No instruments had been used in delivery. The day after birth the right eye began to protrude. This condition continued to grow worse till the lids could scarcely be closed. Palpation discovered an indistinct mass in the upper part of the orbit, back toward the apex. The orbital tissues were much swollen. Hot applications failed to reduce the swelling. The cornea became dry and deeply infiltrated. Two days after admission to the hospital the eye was enucleated. A large, fluctuating mass was found next the roof of the orbit, near the apex. As it was being palpated, it burst, and several drachms of blood, with clots and serum, came out. No fracture could be made out. The swelling rapidly subsided and three months after the operation, when last seen, the child seemed well and strong. There must have been some traumatism during birth, which was the direct cause. There was probably a fracture through the orbital plate. At the time the child was seen enucleation seemed the best proceeding, and, probably, was the safest thing to do, considering the conditions at that time.—*Pediatrics.*

Wounds of the Heart.—L. L. Hill reports two cases, the first being that of a girl of eight years. She had carried in her shirt-waist a needle two and a half inches in length, which she had driven into her heart by accidentally falling against a tree. Her countenance was anxious, pulse rapid and weak, and respiration somewhat labored. She had slight pain about her heart. Upon inspection it was found that the foreign body had entered the fifth intercostal space on the left side, and with the pulsation of the heart the head of the needle could be seen to move under the skin. Under cocaine, an incision one inch in length was made down to the needle and the latter extracted. Recovery was without incident. The second case was that of a man, aged twenty-eight years, who had received a stab wound in the fourth intercostal space a little to the right of the left nipple. Seen shortly after the injury there was complete relaxation of the extremities, and the pulse was hardly perceptible. The countenance depicted a suffering and distress that would seem to welcome death with the wintery sterility of the grave as a kind and sympathizing friend. Auscultation revealed the heart sounds very indistinct, and percussion elicited increased dulness. It was evident that the pericardium was rapidly filling with blood, and that the heart's action would soon be overcome by compression. The external hemorrhage was slight. The blood was evacuated by enlarging the opening in the pericardium, and the patient's condition at once improved, and he ultimately recovered, though subsequently traumatic pericarditis supervened.—*Indian Medical Record.*

Intermittent Claudication.—William Osler describes this condition in the horse, and then reports the histories of two patients who suffered from the same affection. The first patient was admitted to the hospital with aneurysm of the abdominal aorta. There was also general arteriosclerosis. The sac was wired, and his condition was greatly improved. Some months later, when he returned for examination, he reported an additional symptom. After walking for a certain distance his legs would give out completely. After resting a few minutes he could go on again. There was no paralysis, and no cramps, but a sensation of dead, heavy weight in the legs. The quantity of blood which reached the legs was insufficient, causing relative ischæmia and inability to walk. In some cases there are cramps and tingling. The second patient had general arteriosclerosis. She had the first attack after eating a very hearty dinner. After walking a short distance she lost control of her legs. Warmth was applied to the legs and careful friction, and she did remarkably well. She was also put to bed, as rest is essential. There have been cases reported in nervous individuals in which the condition seems to depend upon vaso-motor disturbances.—*The Montreal Medical Journal.*

The Newest Physiology of Digestion in Relation to Treatment.—Alfred W. Perry describes Pawlow's recent researches in days on digestion. One of the most striking results of these researches is the proof of the exactness with which the gastric and pancreatic secretions correspond in quantity and strength in the various digestive ferments, pepsin, trypsin, amyolitic and fat-splitting ferments, with the need for them in the various foods taken. In view of this fine adjustment of nature, we cannot be too much afraid of injuring it by medicines to help indigestion—in this denunciation are not included the acids which naturally exist in the body or food, nor the digestive ferments. The most rational gastric therapeutics is to remove motor derangements by mechanical and hygienic methods; and deficiencies in any of the long series of digestive acts, by alterations in the quantity, fluidity, fineness of division, temperature, times of taking, and separation of the different classes of force from each other, separation of fat from meat, etc. The author gives details in the carrying out of these principles.—*Pacific Medical Journal*, March, 1902.

A New Treatment for Plague.—In the treatment of septic plague, R. Walker recommends much larger doses of lime than in the other varieties, and the same small doses of zinc for the first twenty hours; to reduce temperature, lithia in five or ten grains, and if the brain is still affected, a dose or two or five or ten grains of alum. The lithia after twenty-four or thirty-six hours brings out a profuse sweat, which continues till convalescence is established. Since the uric acid, lithia and zinc treatments are depressant, lime should first be given to strengthen the heart and give stamina. The next drug that should be used is zinc, and then the other drugs enumerated. Where a pulse is quick, without a corresponding high temperature, it means that the heart is giving way; then add brandy, digitalis and strychnia to the treatment. Where a pulse is very slow it also indicates cardiac danger. This pulse, common in plague, is evidence of uric acid in excess in the brain, is met best with large doses of tincture belladonnæ and lime. For "quick respiration" the writer recommends tincture cannabis indica ♏ iii. to ♏ xv., with tincture ferri perchloride ♏ v-x.—*Indiana Medical Record.*

The Instrumental Relief of Acute Retention from Prostatic Enlargement.—W. T. Belfield offers the following conclusions: (1) Acute retention from prostatic enlargement is due to an œdema, not a rigid obstacle, in the prostate; (2) This œdema can be passed sometimes by a Nélaton, always by a Mercier catheter; (3) A metallic catheter is curved to traverse the normal deep urethra, and is therefore not adapted to traverse the elongated distorted urethra of the enlarged prostate. Hence it should be used only as a last resort, and then never forcibly. It is understood that urotropin or cystogen should be administered at once in all cases of acute retention, and continued until the danger of pus infection of the urinary tract has passed.—*Therapeutic Gazette.*

The Etiology of Acute Dysentery in the United States.—E. B. Vedder and C. W. Duval conclude, from their researches, that (1) several standard cultures used in their study are indistinguishable—a conclusion previously reached and stated by Flexner; (2) the acute dysentery of the United States is due to a bacillus indistinguishable from that obtained in epidemics of dysentery in several other parts of the world; (3) the sporadic and the institutional outbreaks of acute dysentery are caused by the same microorganism, and this organism is identical with that causing epidemic acute dysentery; (4) the cause of acute dysentery, whether sporadic, institutional, or epidemic, is *Bacillus dysenteriæ*, Shiga.—*The Journal of Experimental Medicine.*

Surgical Operations on Old People.—J. C. Sexton believes that it is disease and not years that makes people old. He contends that the shock of operation, pure and simple, is not a great factor in the surgery of the aged. The shock of blood loss is, and there are many who do not think there is very often any other kind of shock. It does not appear to be necessary to produce deep narcosis in old people. The extreme sensibility of the nervous system incident to the prime of life seems dulled in old age. Old people can endure a great deal and have the same right to surgical skill as any one else.—*Indiana Medical Journal.*

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THE TREATMENT OF TROPICAL DYSENTERY.

Now that the United States has control over tropical lands, and that a large number of her citizens live in these parts, the climatic diseases cannot but possess peculiar interest for the medical profession.

Dysentery is one of the most prevalent maladies of the torrid zone, and is, at the present time, especially rife in the Philippines. The latest report of sickness received from those islands gives the following table of the most important diseases at the four main military hospitals: Dysentery, 16.7 per cent.; diarrhœa, 6.91 per cent.; typhoid fever, 0.33 per cent.; gastric disorders, 5.07 per cent.; tuberculosis, 1.24 per cent.; venereal diseases, 15.54 per cent.; insanity, 2.08 per cent. It will thus be seen that dysentery is the most fruitful cause of sickness among our troops in the Far East, and not only is this the case now, but at all times the affection prevails to a greater or less extent.

With regard to the treatment of dysentery, as with almost every disease, there is no specific remedy. Preventive measures carefully followed are the surest safeguards against contracting the complaint.

Great Britain, with her numerous and long-held tropical colonies, has had the best opportunities of studying diseases incidental to these portions of the globe.

Dr. Davidson, who lived in Mauritius for many years, writes as follows, in "Allbutt's System of Medicine on Dysentery":

"The resident in countries where the disease is endemic or epidemic, should see that the soil in the neighborhood of his dwelling is not subjected to fecal pollution. He should make sure of the purity of his water supply; and if there be the slightest reason for suspicion on this score, the water should always be boiled before use. Food should be of good quality, well cooked, and excess and defect alike avoided; alcoholic stimulants, if used at all, should be taken in strictest moderation. Diarrhœa and constipation alike should be guarded against as far as practicable. Exposure to cold and wet must be avoided. When the clothes get wet, they should be changed as soon as possible. An abdominal belt of flannel should be worn in the tropics. Dysenteric stools should be disinfected, and disposed of by covering them deeply with earth at a distance from the dwelling. In camps they should be disinfected immediately, and then disposed of by cremation."

There can be no cavilling at the foregoing rules for prevention, but with respect to the remedial and curative treatment of dysentery, authorities on the matter are, of course, not nearly so unanimous in their views.

The same kind of treatment will not benefit all forms of the disease, nor will one drug answer in all its stages. In uncomplicated cases of tropical dysentery, however, the British school of medical practitioners hold that ipecacuanha is the sheet anchor. This drug, in combination with salines, they claim, acts as a most efficient intestinal evacuant.

In the treatment of dysentery in war and famine, calomel has been the drug chiefly relied upon, but irrigation of the bowels with antiseptics has been most successfully practised in treating dysentery and allied conditions among the British troops in South Africa.

Dr. Henri Lafleur, McGill University, Montreal, writing on this point, says that irrigations of antiseptic solutions is the most rational and direct method of treatment. The amœba is susceptible to the action of solutions so dilute as to be only feebly toxic, and consequently gives us a stronger hope for the success of this method. Quinine, corrosive sublimate, nitrate of silver, nitric acid, and, latterly, permanganate of potash, are among the antiseptics which have been chiefly used for this purpose.

In the Paris letter to the *Therapeutic Gazette*, March 15, is an account of the treatment of tropical dysentery by Dr. Plehn, which reads as follows:

"Dr. Plehn, who has been practising a great many years in Africa, has published, recently, an interesting article in the *Deutsche medicinische Wochenschrift*, on the treatment of dysentery. This treatment is based on the successive use of purgatives, calomel, and subnitrate of bismuth. The most important part of the treatment is the method to be used in exhibiting successively these different drugs. As soon as there is a suspicion of dysentery, the bowels are flushed out; if the diagnosis is not quite sure, the inspection of the excreta shows if it is a true case of dysentery. If the case is one of dysentery, calomel should be given after twelve to eighteen hours. Twelve tablets should be given, each one containing about 0.03 centigram. . . . This treatment is continued three days, and then calomel is succeeded by subnitrate of bismuth. Tablets of fifty centigrams are given, twelve being given each day. This should be kept up three or four days, till the excreta becomes solid again, and do not contain any pathological products. As there is a tendency to constipation for the first few days, some mineral water should be given every day. Large enematas, containing a small amount of salicylic acid may also be used, but Dr. Plehn is not an ardent advocate of this treatment, which would seem to cause some weakening of the atony of the intestine."

In India dysentery is said to have been, and to be still, treated with good results by bael fruit. Naturally, judicious regimen is also a most important feature in the treatment of dysentery. Milk is recommended by the majority of authorities as the best staple diet, but if not found suitable, variations in food must be left to the discretion of the physician.

Careful supervision of sanitary arrangements is undoubtedly essential to prevent the occurrence of dysentery, and especially is this so with European troops in tropical countries. With regard to treatment, it would seem that the use of antiseptics, either by the mouth or rectum, is, on the face of it, sound practice. The United States Army surgeons in the Philippines should be able to throw some fresh light on the treatment of dysentery generally, and on the drug treatment in particular.

All experts concur in stating that the only hope of cure for chronic dysentery, attacking Europeans living in tropical countries, is a change to more temperate climates.

THE ORIGIN OF CANCER.

The Chelsea Clinical Society at its annual clinical debate, held on March 25, discussed the subject of cancer.

A communication sent to the meeting by Professor J. G. Adami of Montreal was one of the most valuable contributions to the discussion.

He said: "From a study of the syncytioma malignum, it might be legitimately deduced that there existed one form of tumor of highly malignant type in which the infiltrating cells were not those of the organism itself, but were derived from another organism. The infiltrative and invasive properties of these cells were not a new acquirement, but were an exaltation of properties normally possessed by them, or, more exactly, under normal conditions it was observed that there was an interaction of two forces—one the invasive propties of these cells, and the other the protective properties of the surrounding maternal tissues, by which interaction the extent of invasion of the cells was strictly limited to the placental side. Dr. Adami's view was that the development of the syncytioma malignum must therefore be attributed to either an increase in the invasive properties of the syncytial cells or to a lessened resistance on the part of the maternal tissues, or a combination of the two. It was concluded, therefore, that if microparasites played any part in the production of the tumor that it must be either by exalting the infiltrative powers of the one, or by lowering the resistant powers of the other. Dr. Adami pointed out that proof positive of the existence of such specific microparasites was still wanting, and in its absence he found it difficult to conceive how specific microparasites could bring about those results. . . .

The prevalent conception of cancer parasites, as existing within the cancer cells, involved the idea of malignant growths being the product of parasites acting within parasites, because, as shown by the study of the synctioma malignum, the tumor cells themselves were essentially parasitic in the organism.

In short, according to Dr. Adami, if the present popular idea was traced to its legitimate conclusion, the most that could be said for it was as the association of parasitic ideas might already have occurred to some, that the theory was in harmony with the great generalization of the poet who wrote that

Great fleas have little fleas upon their backs to bite them,
And little fleas have lesser fleas, and so on ad infinitum.

Dr. Adami wished to know if that generalization was also to be applied to explain the action of pathogenic bacteria. In the long-continued action of microparasites he was willing to recognize a process which might, like other modes of stimulation, initiate aberrant and neoplastic cell growth, but beyond that point he contended that they seemed to be asked to contemplate a most extraordinary condition of affairs.

The parasitic theory of the origin of cancer presents to many earnest and keen investigators so large a number of difficulties that, before being accepted as the true cause, a quantity of unsolved points must be made clear.

The progress toward this end has, of late, been by no means rapid.

The increase, however, in the facilities for cancer research in various countries of the world give rise to the hope that the final unraveling of its mysteries may not be far distant.

MOSQUITOS FROM THE LABORATORY POINT OF VIEW.

Since the investigations of Manson, Ross and the Italian scientists have shown that mosquitos are mainly responsible for malaria, and since Reed and others of the United States Army Medical Service have demonstrated a similar fact with regard to yellow fever, the literature concerning these insects has lacked in neither quality nor quantity.

Dr. William N. Berkeley of New York has, however, contrived to embody in a small space many of the salient points regarding the culicidæ, and especially of the species Anopheles maculipennis and Stegomyia fasciata, viewed from the laboratory standpoint.

When it is borne in mind that F. V. Theobald, the well-known dipterologist of the British Museum, has recently published, in two volumes, an immense monograph of the Culicidæ of the world, but has announced that a third volume will be required to complete the subject, a clearer conception of the vastness of this field of research will be grasped than is usually the case.

Dr. Berkeley has summarized the most important conclusions already reached by investigators of various nationalities respecting mosquitos, besides which he has formulated some original views. His work* has been done at the Pediatrics Laboratory, at the laboratory of the Presbyterian Hospital, and at the Clinic of the Third Division of Bellevue Hospital. The book, which was issued from the Pediatrics Laboratory Press, is excellently illustrated by Miss Marion Salterlee and Dr. Louise Cordes.

The first five chapters of the volume are devoted to the Development and Mode of Life of the Culicidæ; Their Collection, Feeding and Breeding; Anatomy, North American (U. S.) Genera and Species, Dissection, Sectioning and Staining. The remaining four chapters, which treat of Mosquitos in Connection with Malaria, Filaria and Yellow Fever, are of exceptional interest to medical men.

Writing of the inoculation of mosquitos with malarial parasites, the author says: "By preference the mosquitos selected for experiment should be bred in the laboratory and should already have digested one meal of sterile blood. They should not be over a week old to insure their surviving the experimental bite as long as possible. If caught in the open, they should be kept long enough for possible previous infections to have disappeared as 'Coccidia' from the stomach-wall."

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*Laboratory Work with Mosquitos. By William N. Berkeley, A.B., M.D., New York. New York: Pediatrics Laboratory, 1902.

In warm, summer weather mosquitos will not bite oftener than every two or three days—that is, as soon as the last previous meal has been digested. To make them bite well starvation for a day longer helps. Experiments of any real value should be conducted at a temperature of 80° F. (27° C), or over, and (as Giles has wisely remarked) preferably at that season of the year when the mosquito is normally most active. Large mosquitos, sucking more blood, are more liable to infection than smaller ones. Of a number of mosquitos biting a case of malaria at one time, as many as 25 per cent. may fail for some reason to "take." Allowing for deaths and accidents besides, it is usually not worth while to conduct an experiment with less than half a dozen insects to start with—twenty are a good number.

Four or five separate cages of insects should be kept, each cageful to be fed on successive days, so as always to have a certain number of hungry ones on hand. The time of day taken for the bite should, if possible, conform to the feeding habits of the mosquito in question. Anopheles, however, though normally crepuscular in its feeding habits, will bite in the day-time. The soft part of the patient's forearm may be laid along the side of the cage. The insects will usually bite quickly through the wire gauze. Manson says that Anopheles puncture a moistened skin more readily.

The chapter on Mosquitos and Filaria briefly reviews the result of the investigations of Manson and others on the subject, and concludes by saying, "No human being has been, so far, experimentally inoculated, but the analogy to malarial disease seems perfect, and there is the strongest probability that the bite of a mosquito thus infected will engraft the Filaria into the human system.

The last chapter, dealing with Mosquitos and Yellow Fever, is by Dr. Aristides Agramonte, Professor of Bacteriology and Experimental Pathology, Medical School of the University of Havana.

Dr. Agramonte is inclined to disagree with the Englishman, Theobald, who states that but two species of Stegomyia fasciata and Stegomyia Signifera are to be found in the United States. Dr. Agramonte thinks that the species now known as Citæniorhynchus Wied presents many features analagous to them.

With regard to the habits of the yellow-fever-conveying mosquitos, many valuable points are given in the chapter, among which are the following: "They bite principally in the late afternoon, though they may be incited to take blood at any hour of the day. They are abundant in Havana from March to September, and, in the opinion of Dr. Agramonte, they are incapable of long flights unless very materially assisted by the wind. The Havana professor, referring to the length of time that infected mosquitos remain dangerous to the non-immune community, says that there is good presumptive evidence that the mosquito may harbor the parasite through the winter and be enabled to transmit in the spring an infection acquired in the fall. He also believes that yellow fever is restricted for its propagation to the genus Stegomyia.

Dr. Berkeley has succeeded in compiling a work which contains, in concise language and in clear phraseology, most of the important facts concerning the mosquitos about which he writes. His investigations are so valuable in their way, founded, as they are, for the most part, on purely original research, that they must needs give a new impetus to the studies of bacteriologists and clinicians in the lines indicated. Dr. Berkeley is well known to the readers of the MEDICAL RECORD by admirable articles on the subject contributed to its columns, and it is gratifying to note that the time, patience and thoroughness of his laboratory work have brought such abundant fruit.

The little volume will, undoubtedly, prove exceedingly useful as a handy textbook on the subject, and, as such, should have a wide circulation.

MARINE HOSPITAL SERVICE AND COMMUTATION OF QUARTERS.

Some comment has been excited in military and naval circles, outside of the medical departments of the army and navy, by a recent circular of the Treasury Department containing amendments to the regulations of the Marine Hospital service. The change relates to commissioned officers serving in the office of the Supervising Surgeon-General, giving them, in addition to their pay proper, an allowance as commutation of quarters, amounting to $80 per month in the case of an assistant surgeon, $85 per month in the case of passed assistant surgeons, and $90 per month in the case of surgeons. As the general commanding the army and the rear admirals of the navy only receive $72 per month for quarters, the surgeons-general of the army and navy, $60 per month, and the grades of major, captain and lieutenant (and their corresponding grades in the navy), $48, $36, and $24 respectively, the generosity proposed in the case of the Marine Hospital surgeons has provoked some invidious comparisons. That an assistant surgeon of the Marine Hospital service should receive an allowance for quarters three and one-third times greater than that granted assistant surgeons of the army and navy, and amounting to $8 per month more than that granted the lieutenant-general commanding the army, would seem, at first sight, to be more than unfair. It should not be forgotten, however, that the Marine Hospital service has no high grades with the much larger pay which medical officers of the army receive as colonels and lieutenant-colonels, and the medical officers of the navy receive as medical directors and medical inspectors, nor does the Marine Hospital service enjoy the benefits of the retired list, by which the future of officers of the army and navy are provided for. The increased allowances proposed, therefore, do not remove the deficiency under which the Marine Hospital corps, as a whole, labors. The whole incident serves as an excellent argument for putting all the medical departments of the Government services on an equal basis, as regards rank, promotion, pay, and allowances, and making the latter sufficiently generous to constantly attract to the Government services the best medical talent that the United States affords. The medical profession, by united action, has it in its power to do this, and to prevent the passage of unwise legislation affecting its representatives, such as that by which the efficiency of the Medical Department of the Army has been lately crippled. There is not a medical department under the Government which does not need—and is not worthy of—the support of the profession in the attainment of necessary reforms.

The Need of Public Baths.

The United States is behind most European countries, and lags far in the rear of Great Britain in regard to public bathing facilities.

New York City is a conspicuous case in point, for although some steps have been taken to provide the inhabitants of the poorer portions of the city with the means of ablution, yet, according to Mr. Charles Sprague Smith, Liverpool, with a population of 668,000, has spent on public baths more than all American cities combined, and Glasgow, with 732,000, has twelve public baths and five swimming pools.

The continent, and Germany in particular, is little behind England, while Tokio, Japan, with a population of slightly over 1,000,000, has 800 public baths.

The lack of public baths in an overcrowded city is naturally a menace to health. Even granting that the good effects of bathing are over-estimated, it is certainly a discredit to any city that a large proportion of its citizens should be compelled to go dirty, owing to the difficulties in the way of bathing.

John Wesley was wont to declare that cleanliness was next to godliness, and although, perhaps, the majority of persons will not go so far as the distinguished preacher in his belief in the efficacy in washing, yet it is, undoubtedly, a fact that bathing conduces both to health and self-respect.

An appropriation has recently been made in New York City for the erection of more public baths. It is to be hoped that those in charge of the arrangements for their construction will see fit to supply a sufficiency of shower baths. Dr. Simon Baruch has pointed out the general superiority of these to tub baths, and their adoption on a large scale is universal on the European continent.

Everywhere the city authorities have, up to the present, been niggardly in their expenditure for the physical and moral welfare of the people, but it would appear that with the incoming century a new era in municipal management may dawn.

Sanatorium Treatment of Consumptives.

A report has just been issued of the results, so far, of the treatment at the hospital for tuberculosis, opened on Blackwell's Island on February 1.

The admissions have numbered altogether 273, of whom same were in a more or less advanced stage of tuberculosis, while others were suffering from the disease in primary form.

Of the 273 patients admitted fifty-five have been discharged, fifty as improved and five as hopeless. The first named patients have either returned to their work, or, upon the advice of physicians, have gone to the mountains or to the country. Twenty-eight cases have been transferred to other wards for operation, or as exhibiting no symptoms of tuberculosis, and seventy-six have died. One hundred and fourteen patients remain in the hospital.

Of these, twenty are fresh cases as yet unclassified, forty are compelled to keep to their beds, and fifty-four are cases in the early stage. Of this latter number twenty-five have shown marked improvement, with an average gain in weight of 6.75 pounds. Eighteen have not progressed so favorably, but have made an average gain in weight of 1.9 pounds. Sixteen have retrogressed, and show an average loss in weight of 1.31 pounds.

On the whole, the experiment at Blackwell's Island has proved an almost unqualified success, and a useful object lesson on the need of extending this mode of treating consumptives.

The Practitioner (April), one of the most progressive of British Medical journals, urges, in strong language, the adoption of stringent precautions to check the spread of pulmonary tuberculosis, and draws attention to Dr. Osler's remarks before a joint meeting of the Maryland Public Health Association, the Medical and Chirurgical Faculty and the Laennec Society. Professor Osler, after upbraiding the civic authorities of Baltimore for the laxness of their measures to prevent the spread of consumption, proceeds as follows:

"Now, what is the remedy? It is simple. It is very easy. It is so simple and easy that we won't get it for a good many years. It is a sad thing to think of, but it will be five years yet before we get a law compelling notification of cases of tuberculosis to the Health Board in Baltimore. Yet we all know there should be notification and careful inspection in every single case. It works no hardship to have the Board of Health know that a case exists in the family, even in the best house of Mount Vernon place. It can be done quietly and easily, without placarding or making the patient feel that he is a social outcast. It can be done properly and easily under systematic management."

The Medical Record has always stanchly championed the cause of the consumptive, and of the needy consumptive in particular.

The notification of pulmonary tuberculosis—at any rate among the poorer classes, who live in close contiguity and are thus peculiarly subjected to the influence of the microbe—is a measure to be taken in the interests of public safety.

Sanatoriums for the treatment of consumptives alone have now decisively proved their worth, and the erection of such public institutions in the vicinity of every large city is an act of self-preservation on the part of its inhabitants.

The Parasites of Malarial Fever.

Dr. Charles Craig, U. S. A. Director of the Laboratory of the Army General Hospital, Presidio, Cal., has published, in the report of that institution for 1901, a valuable contribution on the above subject, the results of his experience in bacteriological research during the fiscal year.

Five thousand eight hundred and fifteen specimens of blood were examined for the parasites of malarial fever, of which 643 were positive and 5,172 were negative. As to the etiology, the 643 positive cases may be divided as follows: Cases due to the benign tertian parasite, 220; to the quartan parasite, 3; to the æstivo-autumnal parasites, 400; to the tertian æstivo-autumnal parasite, 20.

Concerning the differentiation of the tertian and quotidian æstivo-autumnal parasites, Dr. Craig calls attention to the following conclusions by Marchiafava and Bignami: (1) Duration of life cycle, twenty-four hours in the quotidian, forty-eight hours in the tertian parasite; (2) Pigmentation, greater in the tertian; the pigment motile; (3) Size of parasite, greater in the tertian; (4) Amœboid motion, more marked in tertian and longer preserved; (5) Relation of the various forms to the life cycle. Most of these conclusions were confirmed at Presidio, and Dr. Craig—in the numerous cases of both varieties studied there—has been able to trace marked differences in every developmental stage of the parasites.

1. The Hyaline Stage.—The tertian æstivo-autumnal parasite is larger, more clearly cut and refractive, and has a more sluggish amœboid motion than

the quotidian parasite. It has often a signet ring shape, while the quotidian is perfectly round. Only the parasite is found, as a rule, in a corpuscle in a tertian infection, while in the quotidian two or more are common. The infected corpuscle is less crenated and lighter in color when infected by the tertian parasite.

2. The pigmented parasite is larger, and pigmentation occurs while the ring form is still retained. In the quotidian the ring form is never pigmented. Amœboid motion is present after pigmentation, while in the quotidian it is always lost before pigmentation occurs. The tertian parasite is more sharply defined and the pigment present is in larger amount, is finer and is motile, while in the quotidian the pigment is always motionless, and consists of one or two coarse granules. Only one pigmented tertian occurs in a corpuscle, while two or more quotidian parasites may be present in one corpuscle. The infected corpuscle is more crenated and brassy when infected by the quotidian parasite.

3. The Segmenting Stage.—The number of segments is greater in the tertian and the segments are more oval in outline and larger. Segmentation occurs outside the red corpuscle in the tertian æstivo-autumnal parasite, while in the quotidian it occurs within the infected corpuscle.

4. The Crescentic Stage.—The tertian crescents are longer and more narrow than the quotidian, are more deeply pigmented, and have less of a double outline. The protoplasm of the tertian crescent is more refractive and granular in appearance.

5. The Flaggelated Stage.—In the tertian parasite both forms of flaggellate bodies heretofore described are larger and more deeply pigmented than in the quotidian.

6. The Cycle of Development.—Twenty-four hours completes the cycle of development within the human body in the quotidian parasite. Forty-eight hours in the tertian.

Dr. Craig definitely concludes that there are at least two varieties of the æstivo-autumnal parasite, a tertian and quotidian.

This view, held by many skilled observers, is in opposition to the opinions of others, who argue that the differences noted may be due to special conditions of environment, or unusual factors affecting the health of the individual, etc.

There would seem to be no means of actually proving the point one way or the other, but, as Dr. Craig remarks, the differences are so constant and harmonious that it is impossible to believe that they are accidental.

Decline in the British Birth Rate.

France has been for some years pointed at as a country on the down grade, because her population has remained almost stationary, on account of the remarkable and progressive decrease in the number of births. Other countries have declined in birth rate to some extent, and among the American-born inhabitants of the United States the proportion of births to deaths is by no means so satisfactory as was the case even ten years ago.

In the *Fortnightly Review* for April, Mr. Edward Canaan contributes a pessimistic paper upon the marked decline in the birth rate of Great Britain.

The writer maintains, from the showing of recent statistics on the subject, that the English are becoming like the French, are ceasing to increase and multiply, and that unless the British Empire can bring within its boundaries a prolific foreign element, and a continuance of the present condition of things be stayed, that Great Britain must lapse from her present high estate and fall into the category of second-class nations.

In order to permanently keep in a stationary position as regards population, it is necessary that the average number of children born from each marriage should be a little over three. The ratio in Great Britain of children per marriage has fallen from 4.36 in 1884 to 3.63 in 1900. At this rate of decrease another sixteen years would dry up the sources of the natural increase of population.

Already Great Britain is, perhaps, full enough of people, but consolation has always been found in turning to her colonies as a refuge for her surplus population. There, at least, is plenty of room in which to live and rear children in practically unlimited numbers,

But Mr. Canaan draws attention to the fact that the British do not appear anywhere to beget progeny as in times gone by, and that in the colonies the children are not of British descent.

Canada for example. The total increase of population in the Dominion, including the gain by immigration as well as by natural increase, has fallen from 839,000 in the decade ending 1880 to 506,000 in that ending 1901.

On the other hand, the French population of Canada has maintained its usual increase.

With regard to Australia the same story has to be told. The birth rate is low and declining. In 1891 Australia, including New Zealand, with a total population of 3,750,000, had 126,000 births; in 1898 only 112,805, while in 1899 a rise in the number of births of but 2,000 was registered.

The inference to be drawn from a study of these facts would seem to be that the fertility of the British race is not what it used to be.

Centralization of Medical Work in Washington, D. C., Desired.

The Medical Society of the District of Columbia has sent a memorial to the Commissioners of the District urging that all matters relating to medicine and sanitation be placed under the control of the health officer. The work of a medical character under the municipal authorities is now directed from a number of sources and includes the following classes:

The administration of the affairs of the Health Department; the administration of the medical affairs of the Washington Asylum and workhouse; the examination of applicants for appointment in the police and fire departments; the treatment of the sick and injured of those departments and of sick prisoners in station-houses; the treatment of sick poor at their homes; the examination of applicants for hospital treatment at public expense; the examination of persons for licenses to practise medicine, dentistry and pharmacy; and the examination of persons alleged to be insane, with a view to their commitment to the insane asylum.

In urging this reform, the Medical Society says that it is unable to find any reason why the medical work of the District of Columbia should be divided among so many departments and offices of the government, while all legal work is concentrated in the office of the city solicitor and all engineering work in the engineering department.

High and Low Death Rates.—Guatemala has the highest death rate of any country in the world. Its death rate is 41 per 1,000. In New Zealand the mortality is only 11 in the 1,000.

News of the Week.

Mount Sinai Hospital, N. Y.—Dr. Joseph Brettauer has been appointed Attending Gynæcologist at the Mt. Sinai Hospital to succeed the late Dr. Paul F. Mundé.

Rush Hospital for Consumptives.—The trustees of the Rush Hospital have secured for use as a country branch a farm of forty-seven acres, two of which are woodland, in Williston Township, Chester Co., Pa., situated about 635 feet above sea-level. The improvements consist of a new three-story frame dwelling, 52x24 feet, containing 21 rooms; a stone dwelling, containing nine rooms; a large barn, an engine house, an ice house, a large spring house, with a good spring, etc. It is intended to receive at the country branch only incipient cases of tuberculosis, in the treatment of which fresh air, good hygiene and nutritious food are most valuable. It is the purpose of the trustees, if this plan proves successful, to build small cottages on the ground similar to those at the Saranac Sanitarium in the Adirondacks.

Philadelphia County Medical Society, North Branch.—At a stated meeting, held April 17, Dr. W. Wayne Babcock presented a communication entitled "Microscopic Diagnosis of the Abnormalities of the Blood," in which he detailed methods of estimating hæmoglobin, of enumerating red and colorless corpuscles, of differentiating the latter and of demonstrating the presence of malarial parasites, such as can be carried out by the general practitioner. Dr. R. L. Pitfield read a paper entitled "The Use of Simple Microscopic Methods by the General Practitioner," dwelling upon the importance of systematic examinations of urine (chemically and microscopically), of sputum (for tubercle-bacilli and pneumococci), of blood, and of deposits in the pharynx. The discussion was continued by Drs. J. Daland, F. A. Packard, Jos. Sailer, A. A. Eshner and M. H. Fussell, who referred to examinations of the fresh blood, of the stools, of the nasal discharges, and to the Widal test.

The Status of Vaccinators of the Board of Health.—Some time ago a number of vaccinators were discharged by a health commissioner of the city, because the appropriation was insufficient to pay all those employed. One of the number sued for reinstatement on the ground that he could be dismissed only on charges brought by the Commissioner and sustained on trial. The court decided that employees of the department could be discharged, without other explanation, whenever the payroll was too large for the appropriation.

Delegates to Convention of Red Cross Society.—Six delegates have been appointed to represent the United States at the international convention of the Red Cross Society, which opens at St. Petersburg on May 29 for a three weeks' session. The delegates appointed are ex-Surgeon-General W. K. Van Reypen, U. S. Navy; Captain S. L. H. Slocum, U. S. Army, Military Attaché at the U. S. Embassy, St. Petersburg; Dr. Nicholas Senn of Chicago, late chief surgeon, U. S. Volunteers; Mr. B. T. Tillingham of Iowa; Miss Clara Barton, President of the National Red Cross Society, and Mrs. J. Ellen Foster of Washington, D. C.

Guilty of Misdemeanor.—Surgeon E. H. Marsteller, U. S. Navy, was recently tried on charges of drunkenness on duty, found guilty, and sentenced to be suspended from rank and duty for two years, to receive, during this period, one-half his shore pay, and to have his promotion retarded by being reduced five numbers. In acting on the record, the Secretary of the Navy says that the sentence imposed was entirely inadequate, and in the army would have resulted in the officer's dismissal from the service. He also criticizes the sentence, in that it relegates to idleness for two years an officer whose services are needed, and throws the performance of his work on others.

Complimentary Dinners to Surgeon-General Sternberg.—A complimentary dinner to Surgeon-General and Mrs. Sternberg will be given in Washington shortly before the coming retirement for age of General Sternberg on June 8, by the army medical officers and their families stationed in or near that city. The Army Medical Corps feels under the greatest obligation to General Sternberg for what he has done, during nine years' service as its chief, to improve its professional status and military efficiency.

In view of the fact that the army dinner is to be a purely "family affair," given by General Sternberg's military associates, a testimonial banquet in his honor, in special recognition of his great contributions to medical science, is to be given in New York, by the most prominent medical men of the United States. Professor William Osler of Johns Hopkins University is in charge of the banquet.

The Secretary of the Navy has transmitted to Assistant Surgeon Raymond Spear, U. S. N., attached to the *Concord*, a copy of a letter from the government of Colombia, thanking him "for valuable services rendered to the wounded Colombian soldiers in the late conflict on the line of the Panama Railroad." Surgeon Spear landed at Panama with 350 marines and blue-jackets in December last, and crossed and recrossed the isthmus with them in their effort to protect the railroad and keep communications open. Upwards of 200 of the native contending forces were wounded during the fighting near the railroad line, and nearly all of them came under the professional care of Surgeon Spear.

Philadelphia County Medical Society.—At a stated business meeting, held April 16, thirty-one new members were elected, numerous verbal amendments to the by-Laws were adopted, the names of thirty-seven candidates for membership were read, and resolutions were adopted commending the administration of the Municipal Hospital at the hands of Dr. Wm. M. Welch and his corps of assistants.

The Continental Anglo-American Medical Society.—It has been proposed that a luncheon of this society shall be held every year at the time and place of meeting of the British Medical Association, and accordingly one will be held this year at Manchester in July.

St. Mark's Hospital in this city was recently seized by the sheriff to satisfy a judgment obtained against it by a manufacturer of surgical supplies. The hospital was not closed, however.

A New Application of the Radiograph.—Certain criminals possess great flexibility of their facial muscles, and so modify their expression when being involuntarily photographed in prison that the portrait can hardly be recognized as that of the prisoner when the latter assumes his ordinary appearance. To get rid of this trouble the French authorities now require that a radiograph be taken of each prisoner. Whatever power he may have of modifying his facial expression, the criminal has no chance with the radiograph; his bones are not amenable to the influence of his will momentarily exerted during his exposure to this, the latest resource of civilization for combating crime.—*Medical Press.*

Dr. Knopf's Prize Essay on Tuberculosis.—Three hundred thousand copies of the German edition of

"Tuberculosis as a Disease of the Masses," by Dr. S. A. Knopf of this city, which received the prize of the German Tuberculosis Congress, have been printed and distributed. The essay has been translated into English, French, Italian, Spanish, Portuguese, Dutch, Russian, Polish, Bulgarian, Roumanian, Hungarian, and Jiddish, and published in fifteen different countries. The right of translation and publication in any language is freely granted in the interest of humanity.

American Climatological Association.—The nineteenth annual meeting of this society will be held at Los Angeles, Cal., on June 9-11, under the presidency of Dr. Samuel A. Fisk of Denver. The secretary is Dr. Guy Hinsdale, 3943 Chestnut street, Philadelphia. In connection with the meeting a tour has been arranged, under the management of Raymond and Whitcomb, by which members of the association will be enabled to investigate at first hands the true conditionsof theRockyMountain and Pacific Coast regions, for which so much is claimed in the way of climatic advantages. The tour will extend from May 26 to July 3, for eastern members, and proportionately less for those who western cities.

The Seventy-fourth Annual Congress of German Naturalists and Physicians will be held at Carlsbad, Austria, on September 21–28, 1902. It is estimated that more than six thousand persons will take part in the deliberations of this Congress, the work of which is distributed through twenty-eight sections. It is a rule of the Congress that papers may be read and discussed in any language whatever, and physicians and naturalists from any part of the world are accorded the same privileges as those enjoyed by the regular members of the association, and it is hoped that there may be a numerous attendance of English and American visitors. Those desiring to read papers or intending to take part in the work of the Congress are requested to give notice of their intention at an early date, directing their communication to "The 74th Congress of Natural Philosophers," Carlsbad, Austria.

International Congress on Electro-Therapeutics.—The first International Congress on electro-therapeutics and radiography was held in Paris in the summer of 1900. At that time it was voted to hold an International Congress periodically every three years. but to avoid clashing with other congresses, it was resolved that the second Congress be held in 1902 and at Berne. The following international committee was then elected and charged with the arranging of future congresses: *President*, M. Tripier, Paris; *Secretary*, E. Doumer, Lille; *Assistant Secretary*, A. Moutier, Paris; *Treasurer*, Boisseau du Rocher; Benedikt, Vienna; R. G. Brown, Brooklyn, N. Y.; Chatzky, Moscow; Dubois, Berne; Grunmach, Berlin; La Torre, Rome; Leduc, Nantes; Provost, Geneva; Schiff, Vienna; Weiss, Paris, and W. Salomonson, Amsterdam. The Congress will open on September 1 and continue for six days. The subjects announced for general discussion are: 1. The Present State of Electrodiagnosis; 2. Surgical Electrolysis; 3. Radiography and Radioscopy of the Internal Organs; 4. Accidents Caused by *x*-rays; 5. The Danger of Industrial Electric Currents. The membership fee is 25 francs ($5.00), which should be sent with the applicant's visiting-card to Dr. Schnyder, 38, Rue Féderale, Berne, Switzerland.

Smallpox at Saranac Lake.—Dr. J. H. Hallach writes that the report that "Cuban itch," or any other disease for which smallpox is sometimes mistaken, prevails at Saranac Lake, is incorrect. There have been only three cases of smallpox or anything resembling it in the town, and these were imported.

Association of French-Speaking Physicians of North America.—The first meeting of this newly-founded society will be held in Quebec on June 25–28, in the buildings of Laval Universiy. Over six hundred physicians from Canada and the United States have announced their intention to take part in the proceedings, and France will also be officially represented.

The Society of the Alumni of the Presbyterian Hospital in the City of New York was incorporated under the laws of the State on April 16, 1902. At the annual meeting, held at the Presbyterian Hospital on April 12, the following officers were elected for the ensuing year: *President*, B. Van D. Hedges; *Vice-President*, David Bovaird; *Secretary*, John Howland; *Board of Directors*, Henry L. Shively, William K. Simpson, Arthur M. Jacobs, John A. Hartwell, and Forbes Hawkes. The next meeting of the Society will be held at the Arena on Saturday evening, May 17, at 7.30 P.M. Dr. Charles K. Briddon will address the Society at that time on "Reminiscences of Half a Century in Medicine and Surgery."

The Committee on Pathological Exhibits for the American Medical Association is anxious to secure materials for the coming session at Saratoga, June 10 to 13, inclusive. This exhibit was accorded much praise and comment during the sessions at Atlantic City and St. Paul, respectively, where were collected valuable exhibits from all parts of the country. The materials included not only pathological specimens, but the allied fields, bacteriology, hæmatology, physiology, and biology, were well represented. It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges. This exhibit has already become a permanent feature of the annual sessions of the American Medical Association, and the committee is desirous of securing its lists of exhibits as early as possible, and to this end, asks those having desirable materials to communicate with any member of the committee. To contribute to the value of the work, it is suggested that, as far as possible, each contributor select materials illustrative of one classification, and, by such specialization, enhance the usefulness of the display. Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the committee, and due credit will be given in the published reports. The members of the committee are: F. M. Jeffries, 214 East Thirty-fourth Street, New York City; W. A. Evans, 103 State Street, Suite 1403, Chicago, Ill.; Roger G. Perkins, Western Reserve Medical School, Cleveland, Ohio.

Philadelphia County Medical Society.—At a stated meeting, held April 23, Dr. Joseph Price read a paper entitled "Operations on the Green Groin (Appendicitis)." He discussed especially the subject of gangrenous appendicitis and the necessity for prompt and radical surgical treatment. Dr. Robert N. Willson presented a communication entitled "The Analyses of Fifty Cases of Tetanus Following Vaccinia, with References to the Sources of Infection." He had collected both from the literature and from private sources, as many of the cases as possible in which tetanus had developed in the sequence of vaccination, and in none was the evidence convincing that the complication was due to direct inoculation with the vaccine virus. It rather appeared that the tetanus was the result of accidental secondary infection, for which there was abundant opportunity, and the fact that the interval between the vaccinal inoculation and the development of the symptoms of tetanus was almost invariably longer than the incubation-period of tetanus seemed to lend support to this view. Dr. Jos. McFarland read a paper entitled "The Relation of Tetanus to Vaccination." He pointed out that while for many years tetanus developed only in isolated cases in the sequence of vaccination a much larger number of cases occurred during the year 1901, and of these the preponderating number followed the use of one particular manufacture of lymph and not within any local geographical distribution. From personal observation Dr. McFarland was able to state that all of the larger establishments for the manufacture of vaccine-virus are provided with the most modern scientific apparatus and are conducted with the greatest regard for cleanliness and antiseptic precautions, being, as a rule, under the charge of able and trustworthy bacteriologists of the highest order of skill, so that if contamination of the virus was the responsible factor for any of the cases of tetanus this must have been due to temporarily unavoidable conditions. The fact that so small a number of cases of tetanus had developed in the sequence of vaccination under all circumstances among the enormous number of vaccinations practised was an indication of the small degree of risk attending the protective operation, and this can be still further reduced by scrupulous attention to surgical antiseptic detail. Dr. F. A. Packard proposed the appointment by the Philadelphia County Medical Society of a commission, through whose hands should pass, periodically, samples of vaccine-virus offered to the profession for consumption, in order that the freedom from contamination of such virus may be established and be properly certified to in order that the practitioner may know in every instance, so far as possible, that the virus that he is employing is safe beyond peradventure.

Obituary Notes.—Dr. Theodore Walser of this city, assistant sanitary superintendent of the Department of Health, Richmond Borough, died at his home in New Brighton, last week, after an illness of three weeks. He was seventy-seven years old. Dr. Walser was a native of Germany, was graduated from the Jefferson Medical College in 1851, and had practised in New Brighton since 1857. He held many public-health offices. In the early sixties he was deputy health officer of the port of New York. For many years he was health officer of the old village of New Brighton, and held that position until the village was incorporated into Greater New York. He was one of the founders of the S. R. Smith Infirmary. Dr. Walser was the third assistant sanitary superintendent to die while holding that office in the past four years. Dr. George G. Hubbard died after having held the office only six months. His successor, Dr. John L. Feeny, died in May last. He left a son, a physician, and a daughter, the wife of a physician.

Dr. George E. Harrison of Springfield, L. I., died in St. Luke's Hospital, in this city, on April 24, from disease of the heart. He was born in Cleveland, Ohio, forty-four years ago. In 1873 he entered the Naval Academy at Annapolis, from the Second Congressional District, Michigan. He left at the end of his third year to study medicine, and was graduated from the Bennett Medical College, Chicago. Dr. Harrison was a traveler and a hunter of big game, and was a frequent contributor on hunting topics to the magazines. He was a member of the Press Club of this city, of the Grosvenor Club of London, and a charter member of the American Society in London.

Dr. Joseph P. Turner, one of the oldest of the alumni of the University of Pennsylvania, died in Trenton, aged seventy-nine years. He was in the cavalry service in the Civil War. He was in practice for over fifty years.

Dr. P. R. Thombs of Pueblo, Col., died at his home in that city on April 27, at the age of sixty-two years. He was graduated from the Rush Medical College, Chicago, in the class of 1862, and immediately entered the army, serving on the medical staff until the close of the Civil War. Soon after that he removed to Pueblo, where he practised his profession until shortly before his death. For several years he was superintendent of the State insane asylum.

Dr. Charles Wirgman died in Philadelphia on April 19 at the age of fifty-five years. He was a graduate of Jefferson Medical College, and was one of the physicians to the Jefferson Hospital.

Dr. J. T. V. Blocksom of Wilmington, Del., committed suicide by strangulation at the State Hospital for the Insane at Farnhurst on April 15. He was born in Sussex County, Delaware, in 1850, and was graduated from Jefferson Medical College in 1874.

Obituary.

FREDERICK A. CASTLE, M.D.,

NEW YORK.

Frederick A. Castle, M.D., of New York died April 28, 1902. He was born at Fabius, N. Y., April 29, 1842, received his preliminary education at Rochester, N. Y., and graduated at Bellevue Hospital Medical College in 1866. He served as medical cadet, U. S. Army, 1862-1863, and as acting assistant surgeon, U. S. Navy, 1863-1865. After graduating, he established himself in general practice in New York. He was editor of *New Remedies*, afterwards the *American Druggist*, and did considerable other medical literary work. For a considerable period previously to this he was a valued member of the editorial staff of the Medical Record. For a time, also, he was a lecturer on pharmacology at Bellevue Hospital Medical College. His thorough knowledge of this branch of medicine secured for him the well-deserved compliment of selection as a member of the committees for the sixth and seventh revisions of the U. S. Pharmacopœa, and for membership in a large number of medical and scientific societies. In 1877 he was appointed Visiting Physician to the Presbyterian Hospital, serving in that capacity for ten years. He was also a member of several clubs, in the organizing and management of some of which he was specially active. Early in his career he connected himself with the County and State Societies, and the New York Academy of Medicine, serving in the latter as treasurer and member of the Board of Managers. As one of the Building Committee of the Academy he was very prominently identified with the construction of the present edifice. It was largely through his personal efforts with influential friends that substantial additions were made to the building fund, thus making possible the necessary elaboration of initiatory plans. Notwithstanding his multifarious duties as medical editor, lecturer, hospital physician, and frequent contributor to medical literature in general, he engaged himself in active private practice, and was, in every sense, a broad and cultured medical man. He was a hard and efficient worker during his entire career, and leaves behind him the memory of duty well done and honors well won.

Correspondence.

OUR LONDON LETTER.

(From Our Special Corrrespondent.)

PARLIAMENT — ASYLUMS BOARD — LOCAL GOVERNMENT BOARD AND GREENWICH SCANDAL—TUBERCULOSIS OF UTERUS — DISINFECTANTS — CULICIDÆ — CANCER RESEARCH—ROYAL ORTHOPÆDIC HOSPITAL AGAIN—OBITUARY.

LONDON, April 11, 1902.

THERE has not been much of interest in the House of Commons, which resumed on Monday. Questions on vaccination statistics, on lymph obtained from monkeys, the cost of the smallpox epidemic, and so on, were put, mostly, with a view of gratifying the anti-vacs, but the answers were not calculated to produce that effect. In reference to the last point, it was stated that the expenditure of the Asylums Board, incurred through the epidemic, in the half year ending March 31, amounted to £280,000. No information had been obtained as to the amounts expended by Boards of Guardians and other local authorities.

The discontent with the Asylums Board has been growing, and at length seems to be justified by the chairman of its finance committee, whose recent statements have given rise to protracted discussions. People who pay want to know why with an increase of ninety-nine patients the increase of expenses ran up to more than £200,000? Further, why the weekly cost per patient at one of the board's hospitals should be £1.9.10, and at another £2.11.6? I have previously referred to the extraordinary expenditure on buildings and the discrepancies connected therewith. The board will have to be reformed or abolished—preferably the latter—for its constitution is anomalous and its administrative efficiency deplorable.

The Local Government Board, too, had better mend its ways; under its orders Greenwich has been compelled to build a new work-house, and that in spite of protests on the part of the guardians. This week the new building has been formally handed over, and is described as a palatial edifice, more fit for a first-class hotel than a home for paupers. The cost is said to exceed £300,000, and now the local board has changed its policy and prefers boarding out. So the poor ratepayers' money is gone, and the palatial building is to let.

Tuberculosis of the uterus is so rare that the proceedings of the Obstetrical Society on the 2d inst. possess unusual interest. Specimens of the affection were shown by the president (Dr. Horrocks) and Drs. Williamson, Targett and Croft.

Then Dr. Lewers read an account of a case of primary tuberculosis of the cervix which simulated cancer so closely that, believing it to be so, he performed vaginal hysterectomy on January 30, 1896. Dr. Lewers has seen the patient several times since, and last November she wrote to him that she was enjoying "good health and had had no return of bleeding." Portions of the growth were sent to the Clinical Research Association, and the report came back that there was no evidence of cancer, but that the structure was tuberculous.

Dr. Handfield-Jones said he had met with a similar case in a patient who had suffered from tuberculous arthritis of the fingers for which some had been amputated. She had hemorrhage and discharge, and an excavation of the cervix extending down to the vagina was found on examination. Tubercle bacilli were found in the discharge. Radical operation was declined, so, under an anæsthetic, the ulcer was thoroughly scraped and Paquelin's cautery applied. The patient remained well, so far as the pelvic symptoms were concerned. Her doctor reported that no trace of the growth could be felt, but she had developed pulmonary phthisis. The question arose whether this treatment would be sufficient in other cases.

Dr. Targett, remarking on the rarity of tuberculosis in the uterus suggested that most cases were due to extension from the tubes, where it was so much more common—from 10 to 15 per cent. of cases of tubal disease being tuberculous. In nearly all cases when the uterus was affected the growth was found also in the tubes and at an earlier stage. Uterine tuberculosis was nearly always associated with perimetritis, leading to extensive adhesions, which made removal of the uterus very difficult. But he doubted if curetting would do any good.

Dr. Croft commented on the close resemblance to cancer of the clinical symptoms and mentioned a case as to which he was at first puzzled, but which proved to be tuberculosis.

Dr. Kerr suggested that the growth in Dr. Lewers' case might possibly have been secondary to pulmonary tuberculosis.

Dr. Horrocks (president) said that even the microscopic appearances were not always decisive. There was, however, a difference which he had noted in two cases of tuberculosis, *viz.*, the growth affected the whole of the interior of the uterus, body, and cervix alike; this was scarcely ever the case in cancer.

In the report of the County Council's Medical Officer, just distributed, there is an account of some investigations by Drs. Klein, Houston, and Gordon on disinfection under conditions similar to those met with in ordinary dwelling houses. The results are rather unexpected, and will probably give rise to other experiments in the interests of those whose products seem the least effectual Cloth, unpainted wood, linen and wall paper were charged with microbes and exposed to the action of different disinfectants. Formalin and sulphur dioxide failed in the case of cloth and wood charged with spores. Formalin was more active than the sulphurous gas on tubercle sputa dried on linen and paper. Turning to fluid disinfectants it seems that corrosive sublimate was most effectual, for twenty-four hours exposure with 1 in 1,000 destroyed all microbes, including spores of anthrax and the bacillus of tubercle. Five per cent. carbolic acid, with the same time of exposure, destroyed all except anthrax spores. Bleaching powder was more destructive to anthrax spores on paper and linen, but in other cases was less active than carbolic acid. The bacillus of typhoid was destroyed by all the disinfectants except bleaching powder and permanganates. A similar result is reported with these two on the cholera vibrio and on staphylococus aureus. The other disinfectants were efficacious in these cases. Practically, it would seem that Condy's fluid is of inappreciable value and bleaching powder must take a back seat. Sulphurous acid, too, has not sustained its reputation, being useless against tubercle bacillus, as were also Condy's fluid and formalin; in fact, for this organism only carbolic acid and corrosive sublimate were of value, and for anthrax spores the sublimate only.

A "Monograph of the Culicidæ on Mosquitos," by F. V. Theobald, M.A., has been brought out for the trustees of the British Museum, in three volumes, with numerous illustrations, maps, and colored plates. It is published for the trustees by Longmans at £3.3.

Major Ronald Ross has written a small volume entitled "Mosquito Brigades, and How to Organize Them," just the thing to suit such of the public as are interested in the prevention of malaria.

A number of other works on this subject are exciting attention—among which I may mention "Reports to the Malarial Committee of the Royal Society," by Dr. Christophers.

The two colleges have arrived at a draft scheme for an organized research on cancer, which I wrote you was proposed. The General Committee seems well constituted, the Scottish and Irish Royal Colleges are to have representatives, and so are the veterinary colleges. The Colonial Office and the Royal Society are each to be invited to nominate a member.

You have heard so much of Mr. Rhodes's will that I refrain from further remark than that Oxford now has the chance of making her medical school worthy of her reputation.

Surgeon-General J. C. Penny, M.D., London., died on the 6th inst., aged seventy-two years. He had a distinguished career in India, was through the mutiny and took part in the relief of Lucknow and Cawnpore.

Deputy Inspector-General J. T. Caddy, R. N. (retired), died on the 21st ult., aged eighty years, after thirty-one years of naval service, he had a Greenwich Hospital good-service pension.

The death of Surgeon-Captain Geo. Ramsay of the Indian Medical Service, at the early age of thirty-three years, is also reported. He had the Chitral medal and clasp.

Robert Brown, F.R.C.S., on the 28th ult., in his eighty-second year.

William J. Preston, M.D., on the 16th ult., aged eighty-two years.

Only last week I told you of the death of Dr. Long Fox. Now, I have to record the death of his much younger brother, Dr. Bonville Fox, who died on the 2d inst. He was only forty-nine years old. He had devoted much attention to lunacy, and was proprietor of a private asylum near Bristol, where he was a well-known figure. His opinion in consultation was highly valued, and he had the esteem of his brethren.

Faculty of Medicine at Columbia.—The first faculty of medicine at Columbia University was established in 1767, and reestablished in 1792, five years after the war was over and the college had been reopened. The medical faculty was merged in the College of Physicians and Surgeons in 1813, the course being given at Columbia. In 1860 the School of Physicians and Surgeons became the medical department of the college, although not actually a fundamental part of the institution.

Progress of Medical Science.

Boston Medical and Surgical Journal, April 24, 1902.

Notes on the Production of the Test Serum in Rabbits.—W. F. Whitney gives directions for humanizing rabbits The serum which can be most easily procured is hydrocele fluid; ascitic or pleuritic fluid is not quite so common, but the amount is so much larger that it can be used for more rabbits. These sera have the advantage over those obtained from blood, that they are perfectly clear and do not have to be separated from the blood clot and corpuscles. Any syringe that can hold 10 c.c. and can be properly sterilized is all that is required. The abdomen of the rabbit should be shaved and the animal held out straight by an assistant. The skin is pinched up with the left hand and the needle introduced by a steady thrust with the right. The only chance is that the point may not be inserted into the peritoneal cavity but under the loose skin. After withdrawing the needle the abdomen should be again scrubbed with alcohol. The operations and reactions are so simple that they can be performed by any one, with the exercise of care and exactness. But considerable experience must be had before one would be qualified to testify in a capital case.

The Serum Test for Blood.—E. S. Wood says that the first discovery of blood anti-sera was made by Tchistovitch, in 1899, and his work has been confirmed and extended by other investigators. It has been found that rabbits are the animals best suited for this kind of experimentation. If a rabbit is prepared by injecting into the peritoneal cavity several times, at intervals of a few days, about 10 c.c. of any kind of blood, or blood serum, there will be formed in the blood of that rabbit a peculiar body, called by Myers and Nuttall, a specific precipitin, which will produce a precipitate called by them the precipitum, in the diluted blood or blood serum of an animal of the same kind as the one with which the rabbit was prepared. Recently the author applied the test with antiserum obtained from a humanized rabbit, in a murder case. Solutions of blood stains found on clothes, towels, a stone, etc., were placed in small test tubes side by side, and when to them was added two or three drops of the test serum, a distinct precipitate occurred within half an hour. This reaction did not take place in test tubes containing blood of the dog, pig, ox, and sheep, which had been prepared for purposes of comparison.

Journal of the American Medical Association, April 26, 1902.

Surgery of the Liver.—Carl Beck of Chicago gives the clinical histories of several cases, and reviews certain experimental researches made by himself and by others. From his observations on patients and from experiments on animals, he would draw the following conclusions: (1) Liver tissue of considerable size may be safely removed by previous anemization of the part which is intended to be removed; (2) For the support of the ligatures living tissue from the same animal, preferably the fascia and peritoneum from the abdominal wall, is best suited; (3) The intraperitoneal or the intraparietal method is preferable to the external method.

The Nature of Prostatic Hypertrophy.—R. H. Greene and Harlow Brooks discuss this question in an elaborate paper, which is freely illustrated. They have collated fifty-eight cases, all showing evident inflammatory lesions. The most frequent cause of enlargement was found to be interstitial hyperplasia. Their main conclusions are as follows: (1) Prostatic hypertrophy of the aged is the result of chronic prostatitis; (2) It most frequently arises from chronic posterior urethritis, of whatever cause; (3) True neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy; (4) Carcinoma is apt to occur in the hypertrophied prostate as a result of the chronic inflammatory process.

The Relationship of Antistreptococcus Serum to the Treatment of Puerperal Sepsis.—G. E. Ranney relates the history of an unsuccessful case, and does not believe that the serum is a proper remedy to administer under the circumstances indicated. His patient died in uræmic convulsions. No pus accumulations could be discovered, and this condition the author attributes to the frequent and persistent use during the case of hot vaginal douches. As things to be avoided in general, he mentions the serum, ether anæsthesia, when narcosis may be required, exploring with trocar for pus, cauterizing abraded surfaces to destroy exudation, making an abdominal incision during the course of the septic fever, unless the pus accumulation has become localized and demonstrated, or making it even then until after leucocytosis had been determined. He advises against subjecting the patient to the shock of any operation until the pus has formed and become localized and can be easily removed without severe shock to the system.

Management of the Umbilical Cord.—C. S. Bacon ties the cord four or five centimeters from the body with a sterile tape; the vessels are emptied out toward the placenta by pressure of the thumb and forefinger, and the cord, then cut with sterile scissors about three centimeters from the ligature. After the mother has been cared for and all made ready by the nurse, the latter holds the baby on her lap with arms and legs surrounded with clean towels. The towel previously wound about the cord immediately after section is then unwrapped, and with a medium-sized silk ligature it is retied at its base or the junction of the skin and amniotic sheath. Without cutting the ligature, he then carefully cuts off the cord two or three millimeters beyond the ligature. If the cord is quite thick, or if there is any sign of bleeding from the vessels, or if he has any doubt of the security of the ligature, after careful inspection, he encloses the cord once more with the ligature. The ends are then cut off rather short, and a large sponge of cotton, saturated with alcohol, is placed on the navel. This is kept in place by the nurse while she oils the child to remove the sebum. When the bath is given, the child is placed on its back in a tub that is only partly filled with water, or the child is washed with a sponge. After the bath, fresh alcohol is placed on the navel while the child is being dried and measured. Then a dry sterile pad of gauze or cotton is placed over the navel and the usual bandage applied. This pad stays in place without trouble till the next dressing of the child. As a rule, the child is bathed and the navel attended to every twenty-four hours. At the subsequent dressings a cotton sponge, saturated with alcohol, is applied before the bathing and also afterward. Then a dry dressing is used. The cord comes away in from three to six days.

New York Medical Journal, April 26, 1902.

A Peculiar Symptom in Typhoid Fever.—W. C. Doane calls attention to a symptom which he has found to indicate great danger and, as a rule, to presage death. It is unilateral deafness. But when, on the contrary, both ears are deaf, the prognosis is generally favorable. This idea was advanced by Trousseau over twenty-five years ago, and Doane is unable to give any explanation of it, but claims to have verified its accuracy in his own personal experience.

On Blood Pressure under the Influence of Acute Overstraining of the Heart.—From an extensive series of experiments, Theodore Schott has determined that during violent exercise, such as wrestling, the heart dilates, first the right ventricle, then the left; the pulse becomes small, rapid, very compressible, and even dicrotic. After cessation of exercise, the conditions return to the normal, the time depending on the age and general state of the subject. Further investigations have shown that wrestling, when not pushed to the point of dyspnœa, resembles a simple, strong muscular action, producing a rise in the blood pressure of from a few millimeters up to 10 or more. As soon, however, as a longer dyspnœa appears the blood pressure rapidly sinks. With the cessation of the dyspnœa and the disappearance of the cardiac dilatation the blood pressure does not necessarily return to normal, for the pulse may show variations from the normal for a long time, and, similarly, the blood pressure may require hours before regaining the normal height. In other cases the normal blood pressure returns very quickly, even while the pulse and respiration rates are still high. The cardiac outlines, however, always become normal by that time. It has also been found that when in a healthy man the experimenter has produced an acute insufficiency of the heart by muscular exertion—for instance, by wrestling—if he repeats the experiment after not too long a period, far less effort and far shorter duration of exercise are sufficient to reproduce the cardiac insufficiency. According to Schott, these observations throw an explanatory light upon the origin of chronic cardiac overstraining.

American Medicine, April 26, 1902.

Pneumonia.—Stephen Smith Burt defines pneumonia as an acute, self-limited, systemic infection, whereof the concomitants, though various, are chiefly pulmonary; it is endemic in many countries, and it occurs everywhere sporadically; regarding the lung tissue, the affection seems more in the nature of an exudation than an inflammation; the frequency of detection of the diplococcus in living blood in pneumonia suggests that by improved technic it will be found, like the plasmodium in malaria, invariably; infection of the heart muscles with resulting degeneration has more to do with heart failure than mechanical obstruction; the exact significance of pathological leucocytosis requires further elucidation; pre-existing receptivity determines the degree of infection, rather than the number of microbes, which are in quality unchangeable; while neglect of personal hygiene and of sanitation predisposes to pneumonia; unqualified good health is a protection therefrom.

Mentholization of the Mucosa of the Air Passages.—W. A. Briggs advises this procedure as a preliminary to etherization. He describes the method as follows: Sprinkle a drachm of oil of peppermint or of saturated solution of menthol in the cone; let the patient inhale the fumes for three minutes, then saturate the cone with ether and bring it down slowly over the face; after a few full inhalations, crowd the cone down and push the etherization as rapidly as can be done with safety. Use the same cone throughout the anæsthesia. After the operation let the patient inhale the peppermint or menthol from a handkerchief till the tendency to nausea subsides. The advantages of the menthol are entire freedom from cough and sense of impending suffocation and comparative freedom from nausea, vomiting, and retching; the ease and rapidity with which anæsthesia may be induced and the ease with which it may be maintained; the entire absence or marked abbreviation of the period of excitement; economy both of ether and of time; more profound primary anæsthesia, under which minor operations may be done with more certainty; and finally, probably less postoperative nausea and vomiting.

Marrow and Spleen Cells Considered in Their Relation to the Blood Cells.—Edward T. Williams describes marrow cells as round or ovoid, and from 15 to 20 microns in diameter. They contain a single large and usually excentric nucleus, varying in shape. This stains readily with the basic dyes. The cell body takes the same dyes, though less deeply. In fact, the true marrow cells are basophiles. The best pictures are obtained with alum-hematoxylin and Bismarck-brown, staining half an hour in hematoxylin, then washing thoroughly, and finally counterstaining with a dilute solution of Bismarck-brown. Hematoxylin and basic fuchsin also make a fine picture. The marrow cells are identical with the so-called large lymphocytes of the blood. The latter is the true myelocyte of the blood. The marrow cells are capable of amœboid movement, and the nuclei seem to be capable of a rotary movement. The marrow cells are in all probability the progenitors of the multinuclear leucocytes. The spleen contains red and white blood-corpuscles and multinucleated giant-cells resembling those of bone-marrow. The spleen-pulp as to its cellular elements closely resembles bone-marrow. Of all the spleen cells, the red blood-corpuscles are the most numerous. The white corpuscles are far less numerous in spleen than in marrow. The majority of these are small uninuclear cells, like the lymph cells. They are distinctly basophile. There are very many large uninuclear leucocytes, often twice the size of the lymphocytes, and nearly, if not quite, identical with the true marrow cells or myelocytes. Multinuclear leucocytes are comparatively rare in the spleen. Nucleated red cells are more numerous in spleen than in marrow. There are a great many microcytes and poikilocytes. As to the red corpuscles, the obvious conclusion is that they are elaborated by the spleen. The production of red corpuscles in the red marrow rests on much slenderer evidence and yet is universally admitted. The writer believes that the red blood-corpuscles are formed in the red bone-marrow, but that the spleen is also an active sharer in the work. As to the leucocytes, the spleen seems to have a less important agency in the formation of these bodies than the marrow and lymph glands.

Medical News, April 26 1902.

The Indications for and Limitations of the Bottini Operation.—According to Louis E. Schmidt, it is almost needless to state that this operation has suffered from the exalted enthusiasm of those who have recommended it for every case of prostatitis. On the other hand, it has been condemned by many surgeons who have never practised it. Authorities vary as to the exact indications. There are certain limitations of the prostatic pathological changes which, when operated on by this method, permit of good expectations as to the ultimate outcome. These changes of the gland, naturally, from the character of the operation, must occur just at the border between the urethra and the bladder. Absolute contraindications can be put forward only in those cases in which the anatomical pathological conditions preclude the possibility of any favorable result. The so-called "prophylactic" Bottini operation of Horwitz must always be followed by good results if the case be properly selected and if the technic be faultless. If it be not possible to make a thorough cystoscopic examination, it is best not to undertake the operation. Cicatricial contraction cannot occur if the barrier or barriers have been completely severed and if the technic is correct. As to phlebitis, anterior incision in the large majority of cases was the cause, and this has been practically abandoned. The Bottini operation is not an easy one. It is necessary to be able and willing to recognize at once any accident which may occur at the time of operation or any later complication. The after-treatment must be very careful. Good results of this operation will depend on the careful selection of cases; on the proper technic of the operation and proper after-care; and on the immediate correction of errors or mishaps.

The Diagnosis and Operative Treatment of Prostatic Hypertrophy, with Remarks on the Complications Before and After Operation.—Ramon Guitéras sums up the clinical and statistical data obtained upon the subject of prostatic operations during the last few years. He says the general practitioner should be educated to palpate the prostate, and to use the other simple means of diagnosis employed in determining the shape and size of the organ. In default of previous training in rectal palpation, he should at every opportunity familiarize himself with the feel of a normal prostate, and should thus educate his touch for prostatic diagnosis. The prostate corresponds pathologically in the male to the uterus in the female, and its examination is just as important. In prostatics, the care of the bladder before operation is a prime factor. The importance of training such patients to observe the minutiæ of catheter life, and of making the kidneys as active as possible before operation cannot be overestimated. Every prostatic operation should be preceded by a thorough general examination. The statistics of the results of prostatic operations demonstrate that the successful cases belong most frequently to the class having a small amount of residual urine and a moderate prostatic enlargement. An early diagnosis is most important. The choice of operation must depend upon the age, the resisting power of the patient, the size and shape of the prostate, with special reference to the seat and extent of the hypertrophy, and the condition of the kidneys and bladder. In the conduct of prostatotomy, as well as prostatectomy, the prime object is to avoid, as far as possible, the occurrence of shock, and to prevent the congestion of the kidneys by proper precautions during and by proper treatment after the operation.

Philadelphia Medical Journal, April 26, 1902.

Report of Several Cases of Corneal Complications in Conjunctivitis Due to the Koch-Weeks Bacillus.—Edward A. Shumway, from his experience with these cases, concludes that the Koch-Weeks bacillus conjunctivitis is apparently becoming more common in Philadelphia than has hitherto been observed. It may present itself in a particularly severe form, and be complicated by phlyctenules and even by corneal ulceration. These cases are especially contagious, and extra precautions should be taken to prevent the spread of the affection, particularly among school children, As a rule, the disease is controlled by the use of mild astringent lotions, and applications of 2 per cent. solutions of nitrate of silver.

A Case of Diaphragmatic Hernia.—This case was under the care of W. Moser. The man had this hernia for some years and did not know how he got it. From his statement it appears to have originated simultaneously with a double inguinal hernia. He cannot recall any severe injury in the region of the diaphragm. It did not exist in childhood, as far as he can remember. The patient had no difficulty in replacing the mass, which probably contained a part of the stomach and intestines. Upon replacing the mass, several fingers could be easily passed through a large opening in the diaphragm, and a part of the heart could be easily grasped with the fingers. The writer thinks that cases of this character may be due to a slight traumatism or heavy lifting, and that a congenital, easily dilatable opening or malformation preëxists.

A Case of Adiposis Dolorosa.—John B. Roberts reports the case of a French woman, sixty years of age and a widow. She first menstruated after her marriage. She was menstruating a few weeks after her marriage when she heard of her husband's death. The flow stopped at once. Twelve years later she menstruated once again, at which time she heard of her mother's death. The flow ceased, and she has never menstruated since. She has never been pregnant. Nine years ago she broke the left fibula. According to her statement, the leg has always been abnormally large since that time. Gradually, both legs and thighs became very much enlarged by deposits of irregular nodular masses of fat. Constant pain was felt in the left leg from the time of injury. The extreme deposit of fat seemed to be limited to the lower extremities. Administration of thyroid extract and potassium iodide has been followed by marked diminution in size of the legs, and the pain has ceased. There are still large masses of fat in both legs. Heart and lungs are both negative.

The Lancet, April 19, 1902.

Diphtheria in the Newly Born.—G. A. Auden reports the case of a boy eight days old, born after a normal labor. On the eighth day there appeared a greenish discharge from one naris, later from both, with fretfulness, refusal to nurse, but nothing could be found to account for the condition. On the tenth day the discharge was increased and both nares were nearly occluded. There was some dyspnœa, some diarrhœa and a moderate fever. Both tonsils showed a patch with œdema of the surrounding tissues. two hundred antitoxin units were injected and repeated in four hours. The child did well, and on the thirteenth day all danger seemed to have passed. It was found that one month before confinement the mother had had a severe sore throat. It may have been diphtheritic, and she herself may have been the source of the child's contagion. Auden does not incline to the view that maternal milk possesses antitoxin properties. In this case the mother nursed the child throughout.

Pyrexia of Gastrointestinal Origin During the Puerperium.—Two cases illustrating the clinical fact mentioned in the title are reported by Ethel M. N. Williams. The author believes that the rôle of the intestinal tube in infections during the puerperium is wider than is generally supposed. Cases both of septicæmia and pyæmia have been described in which the infecting organism has been found to be the bacillus communis, and it is much easier to suppose that the infection in those cases has taken place through the walls of the intestine rather than through a wound in the genital tract. It is known, as a matter of fact, that during the puerperium the resistance of the body against microbic invasion is very markedly diminished. It is but natural, then, to suppose that this loss of defensive power will be as apparent in invasion from the intestinal tube as in the more usual invasion from the genital tract. Obviously it is of the utmost importance to make an early distinction between these two classes of cases. In the gastroenteric cases, we should expect an absence of symptoms pointing to the genital organs much flatulence and considerable abdominal pain, usually localized in the upper quadrants of the abdomen. A history of constipation is not always present, yet after the bowels have been acted upon, there is often evidence of a previous fecal retention.

On Cardiac Inadequacy.—Alexander Morison believes that some patients possess an abnormal smallness of the heart in proportion to the circulation it is called upon to maintain. This is a very important factor of success in treating those diseased conditions in which an additional strain falls on this organ. Certain cases of phthisis show an abnormally small heart. Physical examination may not suffice to reveal this abnormality, but in the *x*-ray we possess a most valuable diagnostic agent. When a heart essentially inadequate gives way under the strain of ordinary existence or exceptional effort, or in consequence of acquired impediment from disease affecting any portion of the circulatory system, the persistence, rapid onset, and intractability of the conditions induced may be expected to be characteristic of the essential and original fault. But, perhaps, the most delicate index to imperfect blood-pressure is the amount of the urine—that is, of water voided by the kidneys. The secretory structure proper to these organs may be healthy and the output of solids not apparently lessened, but the urine will have a high specific gravity and, proportionately, deposit a larger amount of solids. Such a condition may, of course, result and, as we know, does result, when a heart, however originally adequate, breaks down from any cause; but when such failure is supplemented by an essential inadequacy it may be expected to be a still more marked, and, perhaps, more easily detecteble sign. For the rest the essentially inadequate organ must participate in all the recognized phenomena indicating failure of the heart from any cause whatever.

The British Medical Journal, April 19, 1902.

The Seton in Migraine.—T. E. Watson gives his experience in a case of this kind. The patient was afflicted with obstinate migraine, the severe pain being almost constant, while insomnia added to his sufferings. He had no appetite, and was very thin and weak. After the introduction of a seton in the back of his neck, improvement was marked, and in three weeks he was almost well. The seton was then removed and about ten days later he was perfectly cured. He has had no return of the pain since.

Notching the Soft Palate for Cure of Post-Nasal Obstruction in Adults.—J. M. Thorne describes this operation, which is very simple: The patient is anæsthetized and the mouth held open by a gag; the palate is grasped with a vulsellum forceps, while with the scissors it is cut through on either side, a wedge-shaped piece being removed; this piece is fully half an inch high. There is then a good-sized notch to be seen on one side of the soft palate. The post-nasal space can then be scraped if needful. After a few days in bed, the patient can get up. In a week the wound has healed. The voice loses much of its former hoarseness, and sleep, which has been so rare, returns. The writer thinks that this operation is likely to relieve the nasal obstruction, which may cause asthma or hay fever.

The Influence of Nasal and Nasopharyngeal Obstruction upon the Development of the Teeth and Palate.—A. L. Whitehead declares that it is quite certain that interference with nasal respiration is capable of producing serious and extensive deformity of the teeth and jaws and that, by the restoration of nasal breathing, this disfigurement of the maxilla can be prevented, and if seen at an early stage, considerably alleviated, the constant stream of air expanding and developing the upper jaw. There are many cases of V-shaped deformity of the maxilla, with anterior protrusion due to other causes, but interference with nasal respiration is so common a cause that the condition of the nose and nasopharynx should be investigated in all these cases. Breathing exercises are undoubtedly valuable in some cases of nasopharyngeal obstruction produced by the presence of an abnormal quantity of adenoid tissue, especially if it is a first attack, or the repetition of a previous one with free nasal breathing in the interval. But when the obstruction is chronic, especially if acute exacerbations occur, when secondary aural affections exist, and when deformities of teeth and palate are present, it will be found that breathing exercises, unless preceded by operative measures, will be generally ineffective, and valuable time will be lost.

Deutsche medicinische Wochenschrift, April 3, 1902.

Gunshot Wounds of the Skull.—Ernst v. Bergmann depreciates the routine employment of operative procedures in small gunshot wounds of the skull (those inflicted by shot 5, 6, 7, 8, and 9 mm. in diameter). He reports two cases to show that non-operative treatment is often followed by complete recovery even when symptoms of severe and extensive brain injury are present. In the first case there was an entire loss of consciousness and a complete hemiplegia of the injured side, except that the leg was somewhat less paralyzed than the arm. In many cases where an operation is performed the bullet is not located, and much harm is done by the necessary manipulation of the brain. Experience has also shown that the symptoms are not a sure guide to the location of the bullet, as it is frequently not found in the situation which such symptoms would indicate. The author believes that only those cases should be submitted to operation in which it can be definitely determined that the bullet lies near the cranial bones. In all other cases the best results are obtained by expectant treatment.

Surgical Treatment of Ascites Arising from Cirrhosis of the Liver.—Hermann Kümmell reviews the literature relative to this subject, and reports seven cases which were operated upon, following the principles laid down by Palma and Drummond. In the last case the length of time since the operation is too short for a correct estimation of the ultimate outcome. However, the liver and spleen have been markedly reduced in size, and the general condition of the patient is very good. The second and third cases died a few days after the operation; in both cases the general condition was very unfavorable, and the operation was only undertaken as a last resort. The fourth case died five weeks after the operation. During that time there was no recurrence of the ascites, although previous to the operation aspiration had been necessary six times within a shorter interval. There was no recurrence of the ascites, in the first case, for three years subsequent to the operation, and the general condition was good. At the end of this time the patient disappeared from view. In the fifth case there was no recurrence of the ascites for one year after the operation. Death then took place, due to an intercurrent disease. The most striking result was obtained in the sixth case. Here the patient, when operated upon, was moribund. Recovery took place, and the patient has remained in good health until the present time. The operation took place on September 4, 1901. Kümmell thinks that it is very doubtful whether cirrhosis of the liver is to be cured by operation, but it is certain that, in most instances, the ascites and other annoying and dangerous symptoms may be permanently relieved thereby.

Münchener medicinische Wochenschrift, April 8, 1902.

Bone Marrow and Infectious Diseases.—Eugen Fraenkel has examined the bone marrow in certain infectious diseases in order to determine whether or not the specific microorganism can be found therein. A case of typhoid fever showed the presence of typhoid bacilli in the spinal marrow. The diplococcus lanceolatus was found in the spinal marrow in five cases of pneumonia, but was not found in the marrow of the ribs. In two cases of facial erysipelas streptococci were found in the marrow, also the diphtheria bacillus in the spinal marrow in several cases of diphtheria. In a case of phlegmonous lesion of the forearm the staphylococcus pyogenes aureus was found in the spinal marrow. This microorganism was also obtained from the spinal marrow in a case of scarlet fever. Finally, streptococci and staphylococci were found in the spinal marrow in a case of tuberculosis. In all of these cases the vertebra showed pathological changes due to the presence of these organisms. These changes were chiefly of a necrotic nature. A more detailed consideration of them is reserved for a subsequent communication.

Changes in Color of the Hair.—W. G. Weinberg says that although the falling out of the hair is a well known and common result of syphilitic infection, the fact that the newly-formed hair which replaces that lost may be of a different color, has not been as yet reported. Three cases are described in illustration of such a change of color. The first was that of a woman who previous to the contraction of. syphilis had black hair. As the result of this disease the hair came out in large quantities. When new hair grew in, it was of a dark blond color and so remained. The second case was in the husband of the first patient Previous to syphilitic infection his hair was light. The new hair which replaced that which had fallen out as the result of this disease was of a dark color. The third patient had blond hair before he contracted syphilis, and the new grown hair was of a still lighter color. The cause of these changes of color of the hair is probably to be sought in tropnoneurotic disturbances, which influence the amount of pigment in the hair bulb.

Stomach Washings with Nitrate of Silver Solutions; a Therapeutic and Diagnostic Cholagogue.—Franz Ehrlich gives the following technic as suitable for adoption in this mode of treatment: at first the fasting stomach is washed out with hot water (40° to 50° C.), which is continued until the water returns perfectly clear. There is then introduced ½ a litre of a 1 to 1,000 aqueous solution of silver nitrate at 40° to 50° C. This should remain in the stomach for ½ to 2 minutes. This latter process is repeated and the stomach is finally washed out with water until the return flow is absolutely clear. These washings are usually painless, but in nervous patients may cause some inconvenience. The diet should be that ordinarily given in chronic catarrh of the small intestine. The cases most suitable for this treatment are those of cholangitis or cholelithiasis complicated with cholangitis or cholecystitis. In such cases after one or more washings the liver markedly increases in size and may so remain for quite a long period. At times the enlargement of the liver is so great that a transient compression stenosis of the pylorus is produced thereby. Subsequently a painless, grass-green diarrhœa sets in which may be accompanied by the passage of gallstones. After a few days of such diarrhœa the liver decreases in size and the symptoms of the disease disappear. At times the swelling of the liver is so marked and continuous that the diarrhœa does not occur. When this is the case the washings with nitrate of silver should be frequently repeated. The effects produced by these washings are due to mechanical, thermic and chemical influences. At first both the intestinal mucus membrane and liver are irritated. The irritation of the former blocks up the intestinal orifice of the gall-duct and prevents the free passage of gall into the intestine. After a few days the irritation of this mucus membrane subsides but that of the liver continues. When this takes place the characteristic diarrhœa begins and the liver decreases in size. The washings should be repeated daily or at intervals of a few days each according to the indications in individual cases. Observations have shown that nitrate of silver given in medicinal doses by the stomach acts as a cholagogue. It is certain, however, that when thus given the results produced are not nearly so satisfactory as when the above described stomach washings are employed. This is shown by the following figures, gathered from a study of seventy-five cases: ordinary administration of nitrate of silver gave 25 per cent. cured without relapses, 37.5 per cent. cured with relapses, 37.5 per cent. not benefited. Stomach washings with nitrate of silver gave 63 per cent. cured without relapses, 31.8 per cent. cured with relapses, 4.5 per cent. not benefited. In only three of these seventy-five cases was it necessary to discontinue the treatment on account of the nervous disturbances produced. In the remaining seventy-two no disagreeable symptoms were produced. Five cases are described in detail in illustration of this method of treatment.

French and Italian Journals.

Tuberculosis of the Suprarenal Capsules in a Cow.—M. G. Petit describes these organs, which were taken from a cow which had suffered from generalized tuberculosis. Tuberculosis of the suprarenal capsules has been less frequently noted in animals than in men. While one of the capsules taken from this cow was perfectly normal, the other was ten times the normal size and was curiously changed. The surface was odular and irregularly infiltrated with caseous matter. It was also beginning to undergo calcareous degeneration.—*Bulletins et Mémoires de la Société Anatomique de Paris*, December, 1901.

Acute Hemorrhagic Encephalitis.—Erminio Masetti reports a case in which the finding of Fränkel's pneumococcus in the cerebral tissue, which was the seat of the disease, permits of the statement that the development of the acute encephalitis was due to the toxic infective action of the microorganism. The case was that of a man, previously in excellent health, who was attacked by a pleuro-pulmonary affection. Six days later he had a general convulsive attack of short duration, with loss of consciousness, involuntary emission of urine, and profuse sweating, followed by somnolence, and fatal coma. The pneumococci, after having caused the inflammatory conditions in the lungs, passed by means of the circulation to the brain, where they found the suitable conditions for the development of non-purulent hemorrhagic polyoencephalitis.—*Rivista Critica di Clinica Medica, March* 15, 29, 1902.

Radium.—Javal makes an interesting communication concerning the curious properties of the new metal, radium discovered and studied by Mr. and Mme. Currie. In the dark this metal emits a light which is peculiar to itself, which is not phosphorescence, and which is distinct from the Röntgen rays, although bearing a certain analogy to the latter. The rays from this metal traverse opaque bodies and produce physiological effects. Currie thinks that these properties could be utilized to discover if the optic nerve in the blind is absolutely atrophied, and if, accordingly, all hope should be abandoned of the recovery of sight. Javal cites several instances in which certain blind patients could perceive the glimmer of radium. In others, on the contrary, there was no perception of its light. This metal is still extremely rare. It is prepared in the form of the chloride.—*Gazette des Hôpitaux Civils et Militaires*, April 17, 1902.

Traumatic Diabetes.—Luigi D'Amato concludes from his studies of the subject that there is no macroscopic nor microscopic lesion of the nerve centers caused by the trauma and capable of explaining the appearance of the diabetes. In diabetes there may be fatty degeneration of the cerebral capillaries and small blood vessels, independent of arteriosclerosis and atheroma; degeneration of the walls may also cause a parietal fatty thrombosis. In addition to irregular degeneration of the nerve fibers in diabetes, there may be lesions of the nerve cells, which are also irregular. There may be a new form of atrophy of the liver, in which there is pigmentary atrophy of the gland cells, with increased interstitial tissue formed of cells and not of connective tissue. In traumatic diabetes there are lesions of the pancreas identical with those found in cases of diabetes from primary atrophy of the pancreas. He suggests therefore that traumatic diabetes may really be a pancreatic diabetes.—*Rivista Critica di Clinica Medica, March* 15, 22, 29, 1902.

Simultaneous and Independent Cancers of Both Lips.—H. Morestin reports this case. The patient was a man fifty-one years old. The mouth was affected with a general leucoplakia, covering the tongue, the cheeks, and the lips. No definite cause could be ascertained. The patient was a very moderate smoker, and was not addicted to the use of alcohol. He absolutely denied syphilis. The plaques were numerous, of a clear opaline appearance, with no point of great opacity. There was a pronounced tendency to ulceration. But of an entirely different aspect were two ulcerations, one on the left side of the upper lip, the other on the right half of the lower lip. The ulceration was seated on a very hard base, and the lip was infiltrated deeply into the muscular layer. In the submaxillary region on each side there was an enlarged ganglion. The general condition was excellent. There was no suffering. The rigidity of the lips hindered articulation and mastication to a certain extent. The diagnosis was confirmed by a microscopical examination. The writer removed both of the tumors, and the recovery was excellent, the healing being by primary intention. The result was satisfactory from all points of view. The only relation detected between the tumors was purely etiological—the diseased condition of the mouth.—*La Presse Médicale*, March 29, 1902.

Book Reviews.

Principles and Practice of Operative Dentistry. By John Sayre Marshall, M.D., Dental Surgeon, U. S. Army; President Army Examining Board for Dental Surgeons. Philadelphia and London: J. B Lippincott Company, 1901.

This comprehensive volume begins with minute descriptions of the anatomy, morphology and development of the human teeth, but most of its space is devoted to operative dentistry. Since bacteriology has come to be of importance, dental surgeons have devoted much attention to the bacteriology of the mouth and teeth, and much light has been thrown upon some pathological processes. This subject and the allied one of dental caries are carefully gone into in this volume as a preliminary to describing those dental operations which are made necessary by bacterial activity. The mechanical processes required for preparing cavities and the various instruments in use are very well illustrated and described by engravings and photographic reproductions. Detailed descriptions of filling materials, their preparation and relative advantages and disadvantages are likewise given. This is an important subject and deserves the considerable space given to it in this volume. Suppurative disease of the teeth and neighboring bone belongs on the border line between dental and general surgery, on the principles of the latter of which its treatment depends. Some of the finer mechanical processes required for such treatment receive in this work the attention which they deserve to make them valuable to the dentist. A number of chapters are devoted to the rarer diseases and injuries of the teeth, and these conclude a very satisfactory volume.

Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages. 130 pages. By Sir Felix Semon, M.D., F.R.C.P. London and New York: The Macmillan Co., 1902.

This work consists of two lectures, delivered in October last at the Medical Graduates' College and Polyclinic. They are, in the main, a protest against the prevalent "lust of operation." According to the author, operative treatment of the upper air tract is resorted to in numberless instances where it is unnecessary, and operations of inestimable value in really suitable cases are discredited by being performed wholesale. The author lays down, in a broad manner, the conditions requiring operative intervention, and clearly discriminates in the matter of indications and contraindications, referring to the operations commonly done. His own conspicuous success as an operator has not blinded his judgment, and his statements are clear and trenchant. It will do every rhinologist and laryngologist good to read these lectures, by the delivery of which Dr. Semon has rendered a distinct benefit to this special field of medicine.

Municipal Engineering and Sanitation. By M. N. Baker, C. E. New York: The Macmillan Company, 1902.

This book is intended for that large and rapidly growing class of persons who, either as officials or citizens, are striving to improve municipal conditions; and gives a brief review of the whole field of municipal engineering, sanitation and economics. In its character, the book is essentially suggestive, and the physician will, as a citizen and taxpayer, find much food for thought within its covers. The number and variety of the subjects treated, their practical importance, and the comparative newness of some of the topics discussed, give special value to the book, which deserves a wide circulation among the general public. The efforts of the author seem to have been directed to stimulating an interest in the various questions of municipal administration, of which those relating to sanitation are of not the least importance, and in this respect the volume will, undoubtedly, prove very successful. The book is not a practical sanitary guide, nor is it intended to be; but it indicates the main principles with which the municipal sanitarian should be conversant, while directing him elsewhere for the study of these principles in detail.

Cats, How to Care for Them in Health and Treat Them When Ill. By Edith K. Neel. Philadelphia: Boericke & Tafel, 1902.

The first part of this little book of fifty pages is devoted to the care of cats in health, to diagnosis, and the administration of medicine; the second to the treatment of pussy's varied ills by homœopathic remedies. We are unable, from personal experience, to affirm or deny the efficacy of arnica, rhus tox., opium, pulsatilla, sabina, and china in the prevention of abortion from various causes, but we can give our unqualified approval of the author's prescription for diphtheria, namely, to kill the cat.

Short Talks with Young Mothers on the Management of Infants and Young Children. By Charles Gilmore Kesley, M.D., Lecturer on Diseases of Children, New York Polyclinic Medical School and Hospital; Assistant Attending Physician, Babies' Hospital, New York; Physician of the Out-Patient Department, Babies' Hospital; Member of the American Pediatric Society. New York and London: G. P. Putnam's Sons, 1901.

This is a very practical little guide for the new mother in the physical care of her first-born, as regards its "feeding, clothing, bathing and airing, and what to do in an emergency," and it contains also a brief description of the ailments and more serious diseases from which the infant or young child is liable to suffer. To this description are added brief notes regarding the nursing and non-medicinal treatment, but the author very properly refrains from any mention of drugs, and, indeed, specifically and solemnly warns against drug-giving by mother or nurse, and, above all, against the use of cough mixtures, soothing syrups, and other patent medicines. What he has to say on this subject, as well as on training babies, on excitement, birthday parties, and various other practical topics cannot be too strongly commended to the careful perusal of mothers, both old and young, who, if they would heed Dr. Kesley's warnings, might spare their children much suffering, if not actual disease and, perhaps, a ruined life.

Clinical Hematology. A Practical Guide to the Examination of the Blood, with Reference to Diagnosis. By John C. DaCosta, Jr., M.D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to the German Hospital, etc. Containing 8 full-page colored plates, 3 charts, and 48 other illustrations. Philadelphia: P. Blakiston's Son & Co., 1901.

In no branch of medicine, perhaps, are more rapid advances being made than in the study of the blood and in the application of the discoveries resulting therefrom to the diagnosis, prognosis, and therapy of disease. It is, indeed, impossible to keep up with the progress of this fascinating study, except in the periodical, literature and even of the progressive weekly journals there is scarcely an issue in which the hematologist does not find some new fact, or at least theory, recorded. This, however, does not detract from the value of systematic treatises, like the one before us, for it is only in such that the beginner can find the information necessary to initiate him into the science, or the advanced worker can refresh his memory or find recorded some fact which would otherwise be hidden in all the voluminous periodical literature of the day. Dr. DaCosta has well met these requirements in this excellent work. He writes with the ardor of an enthusiast, tempered by the caution of an expert. The first section contains full and very clearly expressed directions for conducting blood examinations; the second treats of the blood as a whole, its composition, and physical character and its morbid modifications—anæmia, plethora, acetonæmia, oligæmia, etc., section third deals with hæmoglobin, the red cells, plaques, and blood dust, and section fourth with the leucocytes; in the fifth section the author takes up the special diseases of the blood chlorosis, pernicious anæmia, leukæmia, etc., devoting the sixth to a special consideration of the anæmias of infancy and childhood; the final section treats of general hæmatology—that is to say, the changes occurring in the blood during the course of general diseases and the deductions to be drawn from a study and comparison of the conditions found. The book, we are told in the preface, is designed as a practical guide to the examination of the blood by methods adapted to routine clinical work. We can only say that the author has succeeded in the task he set before himself, and no one can go far wrong who follows so capable a guide.

Essai de Sémiologie Urinaire, Etc., por Camille Vicillard. Preface por Albert Robin. Paris: Société d'Editions Scientifiques, 1902.

The book is divided into three parts: the system of urinary semiology, general semiology and applied semiology. In the first part, after a short introduction emphasizing the value and importance of urine examination, the author points out the relation of the urine to the general condition of the organism, and in special to the organs most active in its formation, liver and kidney. From this standpoint he divides the indications of urinary analysis into two groups: the direct and redirect. The direct indications depend on the general status of nutrition, and on the functional integrity of the organs specially engaged in its formation. The redirect indications are given by conditions which secondarily affect the composition of the urine. This is followed by a discussion of the physiological processes, which modify the character of the urine, food, drink etc., physical and mental exercise; and, finally, by methods which the author recommends for the proper tabulation and recording of the results of analyses. The second part, which is devoted to general semiology, presents the conditions which will produce deviations from the usual values of the urinary constituents, *i. e.* the pathological variations in amount, color, appearance, etc., and their causes. This includes glycosuria, albuminuria and the sediments.

The third and last part considers such variations as occur in individual diseases, or specific groups of pathological processes: fevers, disorders of nutrition, diabetes, gout, etc., and the influence of primary diseases of the genitourinary tract. In a concluding chapter the author reviews once more all evidence which may be obtained from urine examination as being indicative of (1) general disturbances of nutrition; (2) of anatomical and functional changes of the kidney, and (3) of changes in the other parts of the genitourinary tract. In an appendix we find a description of some of the physical phenomena of urine, which has received a good deal of attention of late, *viz.*, the relationship of the freezing point to the molecular concentration of the urine, and its application to clinical problems, especially diagnosis and prognosis.

Transactions of the Association of American Physicians. Sixteenth session, held at Washington, D.C., April 30, May 1 and 2, 1901. Vol. XVI. 730 pages. Philadelphia: Printed for the Association by Dornan, Printer, 701–709 Arch street, 1901.

This volume consists of fifty-six articles on various subjects, the majority of which will be read with much interest by general practitioners and advanced workers. They have a peculiar value in that they represent the work of those well qualified to speak on the subjects treated, and in the fact that they were specially selected for presentation to a discriminating audience.

It would take too long to review the many articles in detail, suffice it to say that they reach an unusual level of excellence. The work is well edited and printed, and contains several explanatory diagrams and a few plates, some of the latter in colors.

Neurological Technique. By Irving Hardesty, Ph.D. The University of Chicago Press.

This little book of 150 pages admirably fulfils its purpose "to serve as an introduction and laboratory guide to the study of the architecture of the nervous system." The general introduction is taken-up with a discussion of the various fixation agencies, and instructions for the removal and handling of tissues that are to be examined. The various methods of staining are then taken up in sufficient detail.

A few paragraphs are devoted to formalin for purposes of dissection, and to a laboratory outline for the dissection of the central nervous system. The appendix contains the anatomical nomenclature for the nervous system and the sense organs. We are disappointed in not finding amongst the methods of staining one of the most useful and widely applicable, *viz.*, Van Giesen's. The book is a safe and useful guide for the beginner and for the advanced student.

The Accessory Sinuses of the Nose; Their Surgical Anatomy, and the Diagnosis and Treatment of Their Inflammatory Affections. By A. Logan Turner, M.D., Edinburgh, Surgeon for Diseases of the Ear and Throat, Deaconess Hospital, Edinburgh, with forty plates and eighty-one figures. 211 pages. New York: Longmans Green & Co., 1902.

This volume is made up of the elaboration of several lectures and papers previously published by the author, together with the results of additional observations upon the anatomy of the sinuses and their communications with each other and with the nasal chambers. Turner has had unusual facilities in the study of anatomical material, and brings, in addition to his work, the results of an extensive clinical experience. The book, therefore, becomes practically an atlas of the special topic of sinus disease and an exposition of the modes of treatment that have come to be recognized as the best. The plates are clear, the type excellent, and the index complete. But a leading feature is to be found, we believe, in the careful and painstaking anatomical studies that are the foundation of the work. Such knowledge, the author maintains, is essential for a proper understanding of the various symptoms connected with sinus suppuration. The anatomical variations in this region are many, and we cannot have too many studies in this direction. Such knowledge, coupled with a notable improvement in methods of examination, has brought about increased precision in diagnosis, and has consequently placed treatment upon a more rational basis.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held April 17, 1902.

V. P. Gibney, M.D., Vice-President, in the Chair.

The Symptoms and Course of Smallpox.—Dr S. Dana Hubbard presented this paper. He said that the lesions on the mucous membranes were seen for the most part on those portions exposed to the air, but in severe cases they might be found throughout the mucous tracts. The varieties of smallpox were discrete, confluent and hemorrhagic or malignant. It was convenient for clinical purposes to speak of the different types as very mild, mild and severe. The term varioloid, being a misnomer, should be discarded, and in its place should be used such designations as mild and discrete. The period of incubation was from twelve to fourteen days, and the period of invasion about three days. There was nothing distinctive about the backache of smallpox. The eruption first makes its appearance on the forehead, at the hair line, and extends down behind the ears and on the back of the neck to the body. The best place to observe the rash for diagnostic purposes was upon the back, where the lesions were less apt to be obscured by scratching. When it first appears the eruption consists of small, round, oval, intensely red macules, one-eighth to one-quarter of an inch in diameter, which seem to be in the skin. These spots readily disappear on pressure or tension. Within twenty-four hours the macule changes to a papule, which is characterized by a peculiarly hard, shot-like feel. Later on the papule becomes a vesicle, and about the sixth day this is converted into a pustule. In from one to three days the umbilicated appearance is lost. It is during the stage of pustulation that the constitutional symptoms become more severe. About the eighth day the pustules reach maturity. About the ninth or tenth day a small dark spot appears in the pustule, and this gradually extends until the pustule dries up. Pustules do not rupture spontaneously and discharge their contents.

The complications of smallpox were usually ulcers, opacities, boils, laryngitis, zoster, sciatica, nephritis and gastritis. The hemorrhagic form is most malignant, and runs its course quite rapidly. Hemorrhage usually occurs as the lesions change from vesicles to pustules. Occasionally the eruption of malignant smallpox closely resembles that of scarlet fever.

The Diagnostic Features.—Dr. S. Pollitzer took up this topic. He said that the recognition of a case of smallpox might be simple, difficult or impossible. The diagnosis was difficult in atypical and complicated cases. It was impossible in most cases in the pre-eruptive stage. During an epidemic of smallpox, if a person presented the initial symptoms of smallpox, that disease might be suspected, even before the appearance of the rash. The characteristic eruption was sometimes preceded by a scarlatiniform eruption, and under these circumstances it might be distinguished from scarlet fever by the absence of angina and the strawberry tongue, and from measles by the absence of catarrhal symptoms. In cerebrospinal meningitis the difficulties of diagnosis were often very great. The rash of this disease, however, usually develops in successive crops, and is irregularly distributed. An attack of grip might simulate closely the early symptoms of smallpox, though in grip the muscular pains were more general, and symptoms referable to the respiraory tract quickly develop. The differential diagnosis between the backache of smallpox and lumbago could be readily made by the fact that lumbago is an afebrile disorder.

Upon the appearance of the rash, smallpox was most likely to be confounded with measles and varicella. The early papular eruption of measles bore considerable resemblance to the early stage of the smallpox eruption. The rapid defervescence observed in smallpox on the appearance of the eruption was in marked contrast with the increasing fever noted in connection with the development of the eruption of measles. The clear vesicles of varicella shoot up from the surface, as it were, without warning, and the characteristic umbilication of the smallpox vesicle is wanting. The vesicle of varicella can be more easily ruptured, and its contents discharged, than in smallpox. In varicella the palms and the soles, except in infants, are almost never affected, whereas in smallpox these regions are very rarely exempt. The only exceptions are in cases of smallpox of a very mild type. It might be put down as a safe rule that a case showing an extensive eruption of vesicles and pustules is not smallpox if the palms and soles are free. Herpes oster was readily distinguished by the special grouping and location, and by the accompanying severe neuralgic pain, though occasionally pustules are found irregularly scattered over the body surface. The occurrence of fever in zoster also tended to obscure the diagnosis.

In general, drug eruptions could be distinguished by the absence of fever and of the usual symptoms of smallpox. The erythematous and purpuric eruption of quinine might be confounded with the hemorrhagic eruption of smallpox. Of all the diseases of the skin, the pustular syphilide most resembled the lesions of smallpox. The lesions may be absolutely indistinguishable from those of smallpox by the appearance alone. The differential diagnosis could only be made by the closest inquiry into the history and a most careful observation of the illness. A pustular syphilide might be associated with a febrile movement. Other syphilitic lesions were sometimes present to give a clue to the correct diagnosis. In exceptionally obscure cases, vaccination should be practised, for, although a negative result from the vaccination would have no value, a positive result would be of the utmost importance, and it could be obtained after a delay of only a very few days.

Dr. Pollitzer exhibited some lantern slides of smallpox cases.

Treatment.—Dr. GEORGE H. FOX read this paper, illustrating it with lantern slides. He said that no remedy or plan of treatment would apply to all cases of smallpox. The very mild cases hardly demanded any treatment. Mild cases sometimes occurred among the unvaccinated. He had noted a few such cases in connection with the present epidemic in New York city. In the malignant cases medical treatment also seemed unnecessary, because experience had shown that in spite of all treatment they quickly terminate fatally.

Vaccination After Exposure.—Some writers contended that vaccination, done after exposure to smallpox, had no effect on the disease which subsequently develops. The question was a difficult one to settle, even after the observation of a large number of cases. It was the opinion of many good authorities that the vaccination begins to exert its protective power at the time of the development of the areola, or on the eighth day, and since the period of incubation was usually twelve days, vaccination should be done. As the protective effect of vaccination was secured somewhat more quickly from humanized virus, it was desirable to use this when possible, and to make several insertions.

As soon as the diagnosis of smallpox had been made the patient should be placed in a room devoid of unnecessary furnishings, and the temperature of the room should be kept at 60° to 65° F. If the disease were mild, a daily bath should be taken, or if this could not be done, a cool sponge bath would usually be beneficial. In unvaccinated persons in whom there was reason to expect a severe attack the beard and hair should be closely clipped. In view of the recent advances in antitoxic medication it was possible that in the near future some specific for smallpox might be discovered. For the lumbar pain hot applications were useful, but mustard poultices should be avoided, since the resulting irritation was liable to increase the eruption and add to the subsequent discomfort of the patient. The theory that the eruption could be lessened by increasing the number of the lesions on other parts of the body had never been confirmed in practice. If there was extreme nausea, vomiting, and thirst, the patient should be given small pieces of ice to suck. During the papular and vesicular stages little or no internal medication was required. A light diet should be enforced throughout the disease.

Local Treatment.—The local treatment of the eruption during the papular and vesicular stages had been a subject of experimentation for centuries. Most of the local applications, however, had generally proved to be more uncomfortable than beneficial. One experienced observer claimed that the use of a mixture of sulphur and quicklime, if applied in the papular stage, would prevent pustulation, and hence, much of the constitutional disturbance.

Effect of Light.—It had long been thought that light had much to do with the severity of the eruption. Experimentation by Finsen, Unna, and others showed that it was not the heat of the sun but the violet rays that caused pigmentation of the skin, and Finsen had suggested that it was only necessary to eliminate the chemical rays of sunlight by the use of red windows or curtains to mitigate the severity of the smallpox eruption. This observer, and others, had reported remarkably good results from this method, the patients passing directly from the vesicular to the stage of convalescence, and no pitting resulting. The speaker said that his own experience with this method was limited to a few cases treated at the Riverside Hospital in 1893. One ward was fitted with red glass windows. The cases were of a mild type, and the experiment was negative in its results.

Stage of Suppuration.—In the stage of suppuration the swelling of the face, hands and feet caused much suffering. A very nutritious diet, which could be readily swallowed, must now be given. Alcoholic stimulants were usually of the greatest service in this stage, and should be given freely, especially at night and in the early morning hours, when the vital powers are at the lowest point. Rectal alimentation was sometimes a valuable adjunct.

Pitting.—A host of local applications to the eruption in the suppurative stage had been recommended. The ointments, plasters, pastes and varnishes which had been advised were unpleasant and rarely accomplished any good. At this stage it was too late to do anything to prevent pitting, though the disfigurement would be reduced to a minimum by all local measures which tended to reduce the grade of inflammation. The best antiphlogistic application to the skin of a smallpox patient was lint well wetted with cold water containing a little glycerine, and this should be covered with rubber tissue. It might be necessary to immerse the hands and feet in tubs of cold water—indeed, if the patient were not in too critical a condition he might with benefit be immersed for hours in a bath, as recommended by Hebra. For the softening of the crusts and allaying the intense pruritus the best application was a five per cent. solution of carbolic acid in oil. Still greater relief would be afforded by frequently spraying the parts with pure chloroform of with chloroform containing some antiseptic. Before discharging the patient he should not only have a bath but should have the head shampooed with carbolic soap, the nails should be clipped and the mucous orifices of the body cleansed with peroxide of hydrogen. The hard kernels or "seeds" left imbedded in the more horny parts of the integument must be dug out before the patient is allowed to mingle with other well persons.

Diagnosis of Unusual Cases.—Dr. DILINGHAM said that a good deal had been said this evening about the typical cases of small-pox, but a physician should have no difficulty in diagnosticating such. The period of incubation was usually from twelve to fourteen days, but it was often longer. He recalled one case in which it was seventeen days, and mentioned the fact that cases had been reported in which this period was twenty-one days. The period of invasion was said to be three days, and while this was ordinarily the case there were many cases in which there was no period of invasion, the first thing noticed being the eruption. It was sometimes stated that papules, pustules and vesicles do not appear at the same time in the same area, yet he had met with a number of cases in which these different stages were all visible at one time. Lesions were not always present in the throat, but, if present, this was one of the first places in which the eruption was visible. With regard to the diagnosis between scarlet fever and hemorrhagic smallpox, there was one point of great value, *i. e.* that if there were hemorrhages in the conjunctiva scarlet fever could be ruled out. Moreover, the eruption in hemorrhagic smallpox was of a deeper hue than the eruption of scarlet fever. The early eruption of smallpox, that preceding the papular eruption, usually appeared first in the groin and then in the axilla, and not upon the body, thus affording a useful means of differentiating it from measles and scarlet fever. He had seen vesicles just as superficial in smallpox as in varicella, though this was not the rule. He had seen several cases of smallpox in which the first lesions were vesicular. There was a large number of cases of smallpox, and severe ones, too, in which there were no lesions in the palms. In making the diagnosis between smallpox and varicella there was no single lesion which could be implicitly relied on. As far as prodromal symptoms were concerned, he had seen as severe prodromal symptoms in chickenpox as in smallpox, though, of course, these symptoms did not last so long as in smallpox. The lesions of smallpox might not go to the papular stage, but dry up and abort. There was a class of cases in which hemorrhage took place into the vesicles, and then the lesions aborted. These cases were not severe ones. He had seen cases of smallpox in which the first lesions had been upon the body instead of upon the face.

Vaccination After Exposure Does Protect.—If the patient were vaccinated at the time of the exposure and the vaccination were successful, that person would not have smallpox. If the person were vaccinated several days after the exposure, the smallpox would be modified. If there was a well developed areola before the outbreak of smallpox, the latter disease would be decidedly modified by the vaccination.

Preventive Serum Treatment.—Dr. J. H. Huddleston said that it had been shown that immunity to smallpox could be given to animals by the injection into the animal of an amount of serum, collected two weeks after vaccination, equal to half of the weight of the animal. It was because of the enormous size of the dose that this method had not been employed in the human subject to any extent for the prevention of smallpox. The risks and inconvenience of injecting a pound and a half of serum were evident. Moreover, in a few instances in which this serum treatment had been tried the results had been disappointing.

Laboratory Diagnosis of Smallpox.—The difficulties of diagnosis had been clearly brought out by the previous speakers, but nothing had been said about the aid that might be rendered by the laboratory. One authority on blood examination had declared that the blood picture in smallpox was characteristic, and afforded an important aid in the differential diagnosis of this disease. This picture consisted in a lymphocytosis and of a certain number of abnormal white corpuscles. It was not claimed, however, that it would distinguish between smallpox and chickenpox. The speaker said that, along with Dr. Braunlich, he had endeavored to confirm this statement regarding the value of blood examinations, but had found that the blood picture could not be depended upon as a diagnostic aid.

It had been demonstrated that monkeys are susceptible to vaccinia and to variola, and to Dr. W. H. Park was due the credit of suggesting that, by the inoculation of monkeys, it was possible to determine at the outset the character of a suspicious epidemic. This process of testing was slow and expensive, but the results were positive, and of great value, not in the individual case, but in promptly determining the nature of an epidemic. It was quite possible that this method could be so perfected that serum could be taken from lesions of the suspected cases and forwarded in tubes to a laboratory for inoculation into monkeys.

Vaccination After Exposure.—Dr. Fox said that Dr. Welch of Philadelphia had reported 194 cases of vaccination performed during the stage of incubation. Of this number, 38 were perfectly protected from smallpox; 16 were almost protected; 31 were protected to a well marked degree; 30 were partially protected, and 79 were unprotected.

Dr. Hubbard reported two cases that he had seen, in which, although a successful vaccination had been performed on the day of the exposure to smallpox, the vaccination had not served as a protection against smallpox.

Multiform Rashes in Smallpox.—Dr. Pollitzer expressed the opinion that it was absolutely impossible for a case of smallpox to show the lesions of all of the various stages of that disease at one and the same time. If Dr. Dillingham had seen papules, vesicles and crusts at the same time, it must be that of some other disease, complicated with smallpox, and that these varied lesions were not all due to the smallpox.

Dr. Hubbard said that it had been the experience of the diagnosticians of the health department that these multiform rashes are quite commonly observed in smallpox. He objected to the recommendation of Dr. Fox that the temperature of the room for a smallpox patient should be 60° to 65° F., on the ground that this distinctly favored the production of severe bronchitis and pneumonia .His own experience had been that, when the temperature of the ward was kept over 70°F., there was decidedly less pneumonia.

Congratulatory Telegram to Professor Leyden.—On motion of Dr. Max Einhorn, the Academy of Medicine voted to send to Professor Leyden of Berlin a telegram, congratulating him on reaching his seventieth birthday on April 20.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, Held April 15, 1902.

E. E. Smith, M. D., Chairman, Pro Tem.

Aids in Life Insurance Examinations.—Dr. Abbott Smith Payn was the author of this paper. He said that the opthalmoscope should always be used in every case involving a large amount of money. The laryngoscope was sometimes useful. The spirometer was applicable only to office work, and its value in life insurance work was doubtful. The same might be said regarding the sphygmograph. The aid of the clinical thermometer was worthy of further study and discussion. The value of the centrifuge was now well known, and this instrument was quite generally employed by insurance examiners. In many cases declined insurance because of râles in the lungs it would be a great advantage to resort to examination of the sputum. He had known of a case of pernicious anæmia having been passed by three companies and insurance granted for a large amount, though the disease was already far advanced and death took place within three years. This showed the need for blood examinations. The urine should, of course, be examined in every instance. While the pathology of true albuminuria was not yet well understood it might be said to be due to: (1) Disturbance of the circulation; (2) Changes in the blood composition, and (3) Changes in the epithelium of the kidney. Functional, accidental or spurious albuminuria was due to the admixture of semen, pus or blood with the urine. The mere finding of albumin in the urine, therefore, was only a hint for further study, and the microscope would satisfactorily decide the true significance of the albuminuria in the individual case.

The Significance of Glycosuria.—Dr. Warren Coleman presented this paper. He said that for clinical purposes the normal urine might be considered as free from sugar. The author considered the following varieties: (1) Alimentary; (2) Toxic, and (3) Forms associated with diseases and injuries.

Alimentary Glycosuria.—The ingestion of cane sugar, grape sugar and milk sugar in quantities of 250 grm. causes a temporary glycosuria. The lactosuria observed sometimes in nursing women must be classed as alimentary glycosuria. It was rarely observed except when there was an interference with the secretion or outflow of the breast milk.

Toxic Glycosuria.—This form includes those conditions of the urine following the ingestion of certain medicinal substances. In certain of these cases it was pretty certain that the reducing agent was not sugar. Among the medicinal substances giving a reducing reaction with Fehling's solution were chloral, chloroform, arsenic, turpentine, and sulfonal. The glycosuria observed in those who had worked long in lead was believed to be due to the action of the lead on the renal cells.

Glycosuria Associated with Diseases and Injuries.—Transient glycosuria was often found in connection with cerebrospinal meningitis, Asiatic cholera, typhoid fever, typhus fever, tetanus, pneumonia and tuberculosis. It was sometimes observed after violent paroxysms of pertussis, and it was not uncommon in persons presenting the typical symptoms of interstitial nephritis. Transient glycosuria was well known to occur in connection with many nervous disorders. It was also observed as an accompaniment of cerebral hemorrhage, hemorrhage into the pons and spinal bulb, cerebral softening, cerebral tumors, disseminated cerebral sclerosis, injuries to the vertebral column, insanity, neuralgias generally, hysteria mental emotion, and exopthalmic goiter. It had long been known that there was a form of glycosuria found in gouty persons, particularly in those having the suppressed form of gout. As a rule it yielded readily to dietetic treatment. Oftentimes the first indication of its existence was the discovery of sugar in the urine. Obesity and glycosuria were often associated. In many cases this form of glycosuria was undoubtedly of alimentary origin, but in others its origin was deeper and much more obscure. Diabetes rarely appeared in corpulent persons before the fortieth year, and was usually mild in character and quite amenable to treatment.

Pancreatic Diabetes.—The association of diabetes mellitus with lesions of the pancreas was known to be more frequent than diabetes alone or pancreatic disease alone. Complete destruction of the pancreas in man might be assumed to cause diabetes, but of no special form. It had been proved that the symptoms supervening on removal of the pancreas were not due to loss of the pancreatic juice. The islands of Langerhans were supposed to form the internal secretion of the pancreas. It had been very recently asserted by one experimenter that the blood and lymph contain an agent which destroy sugar, and that this agent is contained in the white cells.

Adrenalin Glycosuria in its Relation to Human Diabetes.—Dr. C. A. Herter presented a paper on this subject. He said that adrenalin glycosuria possesses a significance much greater than that attaching to the mere fact of the occurrence of this form of glycosuria. About six months ago Dr. Blum had made some experiments in injecting the superarenals of sheep into rabbits and dogs. He found that when large quantities of extract, prepared by him from the adrenals of sheep, were injected into these animals that they, almost without exception, developed glycosuria. At times this glycosuria was only slight, but in other instances it was considerable. The highest percentage observed was a little over three. The quantity of extract used in these experiments was large, and almost always at the site of the injection there was some inflammatory œdema. These observations had been repeated in Germany and in this country. The speaker said that, with Dr. Richards, he had repeated these experiments, using adrenalin chloride as prepared by Dr. Jokichi Takamine. He injected the adrenalin into the peritoneal cavity of dogs, and found that when from four to eight cubic centimeters of adrenalin chloride were thus injected large quantities of sugar were always present in the urine—frequently as high as 8 or 10 per cent. The degree and the duration of the glycosuria were much influenced by the conditions of the experiment. For instance, if subcutaneous injections of adrenalin chloride were made in dogs weighing from fifteen to twenty-five pounds, the quantity of sugar in the urine would be small. If the same dose were given intravenously the amount of sugar would be much larger. If the adrenalin were administered by mouth there would be, as a rule, no sugar in the urine. For a short time after the intraperitoneal injection of the adrenalin the animal would remain quiet; then, after an interval of about fifteen minutes, the animal became wildly excited. This period of excitement ordinarily lasted half an hour or an hour, and was followed by a prostration lasting several hours. By the following day the animal would have resumed its normal appearance and behavior. The glycosuria lasted, as a rule, only a few hours, rarely more than twenty-four hours. The total amount of sugar excreted in the dog of medium size was not more than a few grammes, although the percentage of sugar might be ten or twelve.

Blood Sugar.—Dr. Herter said that his associate, Dr. Richards, had made some very careful experiments on the blood sugar. He had found that in these injections experiments the increase in the blood sugar might be very marked within a few minutes after the injection. It was interesting to note at the conclusion of the experiment there might be considerably less sugar than at the beginning, half the original quantity, or even less. In this respect it differed markedly from the glycosuria following the administration of phloridzin. The glycogen in the liver probably bore a very important relation to this particular variety of glycosuria. In dogs well stored with glycogen the largest glycosuria was observed; in dogs that had been starved there was very little glycosuria after the administration of adrenalin. The phloridzin diabetes was capable of being induced after the action of the adrenalin chloride had worn off.

An Acquired Tolerance to Adrenalin.—The effect of repeated injections of adrenalin was of no little interest. An attempt had been made to give dogs 5 to 10 c.c. of adrenalin chloride for a period of several months, giving it every day or every other day. As a rule the quantity of sugar diminished quite rapidly. Two of the dogs died in a month or two from over-doses of adrenalin, but two others were now alive after a period of three months. The last few doses given had failed to cause any glycosuria, from which it seemed probable that some sort of tolerance to the adrenalin had been established. How far this action was due to tolerance and how far to a species of immunity, Dr. Herter said, he was not yet prepared to say. These dogs lost their appetite and became very thin, so that probably very little sugar was stored in the liver and in the muscles. It was known that under these conditions the adrenalin would not produce glycosuria. Both of these dogs, after this immunity had been established, were well fed for a week or two, and then, on resuming the administration of the adrenalin, large quantities of sugar appeared in the urine—as much as in the first instance.

Fatal Doses of Adrenalin Chloride.—If a dog weighing about fourteen pounds were given an injection of 10 c.c. of adrenalin chloride into the abdominal cavity, the animal would almost surely die within twenty-four hours. It would first become excited, then prostrated; then there would be frequent vomiting and bloody diarrhœa. The autopsy in such cases showed the pancreas to be the seat of hemorrhagic changes, and the intestinal canal was often intensely congested throughout its whole extent. In certain parts of the intestinal tract the epithelium had been completely stripped off. The pancreas showed numerous focal necroses and hemorrhages. In some cases the acini had suffered more than the islands of Langerhans, while in others the reverse had occurred. Apparently these changes in the pancreas bore no definite relation to the glycosuria. It had been found that glycosuria might occur entirely independently of any visible change in the structure of the pancreas. If a dog were opened, and a bit of the splenic end of the pancreas nipped off, it could be hardened and studied histologically. If then the dose of adrenalin were given intravenously and a marked glycosuria were produced, another piece of the pancreas, contiguous to the portion already examined, could be removed and examined. In three instances in which such an examination had been made at the height of the glycosuria, it had been found impossible to distinguish between the first and second pieces of pancreas removed.

Pancreas Responsible for the Adrenalin Glycosuria.—In order to determine whether these experimental glycosurias were dependent upon direct contact of the adrenalin with the pancreas, Dr. Herter exposed the pancreas and applied the adrenalin chloride with a brush. It was found that when about 1 cc. was applied to the surface of the pancreas in this way, a rather marked glycosuria occurred almost invariably. It was interesting to note that a quantity of adrenalin chloride, when applied directly to the pancreas, would provoke glycosuria, but would not excite glycosuria if applied to the spleen or to other parts of the body. It was, therefore, evident that the pancreas was the organ concerned in the production of this adrenalin glycosuria. When well-fed animals were given adrenalin at the height of digestion, the resulting glycosuria was much more marked than when the animals were poorly fed and the injection made at another time. It was not found necessary to apply the adrenalin to the entire surface of the pancreas in order to produce glycosuria; its application to a very small area would suffice for this purpose.

Mode of Action of the Adrenalin.—Naturally the first thought would be that the production of the glycosuria was connected with the well-known vasomotor action of the adrenalin. However, instead of finding blanching of the pancreas when the adrenalin was applied, it was noted that the pancreatic tissue became reddened. Again, when the adrenalin was injected intravenously, there was no visible change in the vascularity of the pancreas. Thinking that possibly the glycosuria might be dependent upon the general rise in blood pressure induced by the adrenalin, the experiment was made of injecting into the peritoneal cavity 5 cc. each of spirits of glonoin U. S. P. and adrenalin chloride. The glonoin was used to offset the blood-pressure-raising action of the adrenalin, and it was found that this did not in any way interfere with the production of the glycosuria; hence, it was evident that the adrenalin did not cause the glycosuria by its action on the bloodvessels.

Oxidizing Function of Pancreas and Glycosuria.—Continuing, Dr. Herter said that he had next experimented with cyanide of potassium, which is known to produce glycosuria. If one or two cubic centimeters of a one-thousandth normal solution of cyanide of potassium were applied to the pancreas, glycosuria would occur within a few minutes. Some years ago it had been shown by Geppert that, in cyanide poisoning, the blood contains a very small quantity of carbon dioxide, while the quantity of oxygen in both the venous and arterial blood is decidedly increased. This investigation reached the conclusion that the cells of the organism were no longer able to take up oxygen. Dr. Herter said it had occurred to him that the adrenalin glycosuria might be due to the fact that the pancreas had been deprived of its ability to take up oxygen. The reddening of the pancreas seemed to favor this view. The next step in the investigation was to make use of a number of reducing agents, such as ammonium sulphide and sulphuric acid. If carbon monoxide were permitted to flow against the surface of the pancreas, taking care to keep the pancreas under normal conditions, a certain amount of the carbon monoxide was taken up and converted into carbonic dioxide, and glycosuria results. Benzyl alcohol had also been tried, because it is a powerful reducing agent, and does not injure the pancreas. Its application was followed by a marked glycosuria, and the same was true of pyrogallol.

Adrenalin a Powerful Reducing Agent.—The adrenalin chloride was oxidized with various substances, such as permanganate of potassium, chlorine, sodium nitrite and bichromate of potassium. The oxidation with chlorine was perhaps the most satisfactory in depriving the adrenalin of its reducing power. There could be no doubt that the glycosuria following the administration of adrenalin was intimately connected with its reducing action. It was known that the adrenal glands contain substances allied to pyridine. It was found that pyridine gave rise to only a little glycosuria, while piperadine caused an exceedingly marked glycosuria. Oxidizing, as well as reducing, agents had been employed upon the pancreas as controls.

Conclusions.—Dr. Herter said he thought he was justified in making the assertion that interference with the oxidizing function of the pancreas was the explanation of all the forms of glycosuria that he had been considering. From the foregoing facts it was reasonable to believe that in studying the production of glycosuria, one must take into account the existence of reducing substances in the blood in proportion to the oxidative capacity of the pancreas. It was probable also that the structural changes observed by Opie in the islands of Langerhans were secondary. In conclusion, the speaker expressed the hope that this special method of investigation that he had employed in this research, *i. e.* local applications to particular groups of cells, might be used with profit in studying the activities of other organs, as for example, the kidneys.

Dr S. J Meltzer called attention to certain discrepancies in the results obtained by Dr. Herter and the three other observers who had investigated this subject. The three others had made use of an aqueous solution of the suprarenal, while Dr. Herter had used exclusively adrenalin chloride. He thought it was possible that there was in the suprarenal two different substances, one substance which was injured or decomposed on exposure to heat, and another, which is found in adrenalin, and which is capable of exciting glycosuria. The speaker then commented upon the fact that glycosuria would not occur in the experimental removal of the pancreas so long as a small portion of this organ was allowed to remain, while according to Dr. Herter's experiments, glycosuria was produced even when a very small portion only of the pancreas was painted with adrenalin. The contrast was so sharp in these two sets of experiments that he was inclined to think that the glycosuria produced in those two cases was not the same. It was also possible that the glycosuria was a result of reflex action from the application of the adrenalin to the pancreas.

Dr. Graham Lusk said that, after sifting carefully all of the evidence at our disposal, one arrived, by a process of exclusion, at the conclusion that the pancreas alone is concerned in the development of glycosuria.

Dr. Herter closed the discussion. He said, with regard to the diastatic ferments that Dr. Crofton had found in the suprarenal gland, that he did not look upon this as of much importance, because there were few parenchymatous organs that did not contain a diastatic ferment in some amount. However, Dr. Crofton stated that the strength of this ferment was greater than in other glands, with perhaps the exception of the pancreas. Dr. Herter said that he had no reason to doubt the correctness of the observations made by Dr. Crofton, but he did not consider the diastatic ferment necessary to the explanation of the glycosuria. It was possible to boil the adrenalin solution for five minutes and inject it peritoneally and obtain about the same effect as was observed when it was used without having been boiled. It was well known that very few ferments would stand such a degree of heat, and certainly all of the known diastatic ferments were destroyed by that temperature. Dr. Crofton had recently made a statement that he had been able to produce glycosuria after having boiled his own suprarenal extract. It could not be denied that there were discrepancies in the results of the different observers, but it should be noted that he had worked with much smaller quantities than had the other three investigators.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON SURGERY.

Stated Meeting, Held April 14, 1902.

JOHN B. WALKER, M.D., Chairman.

Suture of Recurrent Fracture of Patella.—Dr. CHARLES A. ELSBERG presented a man who had fractured his patella, for the first time, about two years ago. With the aid of a knee-cap, he had been able to walk around fairly well, but one year later he had again fractured this same patella. After a delay of some months, the man came under Dr. Elsberg's observation, and was operated upon. A very large amount of fibrous tissue was found between the two ununited fragments. This was removed, and the fragments sutured with chromicized catgut. The wound. healed by primary union, and he was walking around in about six weeks. Since that time the function of the limb had been perfect.

Adénolipomatose Symétrique.—Dr. ELSBERG also presented a man about fifty years of age, a patient in the Montefiore Hospital. About eight months ago a number of tumors developed in the front of the neck, on either side, and in the lower cervical region. These growths would grow rapidly for several weeks, and then stop growing or decrease in size. One of them had been excised, and had been found to consist chiefly of fatty tissue, but there was also considerable lymphomatous tissue present. This was a very rare condition, which had been described by the French under the name of *adénolipomatose symétrique.* The disease appeared to be confined to the male sex, and its victims were very liable to develop tuberculosis—indeed, this patient had contracted tuberculosis while under observation.

A Case of Inoculation Tuberculosis.—Dr. M. W. WARE presented a little boy who had stepped upon some sharp object, thus receiving a wound which showed no disposition to heal. After three weeks it was evident that the wound was infected with tuberculosis. The patient disappeared from observation for a short time, and on his return it was found that the glands of the inguinal region on the same side as the plantar wound had become infected. This occurred four weeks after the original injury. There was no history and no evidence of the child's having had tuberculosis before the injury to the foot. The speaker said that he had seen several cases of inoculation tuberculosis, and all of them had been very virulent forms of tuberculosis. One case was a tuberculous ulcer following piercing of the ears, and it was supposed that the thread passed through the ear had been moistened with the spittle from a tuberculous person. In another case a man became infected by being struck with a cuspidor in a barroom fight. Most of these infections had made themselves evident within four weeks after the injury.

Resection of Transverse Colon for Intraintestinal Tumor.—Dr. WILLY MEYER presented a woman of twenty years, who had come under his care last summer. In November, 1900, she had been suddenly seized with abdominal colicky pain and vomiting. Soon afterward a movable tumor had been noticed in the abdomen, situated sometimes to one side and sometimes to the other side of the median line. When on the left side the pains were more intense. On examination he had found a movable tumor which puzzled him. After keeping her under observation, it was concluded that the tumor was omental. Finally, an exploratory incision was made, and at the mesocolic attachment the tumor was found to be sessile. There were many enlarged glands in the vicinity, which seemed to point to the diagnosis of sarcoma of the colon. The colon was clamped and the gut resected and sutured. The patient made an uninterrupted recovery, and since then had felt entirely well. The pathologist's examination showed the tumor to be a lipoma.

Round-Cell Sarcoma Causing Intussusception.—Dr. MEYER referred to another case, that of a boy who had been sick with all the symptoms of chronic stenosis of the intestine. On examination a tumor could be felt in the right iliac fossa. A diagnosis of chronic intussusception was made, and on operating, an intussusception of the ascending colon into the transverse colon was found. It was necessary to resect the colon from two inches above the vermiform appendix to the middle of the transverse colon. A Murphy button was used to unite the divided portions, and this button was passed on the eleventh day. Within the intussusception was found a round-cell sarcoma.

Successful Extensive Resection of the Bowel.—Dr. CHARLES H. PECK said that, on July 13, 1901, the woman, whom he was about to present, had been curetted by a physician for retained secundines, and during this operation the uterus was ruptured. The patient had come under his observation twenty-four hours later with evidence of peritonitis. She was at once operated upon, the recent adhesions being separated and the coils of intestine drawn out until the healthy portion was in sight. Extensive gangrene of the bowel was found. This was resected and a Murphy button inserted. Her condition was very critical for two or three days, but after that she did fairly well. A small fecal fistula appeared on the seventh day, but closed spontaneously in three days. An abscess formed behind the uterus, owing to imperfect drainage, but, after opening this, recovery was uneventful. and the patient was up and around in about four weeks. The resected portion was measured after the operation, and was found to be eight feet five and a half inches. This, Dr. Peck thought, was the largest portion of bowel that had been resected in this country. The patient's nutrition had remained excellent, and there had been no diarrhœa, but she had a very vigorous appetite. The specimen was exhibited.

Dr. WILLY MEYER spoke of a case of inoculation tuberculosis occurring about four weeks after a ritual circumcision. This, like several other similar cases, had proved to be a very virulent infection, and had required very extensive excision of the lymph nodes in the vicinity.

Dr. M. W. WARE said that a search through the literature showed that in 80 per cent. of these cases of inoculation tuberculosis the disease develops in other parts of the body. In the case reported by him, microscopical examination of the diseased tissue had revealed a typical picture of tuberculosis. The patient had exhibited a remarkable intolerance to iodoform dressings. Although he had employed blunt dissection of the muscles, he had found that this method gave sufficient room for the removal of the diseased glands, but he could easily imagine that in some cases in which the glands were larger it would not be sufficient. Moreover, he had found that this method of dissection had given a wound which had not drained at all satisfactorily.

Rôle of the Bacillus Proteus Vulgaris in Surgery.—Dr. M. W. Warb, in this paper, reported a case of proteus infection, and gave a rapid review of the literature. He showed that cases of periostitis, osteomyelitis, empyema, peritonitis arising from the intestinal tract, gangrenous diphtheria, etc., sometimes arise from proteus infection. Attention was directed to the statement of Schnitzler that this bacillus is alone capable of causing cystitis, a contention that had been abundantly supported by other observers. The streptococcus was the most frequent companion of the proteus. It should be remembered that proteus infection usually originates in the intestinal tract.

Dr. E. Libman said that, from animal experiments that he had made, he was convinced that the proteus had a special predilection for causing very marked degeneration of the liver and kidneys. In these cases a special reaction had developed in the blood, showing that the proteus was really the infecting agent, and not merely a parasite. The proteus was most commonly found in general peritonitis, appendicitis, and chronic brain abscess due to disease of the ear. He agreed with the reader of the paper that it was probably a secondary infecting organism.

Infection by a Paracolon Bacillus Secondary to Typhoid Fever.—Dr. A. A. Berg was the author of this paper. He said that last August he had seen a man of thirty-three years, who ten days previously had had a sudden attack of nausea, vomiting and a feeling of marked weakness. The temperature was 100°F., and there was considerable abdominal distention. After a free movement of the bowels, the patient was decidedly better, but he remained in bed for two days. On the seventh day he had been again seized with intense pain in the epigastrium, occasionally radiating to the back. The next evening the temperature had risen to 103°F. and the pain was severe and typical of biliary colic. He was slightly jaundiced. When seen by the speaker his temperature was 104.6°F. in the rectum, and the pulse was 124. There was marked heaving of the precordium, and the heart was dilated. The free edge of the liver was not palpable. In the right hypochondrium could be felt a mass about the size of a large lemon. The diagnosis was thought to lie between empyema of the gall-bladder and abscess of the liver. Operation was advised, but the man did not enter the hospital until two days later. The leucocyte count was 15,000 and the Widal reaction was negative. Under chloroform anæsthesia, an exploratory incision was made. The surface of the liver was for the most part smooth, and the gall-bladder was moderately distended, but the contents of the gall-bladder could not be expressed into the common duct. No stones could be felt in the gall-bladder. Aspiration of the liver in many directions yielded no pus. The gall-bladder was aspirated and black bile withdrawn. After the operation the epigastric pain continued to be severe. The urine contained hyaline and granular casts. A few days later the liver was again aspirated with negative result. At this time the patient became delirious and apathetic. Three days later the leucocyte count was 10,000 and the Widal reaction was positive for the first time. The patient died of exhaustion. About six days before his death 11 cc. of blood was taken for a blood culture, and this yielded a microorganism like that which had been isolated from the gall-bladder. In the blood, urine and gall-bladder during life a paracolon bacillus was found. The autopsy was made under great difficulties. Healed and healing ulcers were found in the ileum. The conclusion of the pathologist was that the case was one originally of ambulatory typhoid, and that the paracolon infection was secondary. The speaker thought that the paracolon infection had probably excited a catarrhal inflammation of the gall-bladder.

Experiments with Cargile Membrane.—Dr. R. T. Morris presented a paper with this title. He said that he had received from Dr. Cargile of Arkansas, a particularly thin variety of goldbeater's skin, or the peritoneum of the ox, with the request that he try it as a means of preventing intestinal adhesions under the same conditions in which Senn's omental grafts were appropriate. Dr. Morris said that he had made a series of experiments with this membrane on twelve rabbits. It was found that where the bowel had been scarified and the membrane sutured over it that this membrane became intimately adherent to the bowel, and even when the surface of the gut had been infected, the infection was prevented by the membrane from spreading to the surrounding tissues. It was also found to completely prevent the formation of adhesions under the line of the abdominal incision when the conditions were such as would have surely led to extensive adhesions if the membrane had not been used. The rabbit on which this expeiment was made, was killed forty-five days after the operation, and it was found that the membrane had been absorbed. Experiments with chromicized membrane showed that the period of absorption was not materially modified. This membrane apparently allows moisture to pass through it, so that the tissues beneath do not become sodden. It was, therefore, a useful substance to place over the line of incision. If cemented down with collodion the wound would be closed and sealed without sutures, and the transparency of the membrane would allow of the surgeon's watching the wound. The membrane which he used had been sterilized by the use of cumol and heat.

Dr. A. A. Berg said that he had recently tried this membrane in a case of strangulation of the small intestine, in which the serosa had been completely stripped off in efforts to relieve the condition. He had covered this surface with the Cargile membrane and the patient had done extremely well.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Annual Meeting, Held April 21, 1902.

Parker Syms, M.D., President.

Dr. A. H. Goelet presented a number of specimens.

Ovarian Cyst Removed Intact.—This specimen had been removed from a woman of thirty-nine years, who had suffered for a number of years from recurrent attacks of pelvic peritonitis, and from profuse menstruation. Both tubes were found at operation to be sclerotic. One-fourth of an ovary was left, and with this the patient had twice menstruated.

Kidney Removed for Pyonephrosis.—This specimen had been removed on March 4. The patient had come to him one year ago with a marked prolapse of the kidney. Operation had been suggested by him, but not urged. On her return last January the kidney was found to be very large and fixed, and the patient complained of a good deal of pain. At the operation the kidney was found to be made up of three abscesses, having been converted into a mere shell.

Intraligamentous Fibroid and Ovarian Cyst.—These specimens came from a woman, thirty-four years of age. The operation for the removal of the fibroid was done on March 21. The tumor was not attached to the uterus or to the broad ligament.

Tubo-Ovarian Cyst and Small Ovarian Cyst.—When this patient had first been seen a diagnosis of ectopic gestation was made because of the presence of a mass to one side of the uterus, which exactly resembled an ectopic gestation sac. On opening the abdomen this mass was found to be a tubo-ovarian cyst on the right side. There was also a small ovarian cyst on the other side.

Ovary in a Pocket of Broad Ligament.—On January 25, 1899, another surgeon had curetted the uterus of this patient, shortened the round ligaments and attached them to the anterior part of the fundus. The woman did not do well after the operation. The ovary, which was left, became enlarged and painful, and both uterus and ovary were removed by Dr. Goelet a few days ago. He could find no trace of a round ligament on the left side. The tube which had been resected at the first operation was found sealed, and the ovary was completely buried in a fold of the broad ligament.

The Treatment of Cancer by the X-Ray.—Dr. CHARLES WARRENE ALLEN, before reading a paper on the above subject, presented a number of patients showing the results of the treatment. The subject was further elucidated by an exhibition of lantern slides. Dr. Allen said that he had observed in the practice of Dr. Pusey of Chicago such results from the use of the *x*-rays that he felt that there was no need of his experimenting in this field; hence he had merely added it to his armamentarium, using also the other well-tried remedies. A long experience with the latter enabled him to determine how much of the result was due to the use of the *x*-rays. The paper was based upon the treatment of twenty-six cases. Of this number seven had been discharged, though they could not, of course, be reported as cured. One patient had disappeared too early to admit of anything being said about it. One patient had died, though life had been prolonged and the patient made much more comfortable by the *x*-ray treatment. There were now thirteen cases under the treatment, and all were improving except one case of recurrent carcinoma of the breast, in which treatment had been interrupted because the patient had received a severe fall. One of the patients was a physician in active practice, suffering from cancer of the rectum. He stated that he had been very greatly improved. The cases treated by him were undoubtedly cancer, and many of them had been pronounced by other physicians to be exceedingly severe if not absolutely hopeless.

X-Ray Dermatitis.—He had not had any severe *x*-ray burns, and this he attributed partly to the use of screens, and partly to the protection of the adjacent parts by the application of a solution of methylene blue in soda. The alkaline solution was used because it had been suggested that in cases of *x*-ray burn the alkaline reaction of the tissues was changed to an acidone. Dermatitis should be avoided if possible, but in some instances it was of decided benefit in hastening the cure. The treatment for such burns was the application of methylene blue in alkaline solution, or picric acid solution.

Apparatus.—He had used the static machine and the induction coil, and both had produced *x*-ray dermatitis in his hands. The large German bi-anodal tubes were very useful, but they were not only expensive but, if perforated, were a dead loss, because there was no place in this country where they could be exhausted. He had used both metallic and vulcanite screens, the latter having the advantage of not causing sparking.

The author drew the following conclusions: (1) The method was of decided value, though not without danger; (2) It was not a method likely to supersede or do away with previous modes of treatment; (3) The focus tube was of comparatively little importance in the treatment of cancer; (4) The method appeared to be of decided utility in cases of recurrent cancer; (5) From present indications there seemed to be no reason why it should not be employed in primary cancer; (6) The exposures should be stopped at the first statement of the patient that a burning or prickling of the skin is felt; (7) In the early stages most cancers could be cured by the *x*-ray.

Dr. ALBERT C. GEYSER said that Dr. Allen had evidently done some remarkably good work with the *x*-rays. He was himself treating with the *x*-rays a woman who had been operated upon for abdominal carcinoma by Dr. Pryor some time ago, and had required to be tapped every five or six weeks. She had been made very comfortable by the use of the *x*-rays, and the odor had been greatly reduced.

Dr. EDEN V. DELPHEY said that there was reason to believe that this use of the *x*-rays would be greatly extended, and on this account those reporting cases should be most careful in giving the details of their method of treatment. The nature of the apparatus used, such as the length of the coil and the size of the wire, and the number of interruptions, should be stated. The last mentioned item was very important, and it was also well to state the nature of the interruptor used. If the static machine were employed the number and size of the plates should be recorded, as well as the number of revolutions made per minute. Whether the current was continuous or was interrupted by means of a spark gap, and whether the Leyden jars were used in series or not should also be noted. Of course, the report should state what kind of vacuum tubes were used. There were two chief kinds of tubes, the plain tube and the adjustable tube. He had obtained the best results from the plain tubes. The distance of the tube from the patient was of much importance. A year and a half ago one member of the *X*-Ray Association reported a number of cases of tuberculosis as cured, whereupon another member suggested that the cases be reported upon again at the end of the year, because these patients, he said, had a habit of dying from the disease after having been reported as cured.

Dr. W. B. SNOW spoke of an exceedingly severe case of osteo-sarcoma of the face that had shown very satisfactory improvement since he had been treating it with the *x*-ray.

Dr. MILTON W. FRANKLIN said that the vacuum tube has a given resistance, which for any one moment is absolutely invariable and can be measured in ohms. With a given voltage or electromotive force in a tube having a given resistance there would be a given quantity of current transmitted. These measurements, in the case of *x*-ray tubes, had never been made. The exact electromotive force of static machines giving sparks above one inch had never been determined. With the static machine the difference of potential between the two poles steadily increases until the poles become "saturated;" then if the poles are near enough to allow the accumulated charge to pass through the intervening air, a spark will result, and a discharge will take place. As the machine continued to run there would be a fresh accumulation and another spark discharge. This supposed that no tube was in use. When a tube of given resistance was interposed and a sufficient charge had accumulated to overcome this resistance, a spark would pass. At no time would the difference of potential in the machine be greater than that necessary to overcome this resistance—in other words, with a low tube there would be a greater number of discharges than if a high tube were used. In each case the amount of electricity would be equal to the electromotive force divided by the resistance of the tube. With the coil it was different. No matter what the resistance of the tube, there would be as many discharges as there were interruptions in the primary current. The voltage in the secondary coil was the same in every case. The voltage was absolutely constant, and with a low tube there would be a larger amount of current passing.

Dr. ALLEN closed the discussion. He said he had used both high and low tubes, or hard and soft tubes, and was now using the hard tubes in preference. All of the burns that he had seen had occurred with the static machine and with very low tubes. Some patients were more susceptible than others, but this individual variation was within rather narrow limits. In a severe case of cancer he had formerly made use of exposures of half an hour; now he was using much shorter exposures, and repeating the treatment more frequently. Some of the cases formerly receiving twenty minutes' treatment were now receiving exposures of eight minutes. For the treatment of cutaneous affections he was in favor of bringing the tube very close to the diseased area—say, two inches. For the more deeply-seated cancers the distance was probably eight or ten inches.

Officers Elected.—*President*, Dr. Alexander Lambert; *First Vice-President*, Dr. Wilbur B. Marple; *Second Vice-President*, Dr. Frederick P. Hammond; *Secretary*, Dr. Ogden C. Ludlow; *Corresponding Secretary*, Dr. Frederic W. Loughran; *Treasurer*, Dr. Charles E. Denison; *Member of Executive Committee*, Dr. Parker Syms; *Member of Nominating Committee*, Dr. E. Eliot Harris.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending April 26, 1902:

	Cases.	Deaths.
Measles	480	22
Diphtheria and croup	295	51
Scarlet fever	434	17
Smallpox	56	13
Varicella	69	..
Tuberculosis	248	154
Typhoid fever	26	6
Cerebro-spinal meningitis	..	5

Test for Blood Stains.—In 1898 and 1899 M. Bordet showed that by injecting the defibrinated blood of any animal into the blood of animals of different species the serum of the latter acquired, after a time, the property of agglutinating and of dissolving the corpuscles of the blood of the former. Moreover, he showed that the serum mixed with the defibrinated blood of any other species formed, after a few minutes, a clear, limpid, red liquid, while if it were mixed with the blood of the animal from which the blood had first been injected, it formed an opaque liquid from which a flocculent mass was quickly precipitated. His experiments, which gave a test for blood stains, have been repeated and extended. Mr. Uhlenhuth has applied it to blood from oxen and rabbits. Every week he injected 10 cubic centimeters of defibrinated ox blood into rabbits, and after five such injections he obtained a serum that dissolved all blood except that from oxen. Analogous experiments with human blood gave like results. It was possible to discriminate between drops of human and of ox blood that had been left to dry for a month on a wooden plank.

Messrs. Wassermann and Schutze have carried such processes further and have experimented on the blood of twenty-three species of animals, and confirmed the former conclusions. The serums were a perfect test. It is noteworthy that the blood of monkeys and of men were somewhat similar in action. Spots of blood three months old could be discriminated. The importance of this discovery to medical jurisprudence is very great.—*New York Sun.*

An Evil Consequence of Pince-nez.—Mr. Robert D. Joyce, Ophthalmic Surgeon to the Richmond Hospital, Dublin, calls attention to a very curious point in regard to the use of pince-nez, namely, that in some cases it sets up a flow of tears in consequence of its pressure dragging on the tissues at each side of the nose to such an extent as to pull the lower lid out of position, and prevent it lying properly in contact with the bulbar conjunctiva. In the cases observed the displacement of the lid, with, of course, the inferior punctum, was small in amount, only about 0.2 or 0.3 m.m. This might easily escape detection, and all the more so, as it has to be looked for while the glasses are on the patient's face. But even this small amount of eversion is amply sufficient to cause epiphora. This, he says, is a very important matter, for such an eversion of the lid, though present at first only when the pince-nez is actually on the face, will become permanent in time, and set going all the troubles associated with ectropion. In a large proportion of cases pince-nez will set well on the face, but in a certain number they are unsuitable for the above reason, even though they may be a "good fit," so far as the optician is concerned. In some cases it is not possible to fit pince-nez without causing this kind of ectropion, and in such, of course, spectacles must be used.—*The Hospital.*

Probing by Telephone.—In several London hospitals surgeons are now using the telephone whenever they have occasion to probe for bullets or other metallic objects. The receiver of the telephone is placed on the head of the operator, and the patient is placed, in the usual manner, in contact with a plate; the general medium employed being a wet sponge or some paper saturated with a saline solution, which is spread over the plate. The latter is connected with the telephone by a wire, and the probe, after it has been introduced into the body, naturally vibrates as soon as the foreign metallic substance comes in contact with it.

The probe is also connected with the telephone by a wire, and thus no such blunder is possible as sometimes happens when an ordinary battery is used.

When a telephone is used in this way the plate acts as one pole and the probe as the other. Needles, bullets, grains of shot and pieces of steel and copper can be easily located by the use of this simple method. Indeed, it is said that the only instances when the telephone did not work satisfactorily were when the objects to be located were of the same metal as the probe.

Eminent French and German surgeons have been watching these experiments in London, and intend to introduce the same method into the hospitals of Berlin and Paris.—*New York Herald.*

The Scale of Professional Envy.—An Italian philosopher, Signor Ferriani, has amused himself by constructing a scale of degrees for the measurement of professional envy. The highest point in this envy measurer is 10. Architects are happily placed lowest on the scale. They register only 1; advocates and priests and military men are ranged at 2, and in the ascending scale he gives us professors of science and literature, 4; journalists, 5; authors, 8; physicians, 9; actors and actresses, 10. The small amount of envy among architects is held to be due to their precise, severe, and rigid studies. The same thing applies to advocates. Among the clergy envy is found mostly in preachers. In the military career envy is quiescent in time of peace, but can become acute in time of war. Envy makes men of science and literature lead solitary lives, diffident of each other. Among physicians envy is still more prevalent, and they do not spare their colleagues, often terming them charlatans. In the theatrical world envy, according to Signor Ferriani, reaches its acute form, vanity playing a great part in its production.

Expectation of Life.—In part 2 of Biometrika, a journal which has recently been established for statistical study of biological problems, there is an interesting article "On the change in expectation of life in man during a period of circa 2,000 years," by Professor Karl Pearson. As the outcome of a comparison between the recorded ages of death of a certain number of Egyptian mummies and the rate of mortality of our own times. Professor Pearson calculates that to-day a man of twenty-five years lives on an average fifteen years more than a man of twenty-five years did 2,000 years ago, thus suggesting that, in the course of these centuries, man is remarkably fitter to his environment, or else he must have fitted his environment, immeasurably better to himself. Whichever be the correct explanation, both conclusions point perfectly definitely to an evolutionary progress. We wonder what will be the expectations of life 2,000 years hence.—*Edinburgh Medical Journal.*

Hebrew Charities' Work for March.—In the month of March, 2,044 families and individuals applied at the Relief

Bureau of the United Hebrew Charities, of whom 403 applied for the first time. In the Employment Bureau there were 746 applicants for work, of whom 487 were given employment. After careful examination relief was refused to 236 persons. Sixty-nine persons were granted transportation to different parts of this country and Europe. Two thousand three hundred and ninety-three garments, 538 pairs of shoes, and 252 articles of furniture and bedding were distributed. Three hundred and twenty nine garments were made in the work-room, and 497 garments were repaired. Twenty-five nights' lodging and 48 meals were furnished to homeless men and women. Eleven bundles of clothing were distributed. Fifty-two persons were supplied with nourishing food. The disbursements in the various departments for relief were $16,331.25.—*New York Evening Post.*

Advantages of Several Meals a Day.—Professor W. O. Atwater says "The theory is advanced from time to time that one or two meals a day are preferable to the three commonly served in this country. If the same amount of food is to be eaten it is hard to see the advantage of two very hearty meals over three ordinary ones. The best physiological evidence implies that moderate quantities of food taken at moderate intervals are more easily and completely digested by ordinary people than larger quantities taken at long intervals. If the food ordinarily taken is considered excessive and the aim is simply to reduce the amount, it would seem more rational to make all the meals lighter than to leave out one. The very fact that the custom of eating a number of meals has so long been almost universal indicates that it must have some advantages which instinct, based upon experience, approves and justifies.

Milk Adulteration in Athens.—A French newspaper describes an ingenious method of milk adulteration practiced in Athens. The residents have a penchant for goat's milk, and herds of these animals are led along the street by milk-sellers wearing long blouses with capacious sleeves. Their cry of "Gala! gala!" brings the housewife to the door, and she prudently demands that the goats shall be milked in her presence. This is done, but the milkman has in one hand the end of a thin tube which runs up his sleeve and connects with an india-rubber receptacle full of water, which is carried under his ample blouse. At each pressure of the fingers on the udder there is a corresponding compression of the water sack, and milk and water flow side by side into the milkpail.—*Boston Evening Transcript.*

Æstival Quotidian Fever (True Quotidian).—Attilio Caccini reports his researches in sixty-two cases of quotidian fever. He examined the blood every three hours, and states that the life cycle of the parasite always followed the characteristic course pointed out by Marchiafava and Bignami, and always exhibited the differential signs distinguishing it from malignant tertian. Further experimentation, consisting in the inoculation of healthy persons, with resulting fever of a quotidian type, proved the existence of a variety of æstival parasites which determine a fever of quotidian type, and complete their life cycle within twenty-four hours. Experiments in the reproduction of the quotidian type of fever, through the sexual cycle in the body of anopheles, are at present under way, and will be reported later.—*Il Policlinico.*

Cancer Investigation in Great Britain.—The Royal College of Physicians and the Royal College of Surgeons together have sanctioned a scheme for the systematic investigation of cancer. It is proposed to raise $500,000 for a special laboratory to work under the direction of the most distinguished medical scientists. It is feared that the scheme is too laboratorical, inasmuch as one vital discovery, namely, how to prevent or stay the course of cancer, is more probably to be sought in a minute and patient study of the living organism and its environment than in the investigation in a laboratory. That study must include investigation of the action of infinitesimal quantities and various elements and their cumulative effects.—*New York Evening Post.*

Physicians' Fees.—The highest fee ever offered to an oculist is said to have been one of $50,000, which was refused by Mr. Critchett a few years ago. The offer came from a wealthy Indian Rajah, who was suffering from a serious eye affection.

Cholera Plague.—The great epidemic of cholera in Europe of 1866 is said to have been most fatal at Rome and Madrid on Sundays, at London and Berlin on Wednesdays, and at Paris on Saturdays.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended April 26, 1902:

		CASES.	DEATHS.
SMALLPOX—UNITED STATES.			
California, Los Angeles	Apr. 5–12	4	
San Francisco	Apr. 6–13	15	
Colorado, Denver	Apr. 5–12	9	
District of Columbia, Washington	Apr. 12–19	1	
Florida, Jacksonville	Apr. 12–19	9	
Illinois, Belleville	Apr. 12–10	1	
Chicago	Apr. 12–19	14	
Galesburg	Apr. 12–19	1	
Indiana, Evansville	Apr. 12–19	2	
Indianapolis	Apr. 12–10	22	1
Kansas, Wichita	Apr. 12–19	2	
Kentucky, Covington	Apr. 13–20	10	
Louisiana, Shreveport	Apr. 12–19	7	
Maine, Portland	Apr. 12–19	1	1
Massachusetts, Boston	Apr. 12–19	9	4
Chelsea	Apr. 12–19	1	
Malden	Apr. 12–19	2	
Somerville	Apr. 12–19	..	1
Michigan, Detroit	Apr. 12–19	10	
Grand Rapids	Mar. 29–Apr. 19	4	
Ludington	Apr. 12–19	5	
Nebraska, Omaha	Apr. 12–19	33	
New Jersey, Camden	Apr. 12–19	1	
Newark	Apr. 12–19	29	4
New York, New York	Apr. 12–19	56	8
Ohio, Cincinnati	Apr. 11–18	17	
Cleveland	Apr. 12–19	2	
Dayton	Apr. 12–19	1	
Toledo	Apr. 12–19	2	
Pennsylvania, Altoona	Apr. 12–19	4	
Columbia	Apr. 14–21	6	
Erie	Apr. 12–19	8	
Johnstown	Apr. 12–19	2	
Philadelphia	Apr. 12–19	26	1
Pittsburg	Apr. 12–19	5	
Rhode Island, Providence	Apr. 12–19	..	2
South Carolina, Greenville	Apr. 5–12	2	
South Dakota, Sioux Falls	Apr. 12–19	1	
Tennessee, Memphis	Apr. 12–19	13	
Nashville	Apr. 12–19	1	
Vermont, Burlington	Apr. 5–12	1	
Washington, Tacoma	Apr. 6–13	..	5
West Virginia, Wheeling	Apr. 5–12	1	
Wisconsin, Green Bay	Apr. 13–20	10	
Jamesville	Apr. 6–13	2	
Milwaukee	Apr. 12–19	3	
SMALLPOX—FOREIGN.			
Austria, Prague	Mar. 29–Apr. 5	5	1
Belgium, Antwerp	Mar. 29–Apr. 5	9	3
Canada, Winnipeg	Apr. 5–12	6	
China, Hongkong	Mar. 1– 8	4	2
Colombia, Cartagena	Mar. 29–Apr. 6	..	1
France, Marseilles	Mar. 1–31	..	2
Paris	Mar. 29–Apr. 5	..	3
Great Britain, Birmingham	Apr. 5–12	1	
Dundee	Mar. 29–Apr. 5	4	
Glasgow	Apr. 4–11	18	2
Leeds	Mar. 29–Apr. 5	..	2
Liverpool	Mar. 29–Apr. 12	7	
London	Mar. 29–Apr. 5	376	54
Plymouth	Apr. 5–12	1	
India, Bombay	Mar. 18–25	..	8
Calcutta	Mar. 15–22	..	11
Karachi	Mar. 16–23	13	4
Italy, Naples	Mar. 22–Apr. 5	20	
Palermo	Mar. 29–Apr. 5	6	2
Mexico, Mexico	Mar. 31–Apr. 6	1	1
Vera Cruz	Mar. 29–Apr. 12	4	3
Russia, Moscow	Mar. 22–29	21	3
Odessa	Mar. 29–Apr. 5	5	1
St. Petersburg	Mar 20–Apr. 5	8	2
Turkey, Smyrna	Mar. 2–30	..	1
YELLOW FEVER.			
Dutch Guiana, Paramaribo	To Mar. 1	31	21
French Guiana, Cayenne	Mar. 27	1	1
Mana	Mar. 27	1	1
St. Laurent	Mar. 27	32	21
Mexico, Vera Cruz	Mar. 20–Apr. 12	6	5
PLAGUE.			
India, Bombay	Mar. 18–25	..	751
Calcutta	Mar. 15–22	..	420
Karachi	Mar. 16–22	90	79
CHOLERA.			
China, Hongkong	Mar 1– 8	1	1
India, Bombay	Mar. 18–25	..	9
Calcutta	Mar. 15–22	..	86
Straits Settlements, Singapore	Mar. 1– 8	..	2

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Original Articles.

REMARKS ON ARTERIOSCLEROSIS.[*]

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NEW YORK.

I WISH to bring to your attention this evening the subject of arteriosclerosis. I do not propose to enter at length into the complicated and still very obscure questions of pathology and the many mooted points of clinical history. I wish to present merely a few thoughts and reflections that may, perhaps, be of general interest, and, possibly, of some practical use.

A vast amount of histological and experimental work has been devoted to this subject in the last twenty years; and much clinical and statistical material has been carefully collected, but we are still very far removed from any really satisfactory understanding of the questions involved. The very term itself—arteriosclerosis—has by no means a stable and universally accepted significance.

Since the brilliant researches of Thoma and his school, arteriosclerosis has been very generally looked upon as primarily a disease of the media or muscular coat of the blood vessels. If the muscular layers lose their elasticity and contractility, be it from over-strain, be it from senile exhaustion, or from disease, the vessel must become distended by the blood pressure; the current is retarded, and as the result of an attempt at self-adjustment, connective tissue is formed in order to restore the proper caliber of the blood vessel. By most ingenious methods, Thoma has established this beyond doubt, and has shown, too, how the well-known tortuousness of the blood vessels, the secondary degenerations, ulcerations, calcifications and ossifications must necessarily follow. This most plausible and enticing theory is now generally accepted in preference to those of Huchard, Traube, and others. A somewhat closer scrutiny, however, leads to the conviction that while very many of the more prominent phenomena are undoubtedly accounted for by this theory, it does not suffice for a complete and exhaustive explanation of all the facts. We are compelled to acknowledge that no theory that takes account of a single factor only can suffice to cover all the phenomena in so complicated an organism as the human body, and that methods of explanation based on mere mechanic concepts are inadequate. Thoma's theory provides a sufficient explanation for the lesions, gross and histological, in the larger and largest vessels, the aorta, iliacs, carotids, radial, etc., but it does not, or so, at least, it appears to me, sufficiently account for the alterations in the smallest vessels and in the parenchyma.

It can, I believe, be taken as a fact, proved by the study of numerous cases in all stages of development, that in every instance of arteriosclerosis, the process is not confined to the blood vessels alone, but that the organs and tissues participate in the form of interstitial inflammation or proliferation, ultimately leading to circumscribed or diffuse fibrosis. It is an open question whether the proliferation of the interstitial tissue is the primary process and the sclerotic affection of the blood vessels secondary to it, or *vice versa*. But of this there is no doubt, that every arterioscleriotic vessel is associated with more or less complete fibrous induration of the territory it supplies. Arteriosclerosis and interstitial induration, ultimately leading to fibrosis, invariably go together. Experimental and histological experiences, which, however, are not as yet sufficiently advanced to warrant positive conclusions, have made it appear possible, and even probable, to me, that arteriosclerosis in many instances begins primarily in the smaller and smallest vessels of the various organs and thence extends upward into the larger trunks. If this is so, we must transfer the point of origin of arteriosclerosis to the small vessels and the interstitial tissue. The arteriosclerosis of arterioles and the fibrous induration of the parenchyma, as the primary lesion, produce the local increase in blood pressure and the retarding of the blood current, which, together with the progressive alterations in the blood vessels from below upward, form a firm foundation, on the basis of which Thoma's theory, with its mechanical and physiological deductions, can then be utilized to account satisfactorily for all the observed facts.

But what causes the primary sclerosis of arterioles and interstitium? It is evident that considerations taking account of purely mechanical factors will not help us here, and we are naturally, and almost by necessity, led into the domain of chemical and metabolic changes. It is certainly not intrinsically impossible that definite local or systemic metabolic derangements can be conceived as a cause for indurative and degenerative lesions in blood vessels and connective tissue. The club fingers in suppurative pulmonary lesions and in certain intoxications may be cited as an apposite illustration. More striking still is the condition of the connective tissue group in myxœdema and in acromegaly. I am well aware that all this is as yet largely hypothetical, and in no wise strictly proven, but this hypothesis seems to explain a great number if not all of the observed facts, and thus far at least there are, to my knowledge, no well-founded observations to contradict it. And, after all, this view is not so purely speculative as might at first appear. Aside from the analogies just mentioned, there are a number of well-grounded facts which distinctly speak in support of it. We know that there are many and important chemical changes in the metabolism of the senile, and senile arteriosclerosis and fibrosis is the most frequent and typical of all forms. We find local and general arteriosclerosis associated with various intoxications (alcohol, nicotine, lead, etc.). We find it almost regularly in gout. It must be noted, however, that there are certain, but, perhaps, not very essential histological differences between the earlier stages of these toxic forms of arteriosclerosis and the typical senile form, but ultimately, and this is certain, they one and all lead to the same type of general arteriosclerosis, atheroma, and degeneration.

Summing up this part of the subject, we note, first that arteriosclerosis may be conceived as commencing in the smaller and smallest vessels, and that it is always and without exception associated with indurative processes in the tissues and organs. It may begin as a purely local process in a single viscus—the heart, the kidneys, the brain, etc.—and gradually become generalized. Second, it is by no means always a disease of advanced age or senility, but it may make its appearance at any period of life, even in infancy and childhood. Thoma himself states that milder grades of arteriosclerosis are very frequent after the age of thirty-five. Young observed typical sclerosis of the temporal arteries in a child of fifteen months. Meigs found sclerosis of the coronary artery in an infant five months old. Among 148 autopsies of arteriosclerotic subjects Seitz found seventeen, whose ages ranged from ten to twenty-nine years. Many more examples might be cited. All these data, moreover, refer to the grosser changes found in the larger blood vessels. It is my conviction that the disease will be recognized still more frequently in comparatively young subjects when the condition of the smaller vessels and of the interstitial tissue is made an object of more careful investigation. Third, it is possible that chemical change, may be important factors in its etiology, and we recognize at present besides the senile forms of the disease, arteriosclerotic conditions produced by various toxic influences. It is probable, too, that hereditary disposition is a not infrequent and important etiological factor.

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[*] Read before the New York County Medical Association.

If we now proceed to consider, from the point of view thus gained, the clinical aspect of our subject, we shall find it a very complex and difficult one. There is no great difficulty in recognizing the tortuous vessels, the senile arch, the hard and rigid radial artery, and all the manifold organic lesions associated with general arteriosclerosis of the aged; but the appreciation of localized arteriosclerotic lesions, and more especially in the case of young individuals, is by no means always an easy task, and this is the more true, inasmuch as there appears to exist no one single symptom that can be relied upon as absolutely pathognomonic. The well-known accentuation of the second aortic sound and Litten's symptom are undoubtedly characteristic and pathognomonic symptoms when present, but their absence proves nothing. Grave arteriosclerotic processes may be going on in various parts of the body—brain, kidneys, liver, etc.—without, for a long time, at least, causing recognizable symptoms in the aorta and the large vessels. Maragliano has shown that the increase of blood pressure, as far as can be clinically demonstrated, and which has so long been considered characteristic of arteriosclerosis, is by no means a constant symptom. In five cases of arteriosclerosis, in which he studied the blood pressure by accurate methods, he found only one in which the pressure was abnormally high. Hypertrophy and dilatation of the left ventricle of the heart is present only in a limited number of cases; the pulse may be very slow or quite rapid or entirely normal. Therefore, as no single pathognomonic symptom exists, each case must be carefully studied on its own merits and with reference to its own peculiar features.

According as different vascular territories are primarily or more prominently affected, several clinical types of arteriosclerotic disease may be distinguished, but it must always be borne in mind that these types are not absolutely fixed and permanent, but may merge one into the other, for the process is largely progressive; one organ after the other becomes diseased, and if life is not previously ended a very general arteriosclerosis of the entire system ultimately develops.

One well-known type may be called cardiac. Here we have arteriosclerosis of the coronaries and the aorta. Numerous histological studies have convinced me that in the heart the arteriosclerotic lesions commence in the finer and finest branches of the coronary arteries, and are associated at the very outset with indurative lesions of the myocardium. By the time that gross lesions appear in the trunks of the coronaries and in the aorta numerous smaller branches in the heart muscle and their surrounding territory have undergone degeneration and the process leads to a condition of diffuse myofibrosis, recently well described by Dehio. The clinical symptoms of this group are well known and need no detailed description here. But it is well to bear in mind that in the early stages physical examination proves practically negative. There are no murmurs, no hypertrophy or dilatation. The symptoms, if any, are mainly subjective and not at all characteristic. There may possibly be a slight abnormality of the pulse, either bradycardia or rapid and somewhat feeble pulse, particularly on slight exertion, or distinct arhythmia and intermittence. In the somewhat later stages accentuated second aortic sound, hypertrophy and dilatation of the left ventricle, later still of the right also, may be found; secondary murmurs develop, angina pectoris and kindred affections make their appearance, and as the degeneration of the heart muscle proceeds, all the well-known symptoms of heart insufficiency follow.

Another type may be called renal. Here, too, there is every reason to believe that the process commences in the arterioles and the interstitial tissue, and progressively and gradually involves large portions of the kidney. The early stages of this group of cases can, probably, never be recognized clinically. There are, as a rule, no subjective complaints. There is no abnormal renal secretion, and the urine, if by any chance it is examined, will, probably, show no albumin. A somewhat later stage is usually recognized by mere accident. There are still no very positive subjective symptoms, an occasional headache is not referred to any renal lesion; not infrequently an accidental examination, as for an insurance company, for instance, calls the attention of the patient to the fact that there is some lesion. At this stage the urine presents the well-known characteristics: a rather low specific gravity, though not always excessively low, only occasionally a trace of albumin, but the constant occurrence of granular casts in the sediment. In its further progress all the characteristic symptoms and sequelæ of chronic contracting kidney are more or less rapidly developed, together with progressive arteriosclerotic lesions involving the heart, blood vessels and other organs.

The following case may be of interest as illustrating some of the points here mentioned, and as again showing how insidious is the beginning of this disease, and how very grave symptoms may suddenly develop with scarcely any appreciable physical signs:

Mr. W. G., about forty-two or forty-three years old, of apparently good constitution and robust build, had always been perfectly healthy, with the exception of the ordinary minor ailments. He was rather a high liver, and at one time had smoked excessively. He never had gout; used alcohol only in moderation. Father and brother had died at a comparatively youthful age of heart disease, the exact diagnosis not obtainable. In consequence, Mr. G. had all his life dreaded heart disease for himself and was of late years frequently examined with entirely negative results. Latterly, he had reformed his habits and became very careful as regards diet and the use of tobacco. He was passed by several insurance companies without difficulty. The last attempt at insurance failed because the examiner detected a trace of albumin. Repeated examinations showed an occasional minute trace of albumin in a urine of average specific gravity of about 1020. but no casts could be found, not even with the aid of the centrifuge. During all this time the man appeared to be in perfect health. While traveling abroad he was taken one night, suddenly and without premonition, with what he called an attack of asthma, but which the physician who was summoned recognized as an unmistakable attack of pulmonary œdema. There was a great deal of præcordial distress, a very rapid and feeble pulse, almost continuous short cough, considerable dyspnœa, some cyanosis, and large and small râles all over the chest. In the morning all these symptoms had disappeared, leaving the patient somewhat weak and badly frightened. I saw the patient a few weeks afterward. Since this first attack he had had a second but slighter one. Careful examination of the whole body gave but very scant results. The heart was neither dilated nor hypertrophied. There were no murmurs. Lungs, liver, spleen, etc., appeared perfectly normal. No arteriosclerotic arteries could be seen or felt. The second aortic sound, however, was distinctively accentuated, and there was a faint suggestion of galloping rhythm, which became more marked on even slight exertion. The pulse was somewhat feeble and rapid. The urine, specific gravity 1018, contained occasionally a slight trace of albumin, and here and there, but by no means regularly, were granular casts found. Notwithstanding these very slight physical signs, the diagnosis of primary arteriosclerotic kidney, with subsequent arteriosclerosis of the heart and aorta, was made and the prognosis was set down as an absosolutely bad one. It is particularly interesting to note in this case that pulmonary œdema was practically the very first symptom that became manifest. From this time on the disease progressed rather rapidly, the left heart hypertrophied, both ventricles became dilated, all sorts of murmurs made their appearance, liver and spleen began to enlarge, attacks of pulmonary œdema became more frequent and severe, ascites and anasarca set in, and the man died four years after the first attack.

Another group of arteriosclerotic symptoms may be distinguished as the cerebral type. As to the first histological development, I am unable to speak from experience, and I believe that a careful microscopic investigation is urgently needed. The larger vessels and their anatomical lesions have, however, been well studied. The clinical symptoms are well known and require hardly more than mere mention. We are all familiar with the diffuse unlocalized headaches, the vertigo, particularly on change of position of the head or of the eyes. This type leads frequently to apoplectic hemorrhages and to softenings. That we have to deal here also with indurative processes in the interstitium is plainly evidenced by the psychic symptoms, which so frequently are associated with these forms of arteriosclerosis: the disturbance of memory, the psychic apathy or irritability, the various forms of so-called senile dementia have their anatomical basis, undoubtedly, in the more or less progressive arteriosclerotic induration of the cerebral tissue, especially the cortex.

These three types of arteriosclerosis, the cerebral, the renal and the cardiac are well known, and have frequently been discussed. I am tempted to suggest two others, which as yet have not, so far as I know, been recognized. One is a spinal type of arteriosclerosis, which may be considered as possessing distinctive features. In these cases, usually in more or less senile subjects, with more or less strongly marked general arteriosclerotic signs, the symptoms to a certain degree simulate tabes, and are not infrequently diagnosed as such. They differ, however, from locomotor ataxia in many and important points, above all in the lack of progressiveness, and of all typical sequence of symptoms. I do not, however, wish to go beyond this mere suggestion, particularly as no anatomical material is as yet at hand.

The second type, which I also merely wish to suggest, in order to invite clinical and histological research of other workers in this field, may be designated as the gastrointestinal type, including under this heading also the liver and pancreas. My own studies, both clinical and anatomical, though by no means as yet resulting in positive conclusions, have made it very probable to my mind that there is a set of gastric, intestinal, and cirrhotic symptoms in arteriosclerotic subjects, all of them depending on indurative and atrophic conditions of stomach, intestine, pancreas and liver, which are the direct consequence of arteriosclerotic indurations. As clinically illustrative of this may be mentioned the peculiar gastric condition so often met with in senile subjects, characterized by a diminished production of HCl, and insufficient and retarded muscular action. Anatomically, we find pressure atrophy of the glandular elements and extensive indurations of mucous, submucous and muscular coats. A similar condition is found in various portions of the intestinal tract, especially in the colon, and also in certain portions of the small intestine, accounting for many intestinal disturbances, such as constipation and atonic distension. The pancreas has been found in many cases of arteriosclerosis in a considerable state of fibrosis. We have thus far no material for determining if in these cases the ferment secretion of the pancreas has suffered. Perhaps the glycosuria, mild but constant, so very frequently found in aged arteriosclerosics, may, at least in part, be due to this arteriosclerotic fibrosis of the pancreas.

I am afraid, however, that I have already ventured too far into the domain of speculation, and will, therefore, stop to say, in conclusion, a few brief words on the subject of therapeutics, though this is even more unsatisfactory than the theory. It is evident that at a time when it becomes possible to diagnose arteriosclerotic lesions the process must have already advanced to some considerable extent, and it is quite hopeless in our present state of knowledge to attempt to restore indurated vessels and tissues to their normal condition. The utmost we can hope for is arrest of the progress of the lesion. This route is clearly indicated where the toxic influences are known, and where syphilis, alcohol, lead, nicotine, etc., are the underlying cause of the arteriosclerotic processes. These must be primarily dealt with, each according to the proper method. According as the heart, the kidneys, the brain, the stomach, etc., are more in the foreground of the picture, they must be treated according to the symptoms. In every case of arteriosclerosis, however, I would again urge, besides the special drugs that may be employed, the systematic use of the iodides. But, after all, according to our present lights, our treatment of arteriosclerosis must be mainly prophylactic. Both as a prophylactic measure and as a possible means of arresting the progress of the disease, diet undoubtedly plays a great rôle. In this connection Rumpf, on the basis of very careful investigations concerning the economy of the lime salts in the human system, has suggested diet schemes for arteriosclerotics and individuals with arteriosclerotic tendencies. Our knowledge of physiological chemistry, as a whole, and of the chemistry of arteriosclerosis in particular, is, however, still so utterly inadequate as to preclude, for the present, any absolutely specific dietary or chemical measures. We are forced to fall back upon the general dietetic and hygienic laws as borne out by common sense and the experience of a thousand generations. Above all, no hard and fast rules, but pliable adaptability of method to the needs of each individual case.

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THE INDICATIONS FOR NEPHRECTOMY, WITH REPORT OF THREE CASES.*

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The indications for the surgical removal of the kidney are to-day most manifold. For convenience, I shall divide them into three classes, according to the age of the patient: (1) During infancy; (2) During adolescence; (3) During adult life.

I shall not attempt to discuss all the rare forms of kidney disease that may necessitate nephrectomy, but shall limit myself to the more common ones. Of the three cases to be included in this paper, all of which were admitted to Dr. Lilienthal's service at Mount Sinai Hospital within the past year, and operated on by me, one belongs to each of the above-named classes. It is a source of gratification that, though each one had some unusual or serious complication, yet all three made complete recoveries.

The diagnosis of the surgical diseases of the kidney is made (to quote from the article on "Kidney" which I had the privilege of contributing to the Mount Sinai Hospital Reports for 1899) from (1) History of the case. (2) Examination of the abdomen, with and without anæsthesia. (3) Examination of the urine (*a*) voided from the bladder; (*b*) drawn from the bladder (catheter); (*c*) drawn by the ureteral catheter. (4) Examination of the bladder and ureters (*a*) by cystoscope; (*b*) by ureteral catheter. (5) Examination with Röntgen rays. (6) Exploratory operations on bladder, kidney, or ureter.

The *other* kidney plays a very important rôle in every case of contemplated nephrectomy. Unless we have some reliable information as to the functionating capacity of the opposite kidney, we have no right to perform a nephrectomy. Clinical experience has demonstrated, however, that it is not essential to have a perfectly sound kidney on the opposite side before removing a diseased kidney.

Of the functionating capacity of the remaining kidney we must, nevertheless, have some knowledge. How can we obtain this knowledge before undertaking a nephrectomy? The chief means at our disposal are:

(1) The use of the cystoscope and ureteral catheter. (2) The palpation of the opposite kidney. (3) Opening the peritoneum before removing the kidney, and thus exploring the opposite kidney (*a*) by enlarging the incision for nephrectomy; (*b*) by making a preliminary separate incision. (4) By doing a preliminary nephrotomy on the diseased side and draining the kidney before removing it. The urine that escapes from this kidney is examined, and likewise that coming from the bladder.

The cystoscope is a great aid in diagnosis. But, although we can with it diagnose a diseased kidney by seeing purulent or bloody urine emanating from a ureter, we cannot conclude that the other kidney is healthy because the urine from that side appears clear. The urine may appear clear, and yet the kidney may be the seat of amyloid degeneration, of a new growth, of calculi; or there may be diseased foci in the parenchyma, which do not communicate with the pelvis of the kidney, and hence do not modify the character of the urine. Regarding the value of ureteral catheterization, we may exclude its use from those ureters from which we have seen bloody or purulent urine escape; for, in these cases the cystoscope has already made the diagnosis for us. We may confine the catheterization to those ureters from which the urine flows clear, as seen with the cystoscope. As the ureteral catheter can only remain in place a limited time, the amount of urine collected from one kidney must be small. The examination of such a small quantity of urine must necessarily often be unsatisfactory, and frequently will turn merely on the question of the presence or absence of albumin. Moreover, even the absence of albumin from such a specimen of urine is far from positive proof of the soundness of the kidney from which it flowed. The presence of red blood cells would be no proof of kidney disease; since a slight abrasion of the mucous membrane of the ureter might very well be the source of the blood. But there is another side to the question of ureter catheterization. Are there any dangers connected with it? The diseases of the kidney that are most apt to be bilateral (and in consequence the catheterization of the ureters of great value) are the purulent and the tubercular. Is there any danger of infecting a healthy ureter by inserting a catheter into it through an infected bladder? There is some difference of opinion as to whether renal tuberculosis is ever ascending. That a purulent kidney is frequently the result of a cystitis is unquestioned; we have but to refer to cases of bladder infection by catheters, followed shortly by bilateral pyelonephritis. In like manner, gonorrhœal kidney diseases are certainly examples of ascending infections. As a matter of course, the bladder should be thoroughly irrigated before introducing the cystoscope, but we know we cannot thereby render an infected bladder sterile. Moreover, if the infectious material comes from the other kidney, it will be continuously flooding the bladder while we are introducing the ureteral catheter. Since purulent and tubercular renal diseases are either the result of pre-existing bladder disease or secondarily infect the bladder, it is obvious that, to reach the ureter, we must pass the catheter through a bladder that is the nidus for microorganisms. There certainly must be some danger of infecting a healthy ureter, and through it a healthy kidney. Henry Morris sounds a note of warning when he remarks: "The cystoscope and the ureteral catheter should be employed with reserve and with great caution in tuberculous disease."

To discuss in detail the relative value of the various other methods for ascertaining the condition of the opposite kidney would lead too far. Suffice it to say that the employment of one or more of the methods above enumerated, combined with a careful study of the history of the case and repeated urinary analyses, will, in a large majority of cases, enable us to decide whether, in the first place, there is a kidney present on the opposite side; and whether, in the second place, it can properly perform its work.

I.—*The indications for nephrectomy during infancy* fall into two groups: (1) Congenital malformations, and (2) New growths. The congenital malformation usually consists of an obstruction to the flow of urine from the kidney into the bladder. The seat of the obstruction may be at the bladder end of the ureter, or at the kidney end, or at any part of the ureter between these two points. Sometimes the lower part of the ureter is entirely impervious. As a result of the obstruction to the flow of urine, a hydronephrosis develops. This hydronephrosis may attain an enormous size, and the kidney parenchyma may become completely obliterated, the kidney being transformed into an enormous cystic sac. I have not been able to find any cases of congenital hydronephrosis that survived a nephrectomy in the first nine months of life, although I have been informed that there are a few on record.

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*Read before the Harlem Medical Association on January 2, 1902.

Case I.—Samuel A., nine months old, admitted to Dr. Lilienthal's service at Mount Sinai Hospital, August 21, 1901. The parents of the child were alive and well. The child had always been constipated. With the exception of this, the parents had noticed nothing abnormal about the child until six weeks before its admission to the hospital. At that time a hard tumor was noticed on the left side of the abdomen. The abdomen gradually increased in size; the child had attacks of restlessness, fever and vomiting. It took but little food, and lost considerably in weight. The stools had often been greenish, and the mother reported that the child had urinated more frequently than formerly. Examination showed a well-nourished child; the tongue was moist and coated. The lungs, heart and liver were normal. In the abdomen there was a very large mass, occupying almost the entire left side, and extending over to the right iliac fossa; its surface was rounded and smooth, and the whole tumor was somewhat movable. The lower portion of the tumor was of softer consistency than the upper. There was no tympany over the tumor.. Splenic dulness merged into the dulness of the tumor. The tumor could be moved towards the left lumbar region, and well over to the right side. By rectum, the tumor could be felt above the pelvic brim. Temperature, 100°; pulse, 110; respiration, 26. Operation on August 24, 1901, under chloroform. I made an incision about 12 cm. long, extending from the left side of the umbilicus backward and slightly upward into the lumbar region. The muscles were, in part divided; in part, separated bluntly. . Upon opening the peritoneum, a large tense tumor at once presented itself; its surface was smooth and covered with peritoneum. On account of the great size of the tumor, the exact location of the pedicle could not be determined. The tumor was aspirated and found to contain a clear, colorless fluid; about 750 grams of fluid were withdrawn. The collapsed sac was then drawn into the wound. Its pedicle was intimately adherent to the omentum and to a loop of small intestine; but, as the child's condition was alarming, no attempt at further exploration was made. The adherent omentum and, at the same time, the vessels in the pedicle were tied off with catgut, applied as a chain ligature, and the cyst cut away. A few small bleeding vessels in the omentum and on the adherent loop of intestine were ligated. On account of the straining of the child, the prolapsed loops of gut were replaced with some difficulty, due to the fact that the anæsthetic had to be stopped soon after the beginning of the operation. The opposite kidney was palpated through the wound and felt normal. The wound was rapidly closed with through and through silk-worm-gut sutures, a small drain being left at the posterior angle. Time of operation twenty-seven minutes.

Examination of the tumor showed a smooth thin sac, in which numerous small subdivisions (calyces?) could be demonstrated. A small portion of the ureter (patent) remained attached to the tumor. The pathologist could find no trace of kidney tissue. There was considerable shock following the operation, and active stimulation was necessary. August 25, pulse, 180; temperature, 103.4°. Drank considerable water, and urinated freely. Steady improvement until August 28, when a bronchopneumonia was detected by Dr. Heiman on the left side posteriorly. The inflammation of the lung cleared up in a few days, the wound healed by primary union, and the child left the hospital well, nineteen days after operation.

Tumors of the kidney in children occur with maximum frequency during the first five years of life. The disease is generally a sarcoma, which originates in the connective tissue in the hilum, and spreads into the renal parenchyma. Rarely is there an obstruction of the ureter, or an ulceration into the calyces; hence we seldom find hydronephrosis or hæmaturia. The first symptom in most cases is tumor. Heresco, quoted by Morris, states this to be so in 81 per cent. of the cases; while pain was the first symptom in 14 per cent., and hæmaturia in only 5 per cent. This contrasts strikingly with malignant disease of the kidney in adults. The earliest successful nephrectomy for sarcoma that I have been able to find in literature was reported by Schmidt, who operated on a child of six months, and there was no recurrence after four years.

II.—*The indications for nephrectomy during adolescence* consist, in the majority of cases, in the presence of a pyelonephritis, or of a septic nephritis of hæmatogenous origin, following in the wake of one of the acute infectious diseases. A kidney already the seat of disease is more prone to be affected, but even a perfectly healthy kidney may become so badly infected as to necessitate its removal. The following is a case in point:

Case II.—Hyman G., thirteen years old, admitted to Dr. Lilienthal's service at Mount Sinai Hospital, March 11, 1901. The family history was negative as to tuberculosis. Seven years before admission the boy had had some kind of fever lasting about a week. Otherwise he had always been well, with the exception of several attacks of tonsillitis, the last one about six weeks before his admission to the hospital. The parents stated that previous to his admission the boy had been sick only twelve days, complaining of frequent and painful micturition and of pain in the left lumbar region. During this time he had had several chills and more or less fever, night sweats and diarrhœa. Examination showed a poorly-nourished and undeveloped boy. The tongue was moist and very red; the throat was normal. At the apex of the heart there was a systolic murmur transmitted to the left. The lungs were normal. The abdomen was somewhat distended. In the left lumbar region, posteriorly, there was a distinct point of tenderness. On bimanual examination an indistinctly fluctuating mass could be made out in this region. The right kidney could not be palpated. Rectal examination was negative. Examination of the urine showed it to be clear, acid, 1020; urea, 1.5 per cent., containing a trace of albumin, no sugar, and only a few pus cells by microscope. Temperature, 103.8°; pulse, 110; respiration, 28. Operation on March 12, 1901, under gas and ether, with a view to incising a perinephritic abscess. An incision was made in the left lumbar region, parallel to the free border of the ribs. A small abscess was opened posterior to the kidney, and a large one anterior to it. The kidney was small and, apparently, normal. The abscesses were drained with tubes and gauze, and the wound left open.

Following the operation the boy did not improve. The temperature rose almost daily to 103° F. From

March 12 to March 23 the average amount of urine secreted in twenty-four hours was 21 ounces. The urine was clear, contained no albumin, 1.5 per cent. urea, and by microscope only a few pus cells. Second operation on March 23, under chloroform. The wound was enlarged and an abscess opened above the kidney under the diaphragm. To secure better drainage, the last rib was resected in the axillary line. In so doing the pleura was opened, and a small iodoform gauze packing was at once introduced into the pleural cavity. In enlarging the wound around the kidney, the posterior layer of the peritoneum was opened, and a packing introduced. The whole wound was left wide open. The right kidney was found, on bimanual palpation, to be considerably enlarged. The boy reacted well, and there were no symptoms referable to the pleura or the peritoneum. However, there was no improvement in the general condition. The temperature rose daily to 102° or 103° F. The urine, in spite of diuretics and saline rectal infusions, became still scantier, 14 to 18 ounces in twenty-four hours. It was still clear, acid, and microscopically contained only a few pus cells. Third operation, on March 30, under gas and ether. The old wound was enlarged, and nothing found to account for the temperatures. Owing to the fact that I could feel the right kidney to be more than twice its normal size, and as the left kidney was small and felt normal, I rapidly performed an exploratory nephrotomy on the right side. The kidney was found to be very large. It was drawn into the wound and aspirated in several places, but only blood was withdrawn. The kidney was then split longitudinally; it was found to be normal, and the incision was at once closed with catgut sutures. The left kidney, which was not more than half the size of the right, was then split longitudinally, and was found riddled with small abscesses. The vessels and ureter were secured by two silk ligatures, and the kidney cut away. Both the nephrotomy and the nephrectomy were rapidly performed, and there was very little blood lost. Owing to the boy's wretched general condition—he had lost considerable flesh and strength since his admission—it was deemed advisable to give him an intravenous infusion of 24 ounces of saline solution. The examination of the pus from the kidney by Dr. Libman, the assistant pathologist of the hospital, showed only staphylococci, no tubercle bacilli. From sections of the kidney Dr. Mandelbaum, the pathologist of the hospital, diagnosed a (septic) nephritis with miliary abscesses. The boy reacted well from the operation. The first two specimens of urine contained blood; after that none. On the first day after the nephrectomy 18 ounces of urine were passed. On the second day 32 ounces were passed; thus demonstrating nicely the inhibitory action which the diseased kidney had exercised on the healthy one. For nine days after operation the urine contained a trace of albumen, pus cells, and a few hyaline and slightly granular casts. Thereafter recovery was rapid and complete. The boy left the hospital six weeks after the nephrectomy in excellent condition, and has since remained well. In the absence of any other etiological factor, it is fair to assume that the boy had a staphylococcus tonsillitis a few weeks before his admission to the hospital, that this was followed by a staphylococcæmia, and that the abscess in and around the kidney formed the locus minoris resistentia. The enlargement of the right kidney, which took place between the first and the third operations, was a compensatory hypertrophy. When the suppurating kidney was finally removed, the right kidney was fully capable of carrying on the work formerly done by both kidneys.

III. *The indications for nephrectomy during adult life* fall into four classes: (1) Hydronephrosis; (2) Pyelonephritis and pyonephrosis; (3) Tuberculosis; (4) Malignant growths.

I. The indications for nephrectomy for hydronephrosis may be summed up briefly as follows: (*a*) Sacs with obliterated ureters; (*b*) Sacs with little or no kidney tissue remaining; (*c*) Repeated failure of palliative operations, *i. e.* nephropexy, nephrotomy, plastic operations, extraction of stone. Only rarely in the adult will it be necessary to remove a kidney for hydronephrosis.

II. Pyelonephritis and pyonephrosis.—It is well known that kidney infections occur in two different ways: (*a*) as ascending infections; (*b*) as hæmatogenous infections. Ascending infections are much more common in men, as they are generally due to a cystitis, combined with a mechanical obstruction to the outflow of urine from the urethra. This mechanical obstruction is, in the majority of cases, an enlarged prostate or a stricture of the urethra. The ascending infections are particularly common in cases of intermittent hydronephrosis, and in calculous nephritis. The transport of bacteria from one part of the body to another through the blood channels is well known. Ten years ago Israel showed that a suppurative nephritis could be caused by a carbuncle. The same observer has reported an acute suppurative nephritis in an old hydronephrotic kidney as a result of a felon on the finger. Moreover, it must be further borne in mind that not every kidney infection following on the heels of an infection of the lower urinary tract, or following an operative interference on the lower urinary tract, is an ascending process. But here, also, in a certain number of cases, the infection of the kidney takes place through the absorption of bacteria, or their toxins, or both, into the general circulation, and thence their deposit, through the renal artery, in the tissues of the kidney, with the resulting suppuration. The differential diagnosis, in a given case of infected kidney, as to whether the infection is an ascending or hæmatogenous one, is not always possible. In the ascending form, the pelvis of the kidney is regularly affected, and the infection spreads from there through the parenchyma towards the cortex. In the hæmatogenous form the pelvis of the kidney may be perfectly normal, *i. e.* there may be no pyelitis present, but only a nephritis, an infection of the parenchyma of the kidney. But, of course, the process may also affect the pelvis of the kidney, especially secondarily. However, if in a given case we find no infection of the pelvis of the kidney, but only of the parenchyma, then the case is surely one of hæmatogenous, and not an ascending, infection. Case II. is an example of this.

In pyonephrosis the distension of the pelvis of the kidney is not so marked as in hydronephrosis. The pelvis may even be contracted, the distension being in the calyces, which may attain an enormous size. They may be partly or entirely shut off from the pelvis of the kidney by an inflammatory process. In cases of ascending pyonephrosis the ureter is regularly diseased, sometimes distended, sometimes contracted. The ureter usually becomes infected from the bladder. The ureteritis causes a narrowing of the lumen of the ureter; this results in a damming back of urine in the pelvis and calyces of the kidney. The kidney thus becomes distended, a congestion of blood follows, and we now have the best possible medium for the further development of the pathogenic germs that have travelled up the ureter from the bladder. These cases are generally unilateral. If the ascending infection takes place without markedly affecting the ureter, a pyelitis or a pyelonephritis, but not primarily a pyonephrosis, results. Another class of cases of pyonephrosis includes those, in which for a longer or shorter time there has been a passive congestion of urine in the kidney, due to an obstruction in the lower urinary tract—stricture, enlarged prostate, and new growth. Here we may long have a distended kidney without any infection. In these cases the lesion is regularly bilateral. An infection, generally due to the use of the catheter or other instrument, is followed by a double pyonephrosis.

The transformation of a hydronephrosis into a pyonephrosis by a hæmatogenous infection is common. The hæmatogenous infection may originate in an organ remote from the kidney, *e. g.* in an osteomyelitis of the tibia; or, it may originate in a suppurative process of the lower urinary tract. Hence we see that there are two channels through which a patient with an enlarged prostate or a stricture of the urethra can infect his kidneys: (1) By direct continuity, through the bladder and ureter, and (2) Through the general circulation into the renal artery. As movable kidneys are found most frequently in women, it is in women that we most frequently find infected hydronephrosis. And such cases are generally unilateral. In men, on the other hand, where, owing to urethral stricture or prostatic enlargement, the urine is dammed back on both kidneys, we generally find the pyonephrosis to be bilateral.

Regarding the diagnosis of pyonephrosis, we may state that in the early stages the symptoms will be those excited by the cause of the obstruction, calculus, prostate, stricture of urethra, etc. Later on we have, in addition, the symptoms of renal distention and pyelitis, such as lumbar pain, fever, the development of a tumor; sometimes, the evacuation of a large quantity of pus, followed by the decrease in size or disappearance of the tumor. Where there is a periodic evacuation of the contents of such a kidney, the character of the urine improves during the complete retention, while the general symptoms are more marked, and *vice versa*. If the obstruction is not complete, there will be pus constantly present in the urine. The obstruction may be so complete that pus is never found in the urine. Pain may be entirely absent; when present, it is due to distention of the kidney, or to pressure on surrounding organs. Not only should the diagnosis of a tumor be made, but the nature of that tumor determined before operation. Further, the character of the obstruction which has led to the renal distention should be determined. Urethra, prostate, bladder, abdomen and pelvis should be carefully examined. Frequently, by relieving the cause of the obstruction, we will do away with the necessity of directly attacking the kidney.

The surgical treatment of pyelonephritis and pyonephrosis may be summed up in two words, nephrotomy and nephrectomy. It is often difficult to say, in a given case, whether the former or the latter is the better primary operation. If, at the time of operation, nephrotomy seems a more dangerous procedure, owing to the presence of many pockets of pus, which must be opened, thus protracting the operation and causing hemorrhage, then a primary nephrectomy should be resorted to. On the other hand, by doing a preliminary nephrotomy, we give the system an opportunity to get accustomed to the use of only one kidney, as the kidney tissue remaining in the diseased organ readily atrophies after nephrotomy. Then again, we have an opportunity of judging of the functionating capacity of the opposite kidney before attempting to do a nephrectomy. As a matter of fact, we do not, after such a secondary nephrectomy, find such a marked disturbance in the urinary excretion as we do in cases of primary removal of a kidney. Moreover, the remote results of a nephrotomy may be bad in conducing to the development of sepsis; or a renal fistula may remain, and finally necessitate the removal of the kidney.

Case III.—Max G., forty years old, admitted to Dr. Lilienthal's service at Mount Sinai Hospital, August 28, 1901. Patient stated that his mother had died of nephritis; the family history otherwise was negative.

Past history.—Father of three children; wife never aborted. Admitted having had two attacks of gonorrhœa; denied syphilis. Had an attack of typhoid fever fifteen years before, at the age of twenty-five years. Following this he was well for ten years. Five years before admission patient had had an attack of intense pain in the left loin. The pain had radiated downwards towards the inner part of Poupart's ligament, and also towards the greater trochanter. This attack had been accompanied by painful and bloody urination. After two weeks of almost continuous pain he had passed a small stone per urethram. During eight months following this attack, with the exception of a little pain in the left side, the man had been perfectly well. He had then had a second attack similar to the first, though less severe; and, in place of passing a stone, he had passed gravel. Hæmaturia was not noticed during that attack. During the four years following the second attack, patient had had six other attacks. They were all similar to the first attack, but there had been no blood or pus noticed in the urine. The last attack had occurred two weeks prior to his admission to the hospital, when patient had passed a small stone, which he brought with him to the hospital. Appetite had been poor; bowels somewhat constipated. Patient stated that he had lost some flesh, and that the attacks of pain had been of such frequent occurrence that he was incapacitated for work.

Physical examination showed a fairly well-nourished man. The tongue was moist and coated. Heart and lungs were normal. There was tenderness over the left kidney, on deep palpation. The prostate and both seminal vesicles were slightly enlarged. The urine was alkaline, 1020, contained neither albumin nor sugar, but a moderate number of pus cells and many triple phosphates. Operation, on August 31, 1901, under gas and ether. I made an incision parallel to and just below the free border of the ribs on the left side, beginning at the anterior margin of the quadratus lumborum, and extending forward to the peritoneal reflection. The perirenal fat was incised, and the palpating finger detected a large kidney, extending so far upward that it was at first thought it might be the spleen. At its lower pole the kidney was freed with some difficulty, owing to adhesion to the capsule. The organ was too large to be delivered through the original incision, which was enlarged anteriorly without opening the peritoneum. The kidney was then drawn into the wound. It was dark red, friable and showed several areas of loss of substance on its surface, where the capsule had been adherent. The vessels were grasped at the pelvis by an assistant, and the kidney was split just posterior to its convex border; hemorrhage was quite free. Some pus escaped from the pelvis of the kidney, but the examining finger could detect no stone. A drainage tube was introduced, and the rest of the kidney wound was sutured with catgut. Packings were placed around the kidney on account of the oozing from adhesions. Following the operation the patient developed a diffuse bronchitis, with signs of consolidation over the base of the left lung. The consolidation cleared up quickly, but the bronchitis remained. During the first week after operation the amount of urine varied from 29 to 40 ounces in twenty-four hours. There was no hæmaturia after the second day. The urine contained a trace of albumin, 1 per cent. urea, and no casts. On September 19 the tube was removed from the kidney, and a small piece of kidney tissue excised for microscopical examination. Urine collected from the tube, before its removal from the kidney, was cloudy, 1020, contained albumin, no sugar, 1 per cent. urea, no casts, a few pus cells, detritus, calcium oxalate and triple phosphates. On September 28 there was a sudden rise of temperature to 103°. The section from the kidney was pronounced a chronic inflammatory process by Dr. Mandlebaum, the pathologist of the hospital. As the condition of the patient had not improved during the four weeks following the nephrotomy, as the temperature had persisted in rising daily to 101° or 102°, and as the patient was steadily losing ground, I determined to remove the kidney.

September 28.—Nephrectomy under nitrous oxide anæsthesia. Owing to the diffuse bronchitis which had persisted, it was deemed unsafe to give ether or chloroform. The old incision was reopened under eucaine; the adhesions were broken up, and the hemorrhage checked by packings. Nitrous oxide was then administered, and the kidney, which was high up under the ribs, was delivered into the wound with some difficulty. As there was no heavy silk on hand, a medium-sized silk ligature was used double to tie off the pedicle. Doubling the ligature interfered with tying as firmly as was desired; and, when the kidney was cut away, the ligature slipped off. The vessels were at once grasped with several clamps. Owing to the extreme friability of the vessels, the hemorrhage was considerable. Several clamps were replaced by ligatures, and four clamps were left *in situ*. The wound was packed with gauze. The patient stood the operation, which lasted forty minutes, extremely well. His pulse was of such good quality that no infusion was deemed necessary. Examination of the kidney showed the whole organ to be enlarged, completely degenerated in spots, and most of the markings obliterated. From the microscopical examination, Dr. Mandlebaum reported a typical pyelonephritis. During the first week after the nephrectomy 19 to 29 ounces of urine were passed daily. The urine was acid, 1010, contained a faint trace of albumin, no sugar, urea 1.5 per cent., a few pus cells and triple phosphates. The clamps were removed forty-eight hours after operation; there was no hemorrhage. On November 1 the wound was almost healed, excepting at one point, where there was a communication with the ureter. Methylene blue solution injected into this opening appeared in the urine in fifteen minutes. A few pus cells were still present in the urine, which otherwise was normal. On November 17 the patient left the hospital. He had gained twenty pounds in weight, and there was only a very slight discharge from the wound, which soon healed completely.

3. Kidney tuberculosis.—As I pointed out in a former paper*, hæmaturia is often the earliest symptom of the disease, and the blood is intimately mixed with the urine. The disease is commonest in women between twenty and forty years. It is usually unilateral. It may remain latent for months or years, and there may be no symptoms until the bladder becomes diseased. According to Israel, ascending renal tuberculosis is found much oftener in men than in women. The combination of genital tuberculosis and tuberculosis of the urinary tract is common in men, and never occurs in women, at least there is only one such case on record. In a large percentage of operated cases the bladder is found involved. The earlier the diagnosis of renal tuberculosis is made, the less likely is the bladder to be effected. A moderate involvment of the bladder does not constitute a contraindication for nephrectomy. It has been estimated that in only 9 per cent. of cases of renal tuberculosis is the disease bilateral, and in the great majority of cases the second kidney does not become affected until long after the first. The symptoms to which the disease may give rise have been well summed up by Morris as lumbar pain, polyuria, pyuria with acid urine, hæmaturia with acid urine, frequent nocturnal, as well as diurnal, micturition, tubercle bacilli in the urine and the general symptoms of tuberculosis. In the early stages the differential diagnosis from renal calculus is often very difficult. For the differential diagnosis I would refer to my previous paper. The bladder symptoms are sometimes the earliest and most pronounced. The cystoscope will sometimes show an area of congestion around the mouth of the ureter on the affected side. This, together with the presence of an enlarged kidney, and of pain in one loin, will aid greatly in determining the side that is affected. According to Morris, "if there is intermittent pyuria with increase in dullness, pain or tumor when the pus ceases to be present in the urine, there is not only a further indication of the organ involved, but good proof that the other organ is not affected."

4. New growths of the kidney—In the adult they are found most frequently after the fortieth year. As we have just seen, this is in contrast to tuberculosis of the kidney, which is most common between twenty and forty years. The new growth is usually a sarcoma or a carcinoma. The characteristic points about renal tumors are: (*a*) Large intestine is anterior to the tumor. On the right side the colon is usually anterior and to the inner side of the tumor. On the left side the colon is anterior and to the outer side. This distinguishes a renal tumor from one of splenic or hepatic origin. (*b*) Renal tumors grow forward, while abscesses generally point backward. (*c*) Renal tumors do not descend as much on deep inspiration as do tumors of the spleen or liver.

The three cardinal symptoms are hæmaturia, tumor and pain. The character of the hæmaturia was discussed at length in my former paper; as was also the difference between the hemorrhage due to renal stone, tuberculosis and new growth. The question as to whether a tumor in a given case is operable or not, is of great importance. Much will depend on the length of duration of the symptoms; the mobility of the tumor; the presence of œdema in the loin, or in the leg on the affected side; the presence of enlarged glands, which can be felt within the abdomen, or along the brim of the pelvis. A careful examination of all the organs in the body (especially the lower urinary tract) should be made for signs of secondary new growths. The improvement in the operative results following nephrectomy for new growths has gone hand in hand with the improvement in other branches of kidney surgery. The mortality has fallen from 60 per cent. of all cases operated on prior to 1890 to 20 per cent. in 1899.

To discuss at length the rarer indications for nephrectomy, such as chronic nephritis with hæmaturia, cysts of the kidney, wounds, contusions, lacerations and urinary fistulæ, is beyond the limits of this paper, which deals avowedly only with the common indications for the surgical removal of the kidney.

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* "Blood in the Urine as a Symptom and the Diagnosis of Its Source," *New York Medical Journal*, March 9, 1901.

In conclusion we would say that the brilliant advances made in kidney surgery in the past decade are due not only to improvement in the technique of bladder and ureter examinations, and of operative work, but also to the hearty coöperation of the internist, who, in the majority of cases, sees the patient before he comes into the hands of the surgeon. It is largely due to his methods in making an early diagnosis that kidney surgery has advanced to its present position. And we venture to predict that the future of kidney surgery will be made still brighter by progress along the line of still earlier diagnosis of the surgical diseases of the kidney. The rôle that the cystoscope and the freezing point of the blood and urine are to play will, we believe, be an important one.

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RESECTION OF THE CERVICAL SYMPATHETIC GANGLIA IN GLAUCOMA; ITS PRESENT STATUS.*

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It is well understood that the treatment of many cases of glaucoma is most unsatisfactory, and that, notwithstanding all our skilfully-directed therapeutic measures, in a considerable percentage of cases (some estimate as high as 50 per cent.) no improvement in vision is effected; while from 10 to 25 per cent. of the cases, according to different writers, end in entire blindness. One can appreciate, therefore, how welcome to the ophthalmic surgeon would be any effective addition to the therapeutic resources at his command in the treatment of this disease.

As long ago as 1866, Wegner (*Graefe's Archives*, '66, II., p. 1) published a series of experiments on rabbits, from which he considered that section of the cervical sympathetic was followed by decrease of the intraocular tension and contracted pupil, and in 1897 Abadie, reasoning from the results of these and other experiments, recommended section of the cervical sympathetic as a means of treatment in glaucoma. It was, however, Jomesco of Buckaross who, in September, 1897, resorted to the operation for glaucoma, although it had been done several times previously by others, for other conditions, such as epilepsy, exophthalmic goiter, etc. Since 1897 the operation of resection of the cervical sympathetic has been done in about eighty-six cases, for glaucoma. Ziehe, in 1900, collected seventy-four cases, and the writer has found twelve others, several not yet published, and it may be of interest, certainly it is of great importance, to consider its claims as a legitimate operation.

The method of operating has been already frequently described in previous reports. Most recent operators go in back of the sternocleidomastoid muscle, and content themselves with a removal of the superior ganglion, instead of taking away all three, as Jomesco originally did. In the hands of a skilful surgeon of experience the operation is not one of great difficulty, nor is it a bloody one. Careful dissection is necessary on account of the proximity of important vascular and nervous structures. It was predicted that the operation would have disastrous consequences, as well upon the general condition of the patient as upon the nutrition of the eye, but these prophecies have not been realized. Abarrio (seventeenth annual meeting of the French Ophthalmological Society, Paris, 1899) stated that he had seen intraocular hemorrhage follow resection of the sympathetic in animals, and Doyon reported (Société de Sc. Médicale du Lyons, 1896) that he had seen the operation followed in rabbits by cataract. But Hertel (v. *Graefe's Archives*, '99, 2) reports his observations on the results of extirpation of the ganglion in young animals, some of them observed for over a year, and he has never observed any such complications. In his hands resection has had no injurious effects, either upon the growth or upon the nutrition of the eye. Neither cataract nor intraocular hemorrhage has been reported as following the operation upon any human subject. Paralytic effects are ptosis, some exophthalmus, ocular and nasal injection and hypersecretion, and often increased temperature of the same side of the head. The ocular and nasal injection usually disappears quite early, and enophthalmus diminishes gradually. Ptosis may disappear, but in many cases it continued as long as the patient was under observation, though often to a less marked degree than immediately after the operation. Pain or difficulty in swallowing has been occasionally observed, but this symptom has usually disappeared early. An accidental complication, due probably to section of the recurrent laryngeal nerve, has been hoarseness, amounting at times almost to aphonia. In one case of Mohr's there was slight motor disturbance of the right arm. The operation can, therefore, be regarded as a relatively harmless one, which, as yet (in the cases operated on for glaucoma) has not injured either the eye or the general health of any patient. In other words, if it does no good it can safely be said that it does no harm. If the bilateral operation is to be performed, resection should be done first on one side, and after an interval of several days or weeks, it can be done on the other side. Fatal results have been reported when ablation of the ganglia on both sides has been performed at one operation, as was not infrequently done formerly, when the operation was resorted to for epilepsy exophthalmic goiter, etc.

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*Read before the New York State Medical Association.

What, then, are the benefits claimed for sympathectomy in glaucoma? These are, first, a diminution of the intraocular tension, and, as a result of this hypotomy, improvement of vision, widening of the visual fields, and relief of pain. It will be of little advantage to consider at length either the theoretical explanations of the modus operandi of the operation, or the theoretical objections to it, as Mohr says, "the theory of Abadie and Jamesco that glaucoma is caused by an irritation of the vasodilator filaments of the cervical sympathetic belongs in the domain of speculation." To decide fairly just what the operation has accomplished, and in what forms of glaucoma, if in any, it is indicated, is a matter of the greatest difficulty, notwithstanding the number of cases in which it has been employed. Most observers have suggested the operation as especially indicated in simple glaucoma an essentially chronic disease, and yet details of cases have been published which have been observed only a few days after the operation! Jomesco published, in May, 1899, in the *Centralblatt für Chirurgie*, an account of eight cases, which report was almost identically the same as he had published in *La Presse Medical*, in June, 1898. Although these reports were almost entirely the same, and although a year had elapsed since the first publication, the later one gives us absolutely no new information as to the final outcome of the cases, and in five out of the eight cases nothing is stated in either report as to how long the patients were under observation. Yet upon such clinical studies does Jomesco base his very important conclusions.

It is not so much more cases that are needed as that those which have been already operated upon shall be kept under longer and more careful observation, so that we shall be able to decide just what are the permanent results. What has been said by Dr. Knapp in reference to the removal of the lens in myopia is equally true in reference to the operation of sympathectomy in glaucoma, for we will not be able to reach a just conclusion as to its value on indications until its "boom" is over; until operators are less interested in getting their cases immediately into print, and more interested in accurate and long-continued observation of their patients. In some cases the process has been reported as "remaining stationary" after the operation. But, as Augelucci asks, how are we to know, unless we keep our patients under observation a long time, whether this stationary condition is a result of the operation or simply a phase of the disease? Among all the cases the writer has found, only about 20 per cent. of them had been under observation for one year or more. To draw positive conclusions, therefore, from such material is a difficult, if not impossible, task. The operation has been done in acute and subacute inflammatory glaucoma (seven cases); in chronic inflammatory or irritative glaucoma (eighteen cases); in simple chronic glaucoma (thirty cases); in absolute glaucoma (eleven cases), and in hyperophthalmus (four cases). There can be no question that in a considerable number of them the operation has been followed for a time by diminution of tension and contracted pupil, and later by increase in the size of the visual fields; less frequently by improvement in vision. At the Heidelberg Congress, in 1900 (*Klinische Monatsblatt für Augenheilk.*, 1900, p. 679), Grunert reported that, out of sixty-two cases collected, there was improvement in forty; in thirteen the condition was unchanged, and in nine it was worse. But in a considerable number of cases improvement meant merely relief to pain, or diminuition in tension; and a large majority of the cases had been under observation only for a short time. Abodie, in the Paris Congress of 1900, considered the indication to be glaucoma simply where, notwithstanding the use of the myotics, the condition becomes worse. He also regarded it as a means of relieving pain in absolute glaucoma. That it cannot always be relied upon to do this is shown by a case of Grunert's (*Klinische Monatsblatt für Augenh.*, 1900, p. 250). The patient, a female, aged sixty-seven years, suffered intense pain from chronic inflammatory glaucoma absolution, and was treated unsuccessfully for a few days with myotics; then ablation of the cervical sympathetic was performed. The pain was less for a few days, but soon returned in great severity, so that the patient begged to have the eye removed, which was done eight days after the sympathectomy. Jomesco, at the International Congress at Paris, in 1900, recommended the operation in simple chronic glaucoma, in which inflammation or irritation is not present; that is to say, in the class of cases where iridectomy accomplishes so little. At the same meeting Axenfeld, from an experience in five cases on three individuals, says that it is indicated. (1) If an iridectomy has resulted badly in the first eye; and (2) If the field is very much contracted, so that little is to be expected from an iridectomy. With these restrictions he considers the operation as a justifiable experimental attempt, which may possibly be extended to the malignant cases of hydrophthalmus. In glaucoma simplex he prefers to do an iridectomy first, for in some of the cases reported glaucomatous attacks have occurred after resection, and required an iridectomy, which has then to be done under abnormal vascular conditions. He probably bases this latter opinion upon the following case of Mohr's (*Klinische Monatsblatt für Augenh.*, 1900, p. 159). The patient suffered from simple chronic glaucoma. Resection of the sympathetic ganglion was followed by improvement in vision and widening of visual fields. This marked improvement continued for two and a half months, when acute glaucomatous symptoms developed with intense pain, and iridectomy wasresorted to. After completion of the section the iris protruded, and it was followed by the lens and then by all the contents of the globe, with abundant hemorrhage and loss of the eye, ending in phthisis bulbi. Such a case emphasizes the importance of making a guarded prognosis in these cases, even where the immediate results are brilliant. Whether the inflammatory glaucomatous attacks which have been observed a few times after extirpation in a previously simple glaucoma were the result of the extirpation, it is impossible to say.

There have been several brilliant results reported as following soon after the operation. Among them some from the Tübingen clinic, observed by Mohr and Grunert; others by Demicheri of Montevideo. In one case of Mohr's, reported in the article quoted above, but which was observed only three months, the vision increased from 5-12 to 5-6, and the patient returned to his work. But Mohr himself recognizes the necessity of observing this case much longer before drawing any conclusions from it. In one of Demicheri's cases vision went from counting fingers or 1m. to vision of ⅔, but this case was under observation only two months. Recently, at a meeting of the Section on Ophthalmology of the New York Academy of Medicine (November 18, 1901), Dr. Colman W. Cutler reported a case of chronic simple glaucoma, which he had had under observation for several years, and in which, notwithstanding an iridectomy, the vision had fallen to 20-200. Resection of the sympathetic ganglion was done early in June, 1901, and soon afterwards the vision improved to 20-40 and has remained so for six months. The result in Dr. Cutler's case is brilliant if it will only last. but it is significant that a similar *temporary* improvement in vision was noted after the iridectomy, which was done some time before, and the optic nerve shows a deep glaucomatous excavation. Still, as Dr. Cutler remarked, even if the visual improvement is not permanent and even if the patient should again become as nearly blind as he was formerly, or more so, nevertheless he felt that to give the patient such visual improvement for six months or a year, if no longer, was a good and sufficient reason for having done the operation.

As to the permanence of the results, Panas quotes Jabauloy (*France Medical*, 1897, p. 5), who had employed sympathectomy in exophthalmic goiter, as follows: "The effects of sympathectomy often last only two or three months. At the end of this time substitution is established by the sympathetic filaments of the trigeminal and pneumogastric nerves and relapses occur." Panas saw a case in his clinic of simple chronic glaucoma, in which double ablation had been done three months before. Nothwithstanding this, vision had failed, one of the eyes had become hard and more amblyopic, and the visual fields had contracted. He thinks that the diminished tension is only temporary, and that, after a relatively short time, the tension increases again and only the myosis persists; that the immediate results are not the permanent results. Albertotti of Modena reports (Annal. di Attalm, 1900), five bilateral operations in simple chronic glaucoma very carefully observed for many months (three cases were under observation fifteen months). In none was the progressive loss of sight prevented, although in two or three pain did not recur. From his experience he thinks resection cannot take the place of iridectomy, but that it can be employed in those cases where iridectomy is refused.

In a recent letter to the writer from Dr. Ball of St. Louis, who has done the operation in three cases of glaucoma, he says, "while the immediate results are sometimes brilliant, the ultimate results are only fair."

Ziehe (Vassius' Sammlung aus dem Gebiete der Augenheilk., IV. Band, Heft 1 and 2) gives the literature of seventy-four cases, and the writer has found twelve additional cases, from which the two following tables have been compiled. Table No. 1 includes the cases observed for one year or more; Table No. 2 comprises those cases observed less than one year, many of them only a few weeks. In these two tables he has not included the three cases of Herbert, one of Schoen, and one of Dodd, inasmuch as the description of these cases is too incomplete. Neither has he included the four cases of Albertotti, where the operation was employed as a means of prophylaxis for the second eye.

TABLE I. (Observed One Year or More.)

	No.	Improvement at first; subsequent relapse.	Improved.	Improvement limited to relief of pain or diminution of tension.	Unchanged.	Worse.
Acute Inflammatory (Irritative)............	2			2		
Hæmorrhagic............	1			1		
Chronic Inflammatory (Irritative)..........	2		1	1		
Simple Chronic..........	6	3	2		1	
Absolute..............	2	2				
Total............	13	5	3	4	1	

TABLE II. (Observed Less than One Year.)

	No.	Improvement at first; subsequent relapse.	Improved.	Improvement limited to relief of pain or diminution of tension.	Unchanged.	Worse.
Acute Inflammatory....	3		1	2		
Subacute Inflammatory.	1	1				
Chronic Inflammatory (Irritative)..........	16	1	7	5	3	
Chronic Inflammatory (Absolute)..........	4		1	1	1	1
Simple Chronic.........	24	5	8	6	5	
Simple Chronic(Absolute)	5		1	2	2	
Hydrophthalmus.......	4				4	
Total..........	57	7	18	16	15	1

It will thus be seen that only thirteen cases (less than 20 per cent.) have been observed long enough to make them in any way the basis of any deductions, while fifty-seven cases have been under observation for only a comparatively short time. The writer is indebted to Dr. G. F. Suker of Chicago for his courtesy in giving him the results in his four cases, some of them not yet published.

The apparent discrepancy between the writer's total of seventy cases and what it would be if the twelve additional cases, which he has collected, were added to Ziehe's seventy-four (viz., eighty-six cases) is explained by the fact that he has counted patients, and Ziehe operations. That is, Ziehe counts a bilateral operation on one patient as two, and the writer as one. Further, by the fact that he has omitted nine cases for reasons stated above.

The cases not referred to by Ziehe are:

1. Black, *Ophthalmic Record.* March, 1901, p. 150.
2. Coover, *Ophthalmic Record.* March, 1901, p. 152.
3. Mullen, *American Medicine.* March, 1901, I., p. 552.
4. Ball, unpublished case.
5. Kipp "Translations American Ophthalmic Society, 1901."
6. Gruening, New York Academy of Medicine, (Oph. Sec.). November 18, 1901.

7-8. Cattoneo, "Bulletin de Sc. Med., Bologna," 1900, p. 526.

9. Cutler, New York Academy of Medicine (Oph. Sec.). November 18, 1901.

10, 11, 12. Suker.

It is interesting in this connection to read part of a recent letter from Dr. George J. Bull of Paris (*Ophthalmic Record*, August, 1901, p. 447). He says: "During the debate before the French Congress of Ophthalmology in May of this year on de Wecker's report on the value of iridectomy in glaucoma, Dr. Émile Javal, now totally blind in both eyes from glaucoma, was led into the room by a servant and took one of the front seats. One speaker after another expressed his opinion on the subject, only to show that little is known with certainty, and that we have to do with a disease which is far from being properly understood. At length Javal was called upon to speak, and not rising as did the other speakers, he turned in his chair towards the center of the room and began his remarks in a low tone. The men in the farther part of the room stood up and came nearer, the better to see Javal and hear him, and presently all were standing except the speaker and those in the few seats around him. It was a dramatic scene not to be forgotten; the sightless speaker, his eyes covered with dark-blue spectacles, his neck scarred from an operation to excise the sympathetic ganglion, a wounded soldier indeed, and the older men in the group around him, with the younger men beyond bending forward the better to hear the soldier's story. From time to time Javal ceased to speak, but no one broke the silence, for it was seen that he was reading with his fingers the notes he held on the table."

To sum up briefly it may be said:

1 That the operation of extirpation of the sympathetic ganglion is a safe procedure in the hands of a skilful surgeon.

2. That (as Ziehe says), while the material is not yet sufficient to reach a positive conclusion as to the permanence of its effect, it is nevertheless established that some of the glaucomatous cases have been improved for some months by resection; in others the condition apparently remains stationary. The results have varied, and one cannot yet be sure in what cases it can be advantageously employed. It at least, apparently, does no harm. A considerable number of favorable results have been reported in chronic irritation or inflammatory glaucoma, as well as in simple glaucoma, in which oftentimes pain is abolished.

3. It does not replace iridectomy, but may possibly supplement the latter, in case this is refused or has already resulted disastrously in the other eye, or is contraindicated, as in hemorrhagic glaucoma, dacryo, cystitis, etc.

4. Until our cases are observed more carefully and for a longer period of time, it will be impossible to arrive at positive conclusions as to the indications for the operation, or as to its permanent results.

35 WEST FIFTY-THIRD STREET.

Cyclic Albuminuria.—Wm. E. Huger draws attention to the fact that position is the most powerful factor in influencing the albumin. In all cases, albumin disappears from the urine soon after lying down and reappears after arising, no matter how the hours are changed or how long the patients lie down. Drugs do not affect the disease. Continued rest in bed should always be urged, because, at any rate, it removes the exciting cause. The writer believes that on a *very careful* examination for casts a large percentage of cases will be found to contain them, and that the serious prognosis given because of their presence will be modified. He concludes that cyclic albuminuria, like the recognized pathological albuminuria, is due to one or perhaps all of the following causes: (1) Inflammatory and degenerative changes in renal structure, as evidenced by the finding of casts, and there is every reason to think that by careful searching casts will be found far more often than previous reports lead us to believe. (2) Alterations in the quality of the blood, which render its serum-albumin more diffusible; there is nothing to prove an inferior diffusibility in these cases, but the patients are almost always anæmic; (3) Alterations in the degree of blood-pressure, here due to a mechanically increased pressure on the renal veins. It has been observed that occasionally these cyclic cases pass into Bright's disease, but that by far the majority have ended in recovery, and that many of the patients have been followed for years and then lost sight of still in the same condition.—*Bulletin of the Johns Hopkins Hospital*, April, 1902.

A Case of Transposition of One Viscus Only.—Edward H. Thomas reports the case of a woman of twenty years, who consulted him in regard to a swelling in her abdomen on her right side, which, in four months from the time she first noticed it, had increased and occupied a little more than half the abdomen. The woman had fever of a distinctly malarial type, and was anæmic. The tumor occupied the right lumbar, right iliac, part of the umbilical, and part of the hypogastric regions. It had no connection with the liver, which could be clearly mapped out by percussion on the right side. The region of the spleen was empty altogether, and very careful percussion and palpation failed to show any splenic dulness in the left hypochondriac region. The right border of the tumor could be felt extending quarter of an inch beyond the middle line of the abdomen toward the left, and it was notched and somewhat rounded. The heart was in its normal position. The diagnosis of the tumor was certain, viz., transposed hypertrophied spleen. The diagnosis was confirmed by the result of anti-malarial treatment, both local and internal, which considerably reduced the tumor within the month that the patient was under the writer's care.—*Indian Medical Record.*

The Rheumatic Affections of Childhood.—J. Burnet includes, under this heading, endocarditis, cardiac dilatation, subcutaneous tendinous nodules, tonsillitis, acute pleurisy and pneumonia, appendicitis (in certain instances), anæmia, stiff-neck and gastro-enteric spasm. He says that the children of rheumatic parentage do not always show some definite manifestation of the disease, but close observation will often show them to be bad-tempered, irritable, nervous, afraid of the dark, sensitive, often thin and spare, frequently complaining of headache and, generally, are of a restless disposition, constantly on the move after some fresh form of amusement. When this nervous restlessness reaches a certain point it becomes associated with muscular movement, and then we have the well-known condition of chorea established. This is the true origin and evolution-history of an attack of chorea. It is muscular movement superadded to a pre-existing nervous unrest.—*Medical Times and Hospital Gazette.*

Early Treatment of Acute Inflammation of the Middle Ear.—E. L. Meierhof says that experience has taught him that in nearly every case early treatment, of which free incision of the drumhead is the most important feature, relieves pain both spontaneous and induced, and in children should be followed by reduction of temperature even if the exudate is only serous. We should anticipate rupture by incision and thus prevent perforations so situated that drainage will be insufficient. Timely incision prevents chronic suppuration. As regards paracentesis, it is a safe rule when in doubt, to incise, especially so in the exanthemata. This, however, is not necessary when the drumhead presents only a few streaks of redness, provided the view is good and the patient can be kept under close observation.—*Annals of Otology.*

Some Observations on the Recognition and Treatment of Trachoma of the Female Genital Tract.—J. A. Hale believes in the existence of a vaginal condition similar in pathological essence to trachoma of the eye. He regards the following symptoms and physical conditions as the clinical expression of the malady: A thin, watery discharge, no history of specific infection, the peculiar rice-grain surface of the mucosa from enlarged papillæ and bleeding fissures, persistent vaginismus, increasing constitutional nervousness from peripheral nerve involvement in the new tissue formation of denuded surface, and in well-developed cases, cicatricial formation, oftentimes demanding surgical interference.—*The Medical Fortnightly.*

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THE SUTURE OF ARTERIES.

THE question of the possibility of suturing a wounded arterial trunk without interfering with the potency of the vessel is a recent one in surgical literature, but it is already responsible for the presence of considerable discussion in the journals. A point, however, which does not, in this connection, seem to have attracted much attention is that of advisability. Experience has established the fact that it is possible to suture successfully almost any artery that is not too small to be manipulated, but whether this is worth the trouble is, in many instances, doubtful.

In the *Boston Medical and Surgical Journal*, March 27, 1902, Hubbard reviews much of what has been written on this subject, and describes what is considered the best technique. The first point to be attended to is control of circulation, as of hemorrhage, if the vessel has been injured accidentally. The point at which the blood current is to be interrupted must be some distance from the site of the suturing, and the pressure must not be so great as to cause any bruising of the walls of the vessel. If a resection is to be done the point of control must be some distance from the operative field and must be especially secure. It is necessary to use the smallest round needles which can be handled and the suture material must be of a size sufficiently large to fill completely the hole left by the needle in the arterial wall. Whether the suture is to be continuous or interrupted will depend upon the nature and extent of the wound which is to be closed. Fine silk is apparently the material which is generally considered most desirable, though it would seem that properly prepared cat-gut possesses many advantages which might make it more desirable. When the suturing is completed it is desirable to test its efficiency by removing the compression from the distal portion of the artery, thus allowing the blood to flow in under low pressure. Any leakage can be controlled by slight pressure or one or two extra sutures.

The results so far have shown that it is perfectly feasible to suture successfully the wounded arterial wall in the same way as has been shown to be successful for the walls of veins, but whether in most cases it is worth while is another question. The ease with which the arterial anastomotic circulation is established after obstruction of the main channel is too well known to need description, and a successful result, after the various forms of ligation of arteries, is practically certain, except in the case of a few of the largest vessels, so that, at least for the vessels of the extremities, it seems very doubtful whether it is worth while to apply an intricate suture when the simpler operation of ligation accomplishes all practical good results. In the case of some of the largest arteries, or in the presence of certain pathological conditions, the question of suturing may assume more importance, and the use of a suture might be thought more desirable than ligation. It is hardly necessary to say that when one of the large arteries of the trunk is wounded there is no time for attempting a complex operation, except possibly in a few unusual instances. We do not wish to seem to depreciate an advance or a refinement in surgery, but desire merely to emphasize the fact that utility, security for the patient, and certainty of outcome are of greater importance than mechanical ingenuity and elegance, and we think that, in most cases, of wounded or diseased arteries, the best results will be attained by ligature, rather than by the more complicated suture.

In arteries the pathological conditions with which we most often have to deal is, of course, aneurysm, and whether there may not be a field of usefulness here for arterial suture is, perhaps, worth discussion. At present our chief and ultimate form of treatment is by means of some form of ligature, and in many instances this has proved very satisfactory, though in a certain proportion of cases it is inapplicable or unsatisfactory. The forms of treatment of aneurysm, other than ligature of the artery in its continuity, have for their aim obliteration of the sac by exciting coagulation of contents or adhesion of the interior surfaces, completely or in part. It is possible that some sort of suturing operation might, in cases in which the aneurysmal sac has not become too greatly thinned, be undertaken successfully, and an important means of coping with a serious condition thereby added to our resources. Under normal circumstances considerable dependence is placed upon the power of rapid adhesive union which the lining endothelium of the artery has, but it is by no means certain that we could count upon this to a very great extent under the altered conditions in the interior of an aneurysm. It is probable that in most cases ligation will remain our chief dependence in the operative treatment of aneurysm, but, apparently, there may be some cases in which a suturing operation, combined with temporary partial control of blood current, might be of great service. A plan somewhat like a reversed gastroplication might offer a feasible solution of the question. Occasionally operators are unfortunate enough to wound an artery of vital importance during the course of an operation, and under such conditions, where there is an opportunity to control immediate hemorrhage, an arterial suture might be of great value. It is safe to say, however, that arterial suture is a procedure which will be found useful only in rare instances and under exceptional circumstances, though the demonstration of its feasibility is of some interest.

New Health Officer in Richmond.—The Board of Health has appointed Dr. John T. Sprague to succeed the late Dr. Theodore Walser as Assistant Sanitary Superintendent of the borough of Richmond. The salary is $3,500 a year. Dr. Sprague had been a medical school inspector for a number of years.

COMPLICATIONS ATTENDING DYSENTERY.

Dr. Charles F. Craig, U. S. A., Director of the Laboratory at Presidio Army Hospital, draws attention in the report of that institution for 1901 to the complications observed at autopsy in cases of dysentery.

The complications attending this disease have received scant notice at the hands of writers on the subject, and, therefore, the knowledge gained by Dr. Craig in seventy-three autopsies on patients who died from dysentery at Presidio should be of especial and somewhat peculiar value.

The brain, in nearly every case in which it was examined (thirty-five), showed an increase in the amount of cerebrospinal fluid. Often this increase was very excessive, the brain being œdematous. In all the cases of amœbic dysentery the blood vessels of the cerebrum were very much congested, and in about one-half of the cases small capillary hemorrhages had occurred. In all the cases of follicular dysentery the cut surface of the cerebrum was anæmic in appearance, while in the diphtheritic and gangrenous forms the cut was, as a rule, congested.

The most common conditions found complicating dysentery, in the lungs, were emphysema and bronchopneumonia. Another very common condition is chronic pleurisy, which was found in sixteen cases. Lobar pneumonia occurred in four cases, and was the cause of death of all. Chronic bronchitis occurred in five cases, acute bronchitis in one case, acute pleurisy in one case, infarcts of lung in two cases, and pulmonary tuberculosis in three cases. Empyema was found in two cases, both due to a rupture of liver abscess into the pleural cavity. Metastatic abscesses of the lung were found in both cases of gangrenous dysentery, and in both cases was associated with abscess of the spleen and kidney. The two most frequent complications in the respiratory system were emphysema and bronchopneumonia, and these are also the two which would be the most likely to occur, owing to the weakness and recumbent posture of the patient. Complications of the circulatory system.—In fifty-one of the cases the amount of fluid in the pericardial cavity was markedly increased. This œdema of the pericardium is one of the most characteristic complications observed in the fatal cases of dysentery. Acute pericarditis was observed in five cases, but in none were any of the complications present due to the heart complications of the genitourinary system.

Some form of inflammation of the kidney was presented in almost every case of dysentery which came to autopsy. Out of seventy-three cases sixty-three showed some form of nephritis. Of the varieties of the inflammation of the kidney—acute tubular nephritis was the most common, thirty-two of the sixty-three cases being caused by this variety. Next in frequency comes the subacute parenchymatous form, which furnishes twenty-six of the cases. The remaining five were due to chronic interstitial nephritis. In such cases there was a history of alcoholism, which probably accounted for the character of the complication.

The most common complication found in the liver was fatty degeneration, which was present in thirty-five of the cases; venous congestion was present in twenty-one cases; cirrhosis of the liver in four cases; metastatic abscess of that organ in two cases, and amœbic abscesses in nine cases. Cirrhosis of the spleen was found in twenty-nine cases; infarcts, two, and melanosis in four cases.

Chronic enteritis almost invariably accompanied the dysenteric process. Of the seventy-three cases fifty-four showed a marked chronic enteritis, while ten of the remaining showed some inflammation of the small intestines, but not marked enough to class as a distinct enteritis. Chronic gastritis was present in thirty-eight cases. Perforation of the intestine, due to dysenteric ulcerations, in four cases, and acute peritonitis was found in seven cases.

The most serious complications are most frequent in the severer forms of the dysenteric process, as, for instance, in the diphtheritic, gangrenous, and amœbic types, while they are the least common in the follicular form, which is also the least severe from a pathological standpoint.

Dr. Craig truly says, "From the study of the complications which attend dysentery it will be seen how numerous and important they are. It is not too much to say that in a large proportion of the cases, which resulted fatally, death was due more to the complications than to the dysenteric affection." There is much need of a more accurate knowledge as to the prevention and treatment of dysentery, and the opportunities afforded our army surgeons in tropical regions will, it is certain, be seized upon to demonstrate more clearly the proper line of treatment to be followed in this disease, and to settle once and for all time the position of ipecacuana as a therapeutic remedy for dysentery.

Old-Fashioned Remedies.

In the rural districts of Europe and of Great Britain, superstition still lingers, and in those places where education has not dispelled the mists of ignorance the simple country people retain a touching belief in the remedies used by their ancestors. This is especially the case in Ireland—that part of England known as Wessex—and in the Eastern counties, whence came the majority of the early New England settlers.

In certain portions of France, too, the peasantry have an abiding faith in tisanes and herb mixtures of various kinds.

The Spectator, April 12, has an article telling of the love of the English agricultural laborer for dosing himself, and recounting some of the extraordinary concoctions he is in the habit of using as therapeutic remedies.

Hemlock water and cowslip ointment is largely used to remove freckles and sunburn, while elder-flower ointment is held in high repute for healing cuts and sores; an infusion of nettles is believed to remove colds, and dandelion tea is regarded as a tonic of indisputable value.

Another much esteemed medicine is made as follows: Snails crawling up a church wall are caught—those crawling down possess no virtue—and are then placed in a pan with a little water, well boiled, being stirred the while with a quill plucked from a black crow. The result of this process will be a salve, which, if rubbed on the soles of the feet, will safeguard their owner against bodily ills, not excepting that fashionable complaint the "hinfooenzy." The ointment is said to be particularly efficacious in strengthening a weak spine.

Snails are looked upon as one of the most valuable remedies for consumption, and at least two specifics for rheumatism are known, one of which is a thread of scarlet silk, tied round the waist next the skin, and the other to keep a raw potato in one's pocket until it turns black, when it must be replaced by a fresh one. Rheumatism may also be transferred from a human being to a dog by compelling the latter to sleep on the patient's bed.

The tortures consequent upon an attack of cramps may be considerably mitigated by wrapping the feet together with a lump of sulphur in a large flannel bag. A village remedy for cancer is one consisting of "Turkey" figs boiled in new milk; the latter to be administered to the patient, while of the fruit a poultice is to be made.

The common fig wart can be recommended as an efficient emollient for boils and carbuncles, and the belief in the cure of king's evil—scrofula—by being touched by the hands of a royal personage, is still harbored in the breasts of many credulous countrymen.

The origin of various diseases is sometimes explained with more ingenuity than verisimilitude, says the writer in the *Spectator*. Thus diphtheria, it was explained, arises from an excessive consumption of green apples, producing in the stomach a disorder which thence mounts to the throat; imported food is likewise believed to account for much illness.

The terms applied to complaints of all kinds by village worthies are amusing. Consumption is generally known as "slime on the lungs," jaundice as "yellow janders," and such affections as "brantitis," "pamonium," "triatic," "insommania," and wandering bone are easily recognized by the rural solons of Eastern and Western England.

An old fogger remarked that he had been very middlin' lately, and that if he had not rubbed some "emigration" on his chest he did think he should have had the "purity in his side." His dame added that she had been obliged to put blisters on his head to keep his senses in.

The foregoing village diseases and remedies are but a few of the many that are known in those remote districts, and the wonder is that, notwithstanding the lamentable lack of knowledge of modern medical science displayed by the dwellers therein, they, as a rule, reach a ripe old age, far surpassing in this respect their more enlightened brethren of cities and of manufacturing localities.

LIMBURGER AS A VEHICLE OF INFECTION.

Dr. M. K. Allen, the Health Officer of Louisville, Ky., has aroused the ire of the German inhabitants of that city by placing a ban upon one of their favorite dishes, one, in fact, of national reputation.

The Louisville Health Officer asserts that the tasty cheese known as Limburger is full of microbes, and dangerous to health, and has issued an edict that anyone who makes or sells the article will be prosecuted to the full extent of the law.

Limburger, to persons of weak stomach and of sensitive olfactory organs, has long been an abomination, but to the robust son of Germany, whose digestive apparatus can assimilate many wonderful and weird foods, the Belgian cheese is a *bonne bouche* to be highly desired.

Undoubtedly, a ripe Limburger is in a state of putrefaction, and is not so wholesome an article of diet as a fresh cheese, but the Louisville Health Board Officer has probably exaggerated the dangers likely to arise from its consumption.

All microbes are not necessarily dangerous microbes. If such were the case, many viands now eagerly sought for would be the means of terminating the existence of numerous epicures.

In the eyes of the majority, or, rather, in the nostrils, the odor attached to aged Limburger is its most offensive quality, but if the natives of the Fatherland are willing to overlook this slight defect for the sake of its undeniably striking flavor, then those in this country of other nationalities will surely not object to sacrificing their feelings to this extent in the cause of their German compatriots.

METABOLISM AND ENERGY WITHIN THE HUMAN BODY.

Bulletin No. 109, U. S. Department of Agriculture, just issued, gives the results of experiments carried on by Atwater and Benedict of Wesleyan University, relative to the metabolism of matter and energy within the human body. In all, thirteen experiments were made with men by means of the respiration calorimeter, which was found to be a satisfactory instrument of precision. Thus, in the forty-five days of rest experiments, the average daily income of energy was 2,255 calories, and the outgo was determined by the calorimeter to be 2,250 calories, or a difference of but 0.2 per cent. In sixty-five days of work experiments, the income of energy amounted to 2,691 calories as a daily average, while the outgo, as determined by the calorimeter, amounted to 2,682 calories, or a difference of but 0.3 per cent. These differences are far within the limits of experimental error and physiological uncertainty, and show that the accuracy of the results attained with the respiration calorimeter cannot be successully challenged in the case of continued experiment. For short experimental periods there is liability, of course, to considerable variation, due to the fact that it is impossible to assume that the quantities of material in the alimentary canal, and of carbohydrates in the body as a whole, are the same at the end as at the beginning of each day's experiment.

With respect to the food materials supplied and consumed, it was found that the diet supplied for rest experiments, about 2,425 calories, was slightly in excess—about 10 per cent.—of the actual needs of the body, while the amount of protein required under these circumstances was about 100 grams. In the work experiments, the work, consisting in riding a stationary bicycle for eight hours daily, the food required was such as would furnish about 3,750 calories, and about 100 grams of protein. The amount of protein required by the system, while performing the above amount of work, was unexpectedly small. As the investigators say, "The tentative standards for daily diet, which have been proposed by a number of investigators, have served a useful purpose, but they will doubtless have to be modified. . . . One principle, which, thus far, has not received adequate recognition in dietary standards, may be expressed by saying that the standard must vary not only with conditions of activity and environment, but also with the nutritive plane at which the body is to be maintained. A man may live and work and maintain bodily equilibrium on either a higher or lower nitrogen level or energy level."

The amount of water given off by the subjects from lungs and skin was found to depend largely upon muscular activity and the temperature of the surrounding air, and to be less affected by the income in food and drink. Thus, in one instance, the amount of water eliminated by the lungs and skin was two and one-third times as large in the work experiments as in the rest experiments.

The amount of carbon dioxide excreted was found to vary with the character of the diet and the time at which the last meal was taken, the muscular activity of the subject, the extreme temperature, the age and body weight, and individual idiosyncrasy.

The elimination of energy was found to be proportioned as follows:

	In rest Experiments. Per cent.	In work Experiments. Per cent.
From skin by radiation and conduction (and in exhaled air)	74.2	62.3
In urine and fæces	1.4	0.5
In water vaporized from lungs and skin	24.4	30.8
Heat equivalent of muscular work done	....	6.4
Total	100.0	100.0

The energy given off per hour during work was more than twice as great as that given off during rest. Perhaps the most interesting results of the experiments were those which proved what had before been more than suspected, that the law of the conservation of energy applied to the human body.

THE DIAGNOSIS OF HYDROPHOBIA.

The diagnosis of rabies in its early stages is in every instance difficult if not almost impossible to accurately make. When a person is bitten by a dog who exhibits any symptoms of excitability or irritability, the suspicion is raised, and frequently the conclusion is immediately jumped to, that such an animal is suffering from rabies, and will inevitably inoculate those bitten by it with the infection.

Those who see the dog at the time are wont to exaggerate matters and to asserve that it was in a far worse condition than was, perhaps, really the case. Nevertheless, it is undoubtedly an error on the right side to quickly capture and kill a dog about whom there is a suspicion.

When, however, this has been done the dog's body should be reserved for the purpose of careful examination, because a post-mortem investigation is the only known means of deciding whether rabies is present or not. Even this method is not decisive, for no specific microbe of the disease has been as yet discovered, so that an examination of saliva, blood or tissues is of no avail. In those cases of the disease which have made much progress in the canine subject, the medulla oblongata is found to be congested, and sometimes a portion of the nerves are more or less broken down.

With the object of throwing further light upon this matter, von Babes of Bucharest has been pursuing for a considerable time an exhaustive and interesting series of experiments. He managed to secure 487 dogs, presumably suffering from rabies. Portions of the medulla oblongata were injected into rabbits, and of these 410 died in from one to five weeks. Four-fifths of the cases yielded conclusive results by a microscopical examination of the brain tissue, while the remainder supplied no evidence of value.

The merit of this test lies in the fact that if it furnishes proof of the presence of hydrophobia it does so at once, whereas the inoculation method takes two or three weeks for the development of results.

Needless to say, it is of the most obvious importance to know as soon as possible whether a person has been bitten by a rabid dog or not, as this knowledge will decide the mode of treatment.

News of the Week.

Health Department of the City of New York, Willard Parker Hospital, Sixteenth Street and East River, Hospital Service.—A competitive examination for the selection of candidates for the position of interne to the Willard Parker and Riverside Hospitals will be held at the Willard Parker Hospital on Saturday, May 31, 1902, at 2.30 P.M. Each candidate is to serve one year from July 1, 1902, to July 1, 1903. The service consists of about four months as interne for the Willard Parker, four months as interne for the Riverside and four months as ambulance surgeon. Candidates must be graduates in medicine. Internes live at the hospitals during the time of service. No salary is attached to the position. The hospitals are devoted to the treatment of contagious diseases and their complications. Applications in writing should be sent to Dr. Henry W. Berg, 923 Madison avenue, New York City, Secretary of the Medical Board.

An Example Worthy of Imitation.—The proprietor of the *Gaceta Médica Catalana* recently received the sum of seventy-five pesetas from an anonymous subscriber who said he had defrauded the journal of that amount, being the price of over seven years' subscription. In making acknowledgement, our pleased receiver begs that, "as this conduct enobles rather than debases, the sender may make himself known in order that he may be praised for the nobility of his act."

The International Medical Press Association met in conference at Monaco, on April 7, in order to decide whether a sufficiently common ground of agreement could be found to establish definitely an International Medical Press Association to draw up a scheme of statutes for such an association. A set of rules was adopted and it was decided that an International Congress of the Medical Press would be held a few days previous to the meeting of the International Medical Congress, which is to assemble at Madrid during the month of April next year. This plan of action is now endorsed by the delegates of the medical press associations of Austria, Bohemia, Belgium, Denmark, England, France, Germany, Holland, Italy, Norway, and Spain.

International Conference for the Prophylaxis of Syphilis and Venereal Diseases.—In a recent notice the date of this meeting was incorrectly given as September 15–20; it should have read, September 1–6. The discussions will be divided into the two main subjects of public and individual prophylaxis, each of these being treated of under several subheads. The Secretary-General, to whom all correspondence relative to the conference should be addressed, is Dr. Dubois-Havenith, Rue du Gouvernment-Provisoire, 10, Brussels.

A Woman Interne at the Gouverneur Hospital.—Dr. Emily Dunning, a young woman graduate of the Cornell University Medical School, has been appointed to the house staff of the Gouverneur Hospital. She passed the examination successfully some time ago, but was rejected by the former board on account of her sex. The present board decided that, as Dr. Dunning had passed the examination with high honors, and as quarters had been provided for women internes, there was no valid reason why she should not be given the appointment she had earned. The new interne will probably have to take the ambulance service, which is the rule for all internes, and as the Gouverneur Hospital district is the "toughest" in the city, it is not an enviable post. Pioneers, however, seldom have agreeable tasks, and Dr. Dunning's will prove no exception to the rule. The present internes are naturally, not especially pleased at the thought of a woman colleague, but, of course, will do nothing to make her task more difficult than it must of necessity be. New York is not the only city in which this experiment is to be tried, for we learn that two women are to be made internes at the Toronto General Hospital, and another is to be appointed to the staff of visiting physicians.

An Ambulance Launch for St. John's Guild.—An electric floating ambulance, the gift of Mr. J. Seligman to St. John's Guild, was launched at Bergen Point, N. J., last week. It is named the *Margaret*, after the donor's daughter. The launch is 38 feet over all, and is strongly constructed of oak and cedar. It will hold forty adults or sixty children, and has an opening in the roof to permit a stretcher to be passed through. It will go sixty miles on one charge and can attain a speed of ten miles an hour. It will be specially used to conduct the sick women and children from the hospital barges, which have to anchor a mile off New Dorp, Staten Island, where the guild has a seaside hospital, to the land hospital.

Professor Behring on Bovine Tuberculosis.—In a work on tuberculosis in cattle, just published in Berlin, Professor Behring asserts that the bacilli of human and bovine tuberculosis are identical, the seeming differences between them resulting from the capacity of the bacilli to accommodate themselves to the organism in which they live. The writer says he has successfully infected cattle with virus from human beings, producing thereby fatal animal tuberculosis. He also says he has rendered cattle immune against tuberculosis by vaccinating them when they are young. This he declares to be his greatest discovery, and says the method is in use on farms at Marburg. He alluded to this method of inoculating cattle in his speech at Stockholm some time ago, when he received one of the Nobel prizes.

The Late Dr. Walser.—The following resolutions were adopted by the Richmond County, N. Y., Medical Society at the April meeting: "Whereas, our associate and co-laborer, Dr. Theodore Walser, has been called by a divine Providence to a heavenly rest, at a ripe old age, and after a life well spent, Resolved, that we, his associates of the Richmond County Medical Society, of which he has been a prominent member for forty-seven (47) years, Vice-President four (4) years, and President two (2) years, in meeting assembled, hereby record our profound sorrow at the loss of so valued and esteemed a member of the medical fraternity, and our unanimous appreciation of his high professional worth, amiable character, and blameless life; *Resolved*, that the sympathy of this society be and is hereby extended to the family of the deceased in their sad bereavement; *Resolved*, that a copy of the above resolutions, suitably engrossed, be forwarded to the family of the deceased by the Secretary of the Society. William Bryan, M.D., Vice-President; Horace W. Patterson, M.D., Secretary.

Long Island College Hospital Alumni Association.—A scientific meeting of this society will be held at the Polhemus Memorial Clinic, Henry and Amity streets, Brooklyn Borough, on Saturday evening, May 10, at 8.30 o'clock. The medical paper, by Dr. Glentworth R. Butler, will be on "Difficulties in the Diagnosis of Certain Febrile Diseases," and will be discussed by Drs. Alfred Stengel and Francis Packard of Philadelphia, and W. H. Thomson and A. Jacobi of New York. The surgical paper, by Dr. John O. Polak, will be on "Early Diagnosis of Uterine Carcinoma; Surgical Limitations," and will be discussed by Drs. J. G. Clarke and J. M. Baldy of Philadelphia, and E. Janvrin and W. R. Pryor of New York. The profession in general is invited to this meeting.

The Florida State Medical Association.—The annual meeting of this society was held at Tampa in the second week in April, and was largely attended. The annual oration was delivered by Dr. Edward N. Liell, who took for his subject a review of recent studies in the etiology and pathogenesis of cancer. The following officers were elected for the ensuing year: *President*, Dr. J. Harris Pierpont of Pensacola; *First Vice-President*, Dr. Edward N. Liell of Jacksonville; *Second Vice-President*, Dr. J. McDiarmaid of De Land; *Secretary and Treasurer*, Dr. J. D. Fernandez of Jacksonville. The next place of meeting will be St. Augustine, the date of meeting being the second Wednesday in April, 1903.

The Winding-sheet of Christ.—The Paris correspondent of *The Lancet* writes that M. Vignon recently read a most interesting paper before the Academy of Sciences and exhibited some photographs which he had taken of the winding-sheet preserved at Turin and traditionally said to be that of Christ. This winding-sheet has on it certain markings printed in a brown color which, when photographed, gave a white imprint as does a negative when printed from. These markings, therefore, act as a true negative, and M. Vignon has shown by certain very careful experiments that cloth impregnated with oil and aloes, as was the winding-sheet in question, will receive an impression when in contact with ammoniacal vapors such as would be given off from a sweat very rich in urea, as is the case in the sweat of a person dying a lingering and painful death. Any idea of fraud need not be considered, for no one has touched this winding-sheet since 1353, and no painter at that date had the skill to reproduce such an exact drawing. The impression of the head is excellent. The wounds produced by the crown of thorns and the marks of the blood drops are quite obvious. The wound in the side and even the marks of the stripes produced on the back by the flagellation are also quite evident. Each of these stripes has at its end an enlargement such as would be produced by a cord with a ball of lead at the end. It is well known that this form of scourge was employed by the Roman soldiers and such a one has been found at Pompeii. Finally, the marks of the nails in the arms are not in the palm of the hand, but show that the nails were driven through at the level of the wrist. M. Vignon's paper has created an extreme interest, both in the scientific and the religious world.

Cholera in Manila.—Eleven men of the Eight United States Regular Infantry have died from the cholera. It is supposed that they contracted the disease while traveling from Manila to Laguna in cascoes. The total number of cases of cholera in Manila, up to May 2, was 703, and the deaths 554. The health authorities are placing additional protection around the water supply, and have placed school teachers in charge of the distribution of foodstuffs.

Retirement of Dr. A. Jacobi.—It is announced that after thirty-two years of active service as Professor of the Diseases of Children in the Medical Department of Columbia University, Dr. Abraham Jacobi of this city has severed his connection with that institution. The resignation will take effect in June, the end of the present term. Dr. Jacobi became a Lecturer on Infantile Pathology at the College of Physicians and Surgeons in 1857. In 1865 he was made Professor of Diseases of Children in the University of New York, but resigned five years later and was appointed to the same chair in the College of Physicians and Surgeons.

The International Association of Railway Surgeons.—At the fifteenth annual meeting of this association, held last week in St. Louis, the following officers were elected: *President*, Dr. A. W. Candless of St. Louis; *Vice-Presidents*, Drs. A. L. Wright of Iowa, John B. Rule of St. Louis, J. C. Wysor of Virginia, E. E. Kitchener of Canada, W. G. Jamieson of Texas, and R. Ortogo of Mexico; *Secretary*, Dr. Louis J. Mitchell of Chicago; *Treasurer*, Dr. James A. Duncan of Toledo, Ohio. Indianapolis was selected as the next meeting place.

No Quarantine Against Cuba.—This is the season when quarantine has usually been established at this port against Cuban ports, but Health Officer Doty has decided not to inaugurate the quarantine restrictions since Cuba is free from yellow fever and unusual care is being taken to keep it free. Indeed, Havana has much greater reason to quarantine against New York, because of smallpox, than the latter has to quarantine against Havana.

The Suffolk County, N. Y., Medical Society.—The annual meeting of this society was held at Riverhead, L. I., on Thursday, April 24, 1902. Dr. George Ryerson Fowler read a paper on "Fracture of Lower End of Radius." The following officers were re-elected: *President*, John H. Benjaman, Riverhead; *Vice-President*, A. C. Loper, Greenport; *Secretary*, P. Van Benschoten Fowler, Centre Moriches; *Treasurer*, B. D. Skinner, Greenport; *Librarian*, John H. Benjaman, Riverhead.

Philadelphia Neurological Society.—At a stated meeting, held April 22, Dr. Wm. G. Spiller exhibited "A Case of Friederich's Ataxia." The patient was a young man, about twenty-one years old, in whom staggering gait and unsteady station had been observed since a year or two. In addition, speech was slow and indistinct, the knee-jerks were absent, the Babinski reflex was present, pupillary changes were lacking; nor was there girdle-sense or lancinating pains or other sensory disturbances. There had been no opportunity to examine the eyes thoroughly, but there was no evidence of gross impairment of vision. Dr. Alfred Gordon read a paper entitled "A Note on Some Psychoses of Early Puberty, with Report of a Case in a Boy Twelve Years Old." The patient was descended from neuropathic stock, and had periodic manifestations of delusions, hallucinations and impulses, and it was thought that the condition might pass over into that of dementia præcox. Dr. David Riesman reported "An Unusual Case of Myasthenia." The patient was a medical man who, following an attack supposed to have been one of influenza, was overpowered by a sense of profound weakness, from which recovery took place in the course of two months. There was no involvment of sphincters, of sensibility, of reflexes; the electric reactions had not been studied. The nature of the disorder was not clear, and while for practical purposes a diagnosis of neurasthenia might suffice, it was by no means satisfactory. In explanation of the phenomena, it was suggested, in analogy with the profound myasthenia of Addison's disease, that the condition here might be one of transitory functional inadequacy of the adrenal glands. Dr. Wm. C. Spiller reported "A Case of Tumor of the Pons, Medulla Oblongata and Upper Part of the Spinal Cord, with Necropsy." During life the symptoms pointed to the presence of a new growth in the neighborhood of the foramen magnum, and operation was advised against. Histologically the specimen presented appearances suggestive of a perithelioma. Dr. A. R. Moulton read a paper entitled "Attempted Self-castration." He reported the case of a man, twenty-nine years old, suffering from depressive insanity with delusions of persecution, and who, while dressed in a restraint suit, by reason of an unsuccessful attempt at suicide, managed with a safety-pin to dissect one testicle out from the scrotum. As soon as the mutilation was discovered the organ was replaced, and although the sutures sloughed, the wound healed satisfactorily after a time. The mental state was in no way influenced by the experience. Dr. Chas. W. Burr read a paper entitled "Thrombosis of the Midcerebral Artery, Causing Aphasia and Hemiplegia." The patient was a woman, past sixty years of age, in whom the symptoms had developed some thirty years previously. There was absolute motor aphasia, but no word-deafness or word-blindness, although the post-thrombotic softening resulted in destruction of the first temporal convolution and part of the supramarginal and angular gyri, in additon to the lower portion of the motor area. Dr. G. A. Pfahler made some remarks on "Cerebral Skiagraphy" and exhibited skiagrams of the normal skull and contents and of thrombotic softening. Dr. W. G. Spiller exhibited a similar specimen for Dr. Chas. K. Mills. Dr. J. H. W. Rhein read a paper entitled "A Case of Ataxia with Recurrent Clonic Spasm in the Anterior Tibial Muscles." He referred to the various involuntary movements that sometimes occur in cases of tabes, and to which little attention appears to have been given by English and American observers. Dr. F. R. Savary Pearce exhibited a specimen of "Hydrocephalus" obtained from a colored child presenting typical clinical manifestations. No underlying cause for the conditions was discovered.

Pathological Society of Philadelphia.—At the annual conversational meeting, held April 24, Dr. Mazyck P. Ravenel delivered an address entitled "The Intercommunicability of Human and Bovine Tuberculosis." While admitting certain differences between human and bovine tuberculosis and between the bacilli found in association with both, particularly the greater virulence of the bovine tubercle bacillus, convincing evidence was adduced to show that the disease is transmissible between human beings and cattle. Dr. D. E. Salmon of the Bureau of Animal Industry of the Department of Agriculture said that while it must now be admitted that there is danger in the consumption of milk and flesh of tuberculosis animals, it is difficult to determine the exact degree of such danger. Dr. Leonard Pearson of the Pennsylvania State Live Stock Sanitary Board pointed out the inadequacy of the existing provisions for detecting and preventing the sale of tuberculous milk and meat. A good deal in the way of suppressing tuberculosis in cattle has, however, been done, and by this means the risks to the community have been lessened. The farmer and dairyman has been encouraged to segregate and to destroy the tuberculous animals in his herds, and so far as possible the State has come to his aid.

College of Physicians of Philadelphia, Section on General Medicine.—At a stated meeting, held April 14, Dr. J. J. Abel of Baltimore read a paper entitled "The Chemistry and Physiology of the Adrenals." He pointed out that his own investigations, conducted over a period of several years, go to show that the active principle in the adrenal bodies is an alkaloidal substance known as epinephrin, the various other substances obtained from the same source being modifications thereof. Dr. Simon Flexner presented a communication entitled "The Pathology of the Adrenals," reciting the several morbid conditions of which the adrenal bodies may be the seat and devoting especial attention to the question of the symptom-complex known as Addison's disease. Dr. Wm. Osler of Baltimore read a paper on "The Clinical Manifestations of the Diseases of the Adrenals." He dwelt at some length upon the symptomatology of Addison's disease and cited a group of cases that had been under his own observation, and in some of which encouraging results had been obtained from the administration of preparations of the adrenal glands. Dr. Alfred Stengel presented a communication entitled "Therapeutic Uses of the Derivatives of the Adrenals," in which he reported the employment of these substances in cases of glycosuria (resulting in increase of the amount of sugar in the urine), in cases of typhoid fever and of exophthalmic goiter—to increase arterial tension, in cases of hemorrhage—as from gastric ulcer. Dr. G. E. de Schweinitz read a paper on "The Use of the Adrenal Preparations in Diseases of the Eye." He pointed out the great value of these agents in removing hyperæmia and controlling hemorrhage, but there is little evidence of any definite curative effect in the presence of any special disorder. Dr. D. Braden Kyle read a paper on "The Use of the Adrenal Preparations in Diseases of the Nose and Throat." He also had found that in some cases these preparations had certain useful symptomatic applications, without any obvious curative value. The results, however, have been variable and the reports recorded in the literature have been most diverse in character.

A new training school for female hospital nurses, erected almost entirely by American contributions and operated by medical missionaries, was recently opened at Canton, China. This is the only institution of its kind in South China.

Dr. A. S. Ambler, Superintendent of the Brooklyn Hospital, has resigned his position as head of that institution.

Northern Medical Association.—At a stated meeting, held April 25, Dr. A. A. Eshner read a paper on "Sciatica." He defined this condition as the result of an irritation of the sciatic nerve, at times proceeding to inflammation, at other times falling short of this. The exciting factors may be physical or chemical. Among the former are traumatism and extremes of temperature; among the latter are poisons introduced from without or generated within the body as a result of metabolic disturbances or infectious diseases. Causes of local operation determine the localization. The essential symptom of sciatica is pain, usually paroxysmal and radiating and referred especially to certain points; in the presence of neuritis the trunk of the nerve may be tender. The treatment comprises rest, elimination, sedation, counterirritation. Dr. D. J. McCarthy presented a communication entitled "Symptomatology, Pathology and Treatment of Migraine." He related the case of a woman, in some members of whose family there was a history of migraine, while others exhibited disorders of the blood and vascular system. In connection with the attacks of headache there was transitory graying of the hair. At a later period the sensory storm was replaced by epileptiform attacks of focal character. The condition was believed to be due to vasomotor disturbances affecting the cortex of one or the other cerebral hemisphere. Dr. P. N. K. Schwenk read a paper entitled "Headache from Eyestrain and Other Ocular Affections." He described the refractive and muscular mechanism of the eye, as well as the conditions that give rise to strain and the consequent manifestations.

The Mayor of San Francisco Condemned by the California State Medical Society.—At the annual meeting of the California State Medical Society, held April 15–17, the following resolution was adopted: "Whereas, The Mayor of the city of San Francisco has seen fit to remove the so-called old Board of Health; and Whereas, The Chief Executive of the city has stated that he has determined, after a prolonged personal investigation, that bubonic plague has never existed in San Francisco; and Whereas, The position is absolutely unsupported by any competent, unprejudiced physician who has made personal examination of suspects or alleged cases of plague before or after death, or who has examined the bacteriological evidence presented, and is further in direct conflict with the findings of the Federal Government experts and Special Commission; therefore be it *Resolved*, That the Medical Society of the State of California emphatically condemns this action on the part of the Mayor of San Francisco, and at the same time endorses the position always maintained by the old Board of Health in its sanitary defence of the people of the city of San Francisco and of the country at large.

Reciprocity in Medical Licensure.—At a meeting of representatives of the medical examining boards of Illinois, Wisconsin, Indiana, and Michigan, held in Chicago in January, a committee was appointed to formulate a policy for reciprocity in licensure between the several United States. The report of this committee, which was adopted at the meeting, submitted the following propositions: (1) That a license or certificate of qualification of at least one year's date and based upon presentation of a satisfactory diploma, and an examination before a board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a State may be issued; (2) That a license or certificate of qualification issued by a State Board of Registration or Medical Examiners of at least one year's date, based upon presentation of a satisfactory diploma and upon the recommendation of a State Board of Registration or Medical Examiners as to the reputability of the applicant, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a State may be issued. Owing to the differences which exist in medical laws in the different States it was only possible for the confederation to recommend the policy upon which the reciprocal exchange of certificates could be accomplished. The details of such reciprocal exchange of certificates must be arranged between States reciprocating; also, the standard of preliminary education, as well as that of the medical qualifications of licentiates, must be a matter of agreement between reciprocating States. The secretary of the "Confederation of Members of Reciprocating State Medical Examining and Licensing Boards," is Dr. B. D. Harrison, Sault Ste. Marie, Mich.

Examination of a Physician for the Indian Service.—The United States Civil Service Commission announces that on June 3, 1902, an examination will be held at the usual places for the position of physician in the Indian Service. From the eligibles from this examination it is expected that certification will be made to the position of physician at the White Earth Agency, Minnesota, at a salary of $900 per annum, and to other similar vacancies as they may occur.

This examination is open to all citizens of the United States, between the ages of twenty-five and fifty-five years who comply with the requirements. Persons who desire to compete should at once apply either to the United States Civil Service Commission, Washington, D. C., for a copy of the Manual of Examinations and Application Forms 304 and 375. The Application should be properly executed and filed with the Commission at Washington prior to the hour of closing business on May 23.

Obituary Notes.—Dr. JOSEPH P. TURNER died at Trenton, N. J., on April 27 at the age of seventy-nine years. During the Civil War he was surgeon to the First New Jersey Cavalry.

Dr. JAMES TAYLOR died at Greensburg at the age of eighty-seven years. He was a graduate of Jefferson Medical College and he represented his county in the legislature in 1861 and 1862.

Dr. CYRUS T. HOTTENSTEIN died in Philadelphia on May 1 at the age of seventy-three years. He was graduated from Jefferson Medical College in 1848, and for twelve years was engaged in the practice of his profession at Portage, Wis. In 1880 he removed to Columbia, Pa., becoming surgeon for the Philadelphia Division of the Pennsylvania Railroad. Shortly after the outbreak of the Civil War he went to the front with the One Hundred and Thirty-fifth Regiment, Pennsylvania Volunteers. He became Surgeon-General of the Third Division, First Army Corps, to which his regiment was attached, and as such remained on the staff of the Division Commander, General Doubleday, until he was mustered out. He was present at the second battle of Bull Run and also at South Mountain, Antietam, Fredericksburg and Chancellorsville. On his return to civil life he resumed his relations with the Pennsylvania Railroad, and these were continued until 1897. He was for more than twenty years physician to the Working Home for the Blind.

Dr. PHILIP F. FULMER of Dingman's Ferry, Pa., died suddenly while attending the funeral of a friend at Port Jervis, N. Y., on April 29. He was born in Stewartsville, N. J., in 1830, and was graduated from the Medical Department of the University of Pennsylvania in 1853.

Dr. CHARLES H. MASTEN of Nyack, N. Y., died of pneumonia on May 1, at the age of sixty-three years. He was born in Odelltown, Province of Quebec, Canada, August 21, 1839, and came to New York when about thirty years old. He studied medicine in Bellevue Hospital Medical College and after graduation, in 1867, settled in Rockland county, where he has since lived and practiced medicine.

Dr. JOSEPH ASBURY TARKINGTON died at Greensbury, Ind., on May 1. He was a graduate of the Medical Department of the University of Georgetown, D. C., in the class of 1870, and until recently practised in Washington.

Dr. D'ESTAING DICKERSON of Kansas City, Mo., died at his home in that city on May 3, at the age of sixty-seven years. He was born in Watertown, N. Y., and was a graduate of the Albany Medical College in the class of 1857. During the Civil War he was in charge of all the hospitals of the Sixth United States Army Corps.

Dr. BENJAMIN LORD, formerly a prominent dental practitioner of this city, died on May 3, at the age of eighty-three years. He was born in Trenton, N. J., and began the practice of dentistry in New York sixty years ago. He was an active worker in many scientific societies and a frequent contributor to dental journals during the period of his professional life.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

PARLIAMENTARY—NEW NAVAL REGULATIONS—CYSTS OF NECK—INTESTINAL OBSTRUCTION FROM EMBOLISM—CEREBELLAR ABSCESS—PERITONITIS AND THORACIC DISEASE—CHOLEDOCHOTOMY—BACTERIA IN PUBLIC BATHS—DR. KNOX ON THE NATAL CAMPAIGN—MEDICAL REGISTER—NEW SOCIETIES—OBITUARY.

LONDON, April 18, 1902.

IN reply to a question in the House of Commons on Monday, Lord Stanley said the report on anti-typhoid inoculation had been received, and it dealt with only 4,138 cases; in these the aggregate results show a mortality of 8.2 per cent. in inoculated persons, against 15.1 per cent. in uninoculated persons. It was considered advisable to obtain further statistics from the admission and discharge books before publishing the report.

The select committee to inquire into the ventilation of the House was nominated on Tuesday. Members were sufficiently alive to their own interests to include Sir M. Foster, Sir J. B. Tuke, and Dr. Farquharson.

The Cremation Bill was read a second time and referred to the Grand Committee on Law. This bill has already passed the upper house.

The passing of the kilt is threatened. Highland regiments are discontented, and various questions have been put, but the War Secretary has said the kilt is not to be abolished. He had to admit that he could not say whether the kilted men suffered less from stomach diseases in consequence of wearing the national dress. It is rumored that the authorities were concerned for the soldiers' knees.

The new regulations for the naval medical service are in no wise revolutionary. Power is reserved to admit a couple of candidates, who have been house surgeons, on the nomination of the medical schools, and six others recommended by the Colonial Universities. There is also an advance in pay, but not in retired pay and allowances. The entrance examination has been revised. The most important point in the new regulations is that every medical officer will have to take a post-praduate course at a metropolitan hospital every eight years, if the exigencies of the service permit.

Last Friday, at the Clinical Society, Mr. Carwardine of Bristol read a paper on the mode of origin of cysts in the neck. He said cysts and fistulæ, arising from the thyroglossal duct usually had a pedicle which passed through the thyrohyoid membrane in the middle line, below the hyoid bone, between the body and the thyroid cartilage. These he proposed to name thyrohyoid cysts. He had met with a case in which the pedicle passed through an interval in the cervical fascia into the middle of the cricothyroid membrane, after which it might vary well be named a cricothyroid cyst. Another case in a similar way he called hyomandibular. Thus there were three median cysts named as above. Lateral cysts were also distinguished and their origin given.

Dr. Tyson then related a case of intestinal obstruction, due to embolus of a branch of the superior mesenteric artery. The patient was a woman of sixty-six, and the symptoms those of colic, which gradually passed to "coffee-ground" vomiting. On laparotomy the small intestine was adherent in the right fossa, where about a foot of gangrenous bowel was found. Excision was done and Murphy's button used, but she died thirty-six hours afterward. At the post-mortem examination atheromatous erosion of the descending aorta was found, with blocking of a branch of the superior mesenteric artery.

Mr. Lunn described a similar case, and Mr. Marsh mentioned that of a man thrown from his horse and falling on his abdomen on a heap of stones. No grave symptoms occurred for a few days, after which acute obstruction led to operation. This revealed gangrenous bowel, and post-mortem embolism of the superior mesenteric artery was found. Mr. Bowlby mentioned a case of gangrene of the fingers from frost bite, after which abdominal symptoms came on and were fatal. On post-mortem a general condition of embolism of the mesenteric area was discovered.

Mr. Barker described a case diagnosed as intracranial abscess with thrombosis of the lateral sinus and jugular vein, in a girl of fourteen. On lifting her to take her to the operating theatre, respiration suddenly ceased. The heart continued to beat, but no sign of normal breathing, in spite of artificial respiration and oxygen inhalation, kept up for an hour. Then he operated and reached foul gas and pus, and kept up the artificial respiration, etc., but without success. The heart continued to beat for two hours and thirty-five minutes from the time natural respiration ceased. At the post-mortem examination a cerebellar abscess was found, which had been partially exsected by the operation.

Mr. Barnard then introduced the subject of simulation of acute peritonitis by pleuropneumonic diseases, observing that Andral recorded several typical cases quoted by Watson, and Fagge added one. But modern writers give only vague indications of the diagnosis, which Mr. Barnard considered easy, if the suspicion is once aroused. Sir D. Duckworth said if such cases were properly examined on admission, mistakes would not occur—a remark which, with more or less force, may be made of most cases for which differential diagnosis is laid down in the textbooks.

A paper by Mr. Mayo Robson on the surgical treatment of obstruction in the common bile duct by concretions, with special reference to the operation of choledochotomy, as modified by Mr. Robson, and illustrated by sixty cases, was read on his behalf at the Medical and Chirurgical Society, on the 25th ult. Regret was expressed at the absence of Mr. Robson, and a desire to ask him some questions of detail. The paper said gallstones could not be removed by medical means when once they had reached the common duct, unless very exceptionally. In an experience of numerous cases Mr. Robson found the common duct had to be dealt with in one out of every five or six cases. In ten he had been able to manipulate the stones back into the gall-bladder, and then remove them; in more than thirty he had crushed the stone in the duct—a plan only to be attempted for soft stones, and where the fragments could be removed. Short circuiting the obstruction left the cause untouched, and was, therefore, inadvisable. Uniting the gall-bladder to the colon was as efficient as uniting it to the duodenum, and simpler. Opening the common duct through the opened duodenum was not necessary, and introduced danger of sepsis. Choledochotomy was the only operation to be trusted, and could, by his improved method, be performed in thirty to forty minutes. The mortality before 1900 was 23.8 per cent. Since January 1, 1900, it had only been 7.4 per cent. and he thought it might yet be reduced to 5 per cent. or less. In the last series of twenty-one consecutive cases operated on since July of last year, he had no death; and, in all his cases since June, 1900, the mortality has only been 5.5 per cent.

Sir D. Duckworth said medical measures could not remove gallstones, but might prevent their formation. Operation should not be delayed too long. Rise of temperature was a good indication.

Mr. Godlee emphasized the septic nature of the contents of the duct and the care necessary to prevent its escape. The influence of the bile in digestion would be lost by uniting the bladder to the colon instead of the duodenum.

Dr. Keay thought medical means might do some good, and referred to oil. He would like to know the subsequent history of the cases as recurrence was not uncommon. The president (Mr. Willett) would have liked to ask how often on operation no stone was found, as he had met with cases in which all the symptoms were present, but no gallstone.

Dr. E. E. Glynn has communicated to the Liverpool Medical Institution the results of his bacterial examination of the water of the public swimming baths of that town. When fresh in the morning the water was practically sterile, not more than three bacteria per c.cm. being present. An hour after the baths were opened the number had risen to forty-six. At 9 P.M., on five occasions in June and July, there was an average of 4,676 bacteria per c.cm. in water of the first-class baths; the average number of bathers being 292. In the second class the samples of three occasions gave 11,970 per c.cm. bacteria; the number of bathers averaging 186. Basing his calculation on the capacity of the baths, Dr. Glynn reckons that the water removed from the skin and hair of each bather between four and six thousand million bacteria. But some of the pollution arose from the corridor between the edge and the dressing baths, where both bathers and those waiting walked about, rendering it muddy soon after the opening. To prevent this, Dr. Glynn says, the baths should have a second corridor outside the boxes. Streptococci were never found; staphyloccus aureus and citreous only very rarely; but S. albus was abundant in three varieties, pyogenes albus, cereus albus, and epidermidis albus. B. coli was present at the end of the day to the number of eight per liter for each bather in the first class, and forty-eight in the second. Dr. Glynn said typhoid was probably never contracted in such baths, and swallowing the water was innocuous. He considers Liverpool fortunate in the number of its baths and the quality of its water.

Lieut. E. Blake Knox, Royal Academy Medical Corps, has published, under the title of "Buller's Campaign," an account of the fighting in Natal, throughout which he served. To those who complain of slow progress in that campaign, Lieut. Knox says, "Go and see the country, and weigh all the circumstances; and it is highly probable your opinion will change."

The "Medical Register for 1902" was issued last week. April seems late for the appearance of such a work. There are 36,912 practitioners registered.

New associations are continually being formed. A "medico-legal society" was established, and its first officers elected on the 5th inst. A "Betterment of London Association" has also been formed, which promises to make the metropolis a more healthy and attractive residence. I wish it success in its arduous enterprise.

Dr. Alexander Macgregor died suddenly on the 12th inst., aged forty-eight years. He came to London six or seven years ago from Aberdeen, where he had a large practice, and was an assistant professor.

Another death, which would be termed sudden in a younger member of the profession, is that of Mr. R. H. Chilton, Registrar of the Bristol Children's Hospital, where he contracted diphtheria. He had passed through the acute stage and seemed likely to recover, when cardiac failure supervened. He took his qualifications in 1893, and his promising career closes in his thirty-first year.

IS THE MIND AN ENTITY?

To the Editor of the Medical Record:

Sir: With extreme brevity I wish to suggest a few points which demand recognition in a discussion of this subject and which the materialistic standpoint fails to satisfy. This résumé is called out by an article of the same name by Dr. H. H. Stoner in the Medical Record, March 29, 1902, which he offers as a counterpart to my article on "The Psychic Half" in the Medical Record, December 7, 1901:

(1) The necessity for unity, in order to have thought, is imperative. Unity is not demanded by psychology alone, but it is a *sine qua non* of all sciences.

(2) There is no real unit in the so-called physical sciences. Hence their resort to hypothetical units. The cell is anything but a unit and the atom is but a hypothetical unit based by analogy on the unity of consciousness.

(3) Sensation is not an elementary something that can be separated from a precede consciousness. "Unconscious sensation" is a contradiction. The simple sensation is to psychology what the atom is to physics—viz., an abstract hypothetical unit by which to explain experience. Neither simple sensation nor the atom exists as an object of experience.

(4) Self-consciousness finds no place in a nervous mechanism, as such.

(5) Space has no objective reality; location and size do not apply to consciousness.

(6) Ideals refer to a unit as their subject.

(7) "Ought" and the moral obligations relative thereto are demanded under any "ism," inadvertently though it may be.

(8) Causation is but a physical law, *deduced* from the self-consistent activity of reality. The ultimate principle of existence is spontaneity of activity. All attempts to correlate force as an active principle with matter as a mere subject of such activity lead to interminable inconsistency and contradiction.

(9) Independent existence is an abstraction having no counterpart in experience. To be an entity does not mean independent existence. "To be is to be related" and relation is found in consciousness alone.

(10) Existence and knowledge are axiomatic. All so-called explanation assumes and accepts the unexplained.

J. Allen Gilbert, Ph.D., M.D.

Portland, Oregon.

Observations on the Early Diagnosis of Typhoid Fever.—R. Polacco and E. Gernelli seek to lighten the task of the clinician in the diagnosis of typhoid by calling attention to the feasibility of obtaining the specific organism from the rose spots without the difficult technique required to isolate it from the stools and before the Widal reaction is positive. Neufeld's method was employed and gave positive results in fifty successive cases. Essentials for success are the use of fluid media, since the bacilli are usually so few in number that cultures on solid media are negative, and that the cultures be taken from at least two of the spots. The authors believe that the organism is always to be found in this way, and that the method affords a convenient and rapid means of diagnosis.—*Centralblatt für innere Medicin.*

Progress of Medical Science.

Journal of the American Medical Association, May 3, 1902.

Blackwater (Hæmoglobinuric) Fever.—J. J. Curry reports two cases of this disease occurring in the United States Military Hospital sat Manila. The name is applied to a disease generally spoken of as non-contagious, which is characterized by the presence of hæmoglobin in the urine and by a marked jaundice. There is a difference of opinion as to its causation, some ascribing it to malaria, while others place it in a different category. During a hæmoglobinuric paroxysm quinine appears to be distinctly harmful. But this remedy may be given with advantage in the intervals between the attacks, and should also be given in cases in which active malarial parasites are present in the blood during an attack and in which the hæmoglobinuria comes on after a succession of malarial attacks.

The Functions of the Soluble Ferments of the Blood in Intracellular Digestion.—According to A. C. Croftan, assimilation and disassimilation of food occur in two stages: (1) Anaërobic stage, in a reducing medium in the absence of oxygen, in the interior of the cell; (2) An aërobic stage in the presence of free oxygen (hæmoglobin) at the periphery of the cell, *i. e.* chiefly in the blood and lymph stream. Both processes, it appears, are inaugurated by the intervention of soluble, chemical, unorganized ferments that the cells secrete. The term "intracellular" digestion is essentially synonymous with general metabolism. The fermentative changes in the gastroenteric canal are essentially hydrolyses, by which diffusion through the membranes is facilitated. In the passage of the hydrolyzed products through the bowel wall they are reconverted, and these processes have been shown to be due to enzyme action. The question arises, where do these processes occur? In the mucosa, the muscularis, the serosa, the lymph or blood stream? Presumptive evidence is overwhelming in favor of the supposition that the leucocytes in the blood and lymph capillaries of the intestinal wall are in some way concerned in this process (digestion-leucocytosis). All the ferments are so toxic when circulating freely, and are still so universally present that we can only assume that mobile cells, like the leucocytes, bear them in a harmless form through the blood and lymph-stream to their ultimate destination, while we have so far been unable to demonstrate experimentally that the cells of our body, like certain bacteria, secrete enzymes that bring about the processes of proteolytic anaërobic fermentation, we are able to show experimentally that the second, oxidative stage of dissimilation of fats, carbohydrates, etc., is due to the action of numerous soluble ferments that are present in the blood and lymph. Whether the blood ferments, after they perform their function, are destroyed, eliminated, re-inclosed in leucocytes, arrested in the digestive glands to be re-excreted, or finally are held by such dis-intoxicating organs as the suprarenals, the thyroid and the liver, it is impossible to say. As the urine nearly always contains some of the ferments, as they are nearly always present in the liver, and as they certainly must suffer the ultimate fate of all the other constituents of the body, it is probable that all these processes can and do occur.

New York Medical Journal, May 3, 1902.

A New Treatment for Deafness from Chronic Catarrh of the Middle Ear; a Preliminary Report.—W. H. Bates finds that in some instances of the nature described in the title of his paper, hearing is improved by the removal of the excess of connective tissue from the inner wall of the tympanum. To obtain room for the treatment of the region of the oval window he found it necessary to remove not only the membrana tympani and ossicles, but also the upper and outer bony wall of the external auditory canal with the outer wall of the attic and aditus and antrum. For the removal of the connective tissue he has found the most serviceable instruments to be a Graefe cataract knife, a Sexton's trowel-shaped knife, and Wilde's forceps. The operation has been done under cocaine in combination with the use of adrenalin. The immediate effect of the removal of the connective tissue was a temporary loss of hearing, due, the author believes, to the reaction from the use of the knife. He further states that two days after a mass of connective tissue is removed, the open space will be replaced in part by a soft material, which becomes, in a week, hard and fibrous. He believes it best to remove this soft material as rapidly as it forms, and also as much of the firmer tissue beneath it as can be done without much reaction or a lowering of the hearing. If one waits, the tissue becomes very dense, and more difficult to remove for this reason; and, what is more disadvantageous, it is more sensitive to pain, and the reaction increase of new tissue is greater.

Medical News, May 3, 1902.

The Right and Wrong Use of Digitalis Based on Cardiac Pathology.—William Henry Porter reviews the various effects of digitalis. It increases primarily the motor force of the heart muscle. It increases at the same time the resistance offered in front of it, so that the rapidity of action of the heart must be diminished in order to increase its working capacity. In both insufficiency and stenosis of the left auriculoventricular orifice, digitalis improves the condition temporarily. It also intensifies the systolic contraction and more completely empties the contents of the ventricular cavity into the aorta. In both lesions of the mitral orifice the pulmonary congestion is overcome, and the dyspnœa consequent upon the pulmonary engorgement is removed. Once the normal tension has been reached and passed, the action of the digitalis is detrimental to all the physiological functions of the body. In aortic lesions, either in incompetency or stenosis, digitalis is not indicated at any stage. In fatty degeneration, or any enfeebled condition of the heart muscles, digitalis is contraindicated. In hypertrophy of the heart digitalis is a dangerous remedy. This drug is of service only for a few days at a time at the longest. It should only be given to influence the heart and circulation when the arteries are very much relaxed, and the pulmonary or systemic veins overfilled with blood.

Intravenous Infusion of Saline Solution.—George Crile declares that normal saline solution is effectual in shock in proportion to the impairment of the vasomotor mechanism. If this mechanism has gone into resolution, infusion is without curative effect. If the impairment is considerable, the infusion will partly restore the pressure. The peripheral resistance determined the height of the blood-pressure, no matter how swift the stream, nor how great the volume of blood. If the peripheral resistance is lost (fatal "shock"), no amount of infusion can more than temporarily and partly restore the blood-pressure and death is inevitable. If the shock is much increased by so-called vascular hemorrhage, as in operations on the splanchnic area, infusion may be effective because peripheral resistance is still present. If hemorrhage complicates shock and the vasomotor mechanism is still intact, infusion is effectual. As to the effect of the varying height of the saline column, it has been noted that increasing the height of the bottle but slightly increased the blood-pressure, as to drug effects, after a considerable amount of saline solution had been infused, the inhalation of chloroform, even in small dosage, produced marked depression of the circulation. Strychnine and nitroglycerin produced their usual physiological action, though to a lesser degree. Thermal, electrical, and mechanical stimulation produced the usual effects. In cases of dangerous hemorrhage the combination of oxygen inhalation with saline infusion is beneficial.

Philadelphia Medical Journal, May 3, 1902.

The Surgery of the Heart.—H. L. Nietert believes, from his experience in the suturing of heart wounds, that: (1) Gentle manipulation may be applied without producing shock; (2) The introduction of the suture produces but a slight irregularity in the heart's action; (3) Heart wounds heal rapidly; (4) Intrapericardial pressure is increased even if hemorrhage occurs during diastole alone. He insists that all heart wounds, in which there is danger of fatal hemorrhage, should be sutured. If the wound does not involve the pleura, the extrapleural route should be employed, but if the pleura has been injured, the intrapleural method should always be employed, and the flap devised by Rotter is the best. Although it is advisable for the surgeon to familiarize himself with the methods of operation and the flaps devised by the different operators, a thorough knowledge of the anatomy of the region is most essential and each operator should modify the flaps as best suits his case. The writer reports a case in detail. The patient was a man of twenty-seven years, who was stabbed in the heart. The wound was sutured and the patient has almost completely recovered, there being noticed only a slight dyspnœa on violent exertion, which is probably due to the weakened condition of the heart.

The Relation of Uric Acid and Xanthin Bases to Gout and the So-called Uric Acid Diathesis.—David L. Edsall in his discussion of this subject thinks that the main question to be decided is whether uric acid causes both general toxic symptoms and local toxic symptoms, as well as the symptoms of irritation that would be caused by any foreign body; whether it causes some or all of the local toxic and mechanical symptoms, but no general symptoms of importance; or whether it causes no symptoms at all that can be directly attributed to it, excepting those which would be produced by any foreign body deposited about the joints. He believes that it is probable that uric acid does not cause any notable evidences of intoxication and does not produce the decided general symptoms of the disease. However, uric acid may produce much of the local difficulty in gout at the time of the attack, as well as in the interval, through its local toxic action when present in extremely concentrated form. There is only weak ground for the belief that it has a purely mechanical action in gout. The writer thinks that the rôle of uric acid in gout may be compared with that of sugar in diabetes, the intoxication being referred in general to some other toxic substance or substances as yet unknown. He suggests, as a remote possibility, that the uric acid in the blood in gout is, in part at least, present in a form which is toxic while it is not notably toxic in other conditions. This is extremely improbable. As to the xanthin bases, there is not an increase of these excreted in gout, and so far there is no reason for thinking that disease of the kidney has any influence upon the oxidation of xanthin bases to uric acid. That some of the xanthin bases are toxic, proves nothing concerning gout or the uric acid diathesis. Besides the xanthin bases there are numerous excretory substances that are toxic, but we do not think of them as the cause of gout or the uric-acid diathesis. There is no better reason for thinking that the xanthin bases are the actual cause of these conditions. The writer concludes by saying that the use of bad methods has led to a great waste of time in the study of the xanthin bases.

American Medicine, May 3, 1902.

On the Effect of the Digestion of Gelatin on Its Styptic Properties.—Horatio C. Wood, Jr., concludes that: (1) Pepsin digestion of gelatin does not destroy its coagulating effect on the blood; (2) The resulting product is dialyzable, and, therefore, capable of absorption; (3) The administration of gelatin by the mouth in the treatment of hemorrhage is, therefore, a rational procedure; (4) Gelatose seems to antagonize, if given in sufficient quantity, the anticoagulating action of peptone.

Indications for the Mastoid Operation.—Lee Wallace Dean states that mastoiditis is usually caused by an involvement of the membrane lining of the opening which connects the antrum of the mastoid with the middle ear. The swelling of the membrane occludes the opening, from which there results stagnation of the secretion in the cavities of the mastoid. If pyogenic microorganisms develop in this secretion, mastoiditis takes place. Although in most cases of mastoiditis the characteristic symptoms are marked enough to make diagnosis comparatively easy, there are cases, especially those of tuberculous origin, in which all these symptoms may be absent, and yet there may be very extensive necrosis of the mastoid cells. This destruction may take place without any pain. When mastoiditis develops, it is best, in the beginning, to give laxatives and apply, by means of Leiter's tubes, cold over the region of the mastoid. If there is decrease in the intensity of the disease within two or three days, the treatment should be kept up. If, however, the disease becomes worse, or even remains at a standstill, or if symptoms of meningeal disturbance develop, operation should be performed without delay. The danger in mastoiditis lies not in the operation, but in not operating. There is little danger if the operation is performed under perfectly aseptic conditions; the patient will suffer little discomfort besides that which results from the anæsthesia. The patient may die as the result of the previous condition, but very few die as the result of the operation.

The Lancet, April 26, 1902.

On Some Points in the Treatment of Puerperal Eclampsia.—G. E. Herman asks what the effect is of emptying the uterus in eclampsia; whether it stops the convulsions and what good it does do. From the collation of quite a large lot of figures, embracing over 2,000 cases, he shows that the mortality in cases in which emptying of the uterus is left to the natural powers is only 1 or 2 percent. greater than in the cases of rapid delivery induced by approved methods. The second question relates to the good effect of the tepid bath when used to reduce temperature in certain cases of eclampsia. This procedure he most heartily commends in those cases characterized by an especially high fever. One case is given in detail. In this case there were stupor and some muscular twitchings, but no actual convulsion.

Note on a Case of Nearly Fatal Intralaryngeal Hemorrhage from Papilloma of the Larynx.—A. Bronner reports the case of a man forty-eight years old with papillomata of the false and true cords. These were removed at intervals without any special incidents. On one occasion while running to catch a train he began to raise considerable blood and feel as if he was going to suffocate. The hemorrhage continued and the man became insensible, but was brought around and in two days was in his usual condition. He was seen quite awhile after by Bronner, who could distinguish in the larynx a small clot in a papilloma, and removal of the clot was followed by a small loss of blood. There was nothing in the patient's condition to suggest lung or other visceral trouble, and these facts, together with the fact that the original bleeding came on after violent exertion, led Bronner to conclude that the papillomata were the source and site of the hemorrhage.

A Case of Relapsing Pyrexia Continuing for Fourteen Months Unabated.—S. H. M. Neave reports the case of a boy of seventeen years, who, without apparent cause, began to have regular attacks of pyrexia with an intense desire to sleep. In the course of six months he passed through nine cycles of pyrexia and remissions of fever in 172 days, making an average of nineteen days each. During these attacks the patient had very little discomfort. He was drowsy, had some bronchitis, the tongue was furred, and at the highest point of the temperature he usually vomited. There was some tenderness over the spleen, and the blood count showed a leucocytosis. The blood was examined by various pathologists for malarial organisms, for the reaction of Malta fever and for the spirillum of Obermeier, but all without any definite findings. In the intervals between the attacks he appeared fairly well, though he was anæmic—the blood showing a deficiency of hæmoglobin—without much wasting, and he felt quite well. After six months, however, he began to lose weight. Every chance of a collection of pus was well considered and investigated; *imprimis*, cholecystitis with hepatic intermittent fever was kept well in view, and there was never any sign of jaundice. The cerebrospinal fluid was sterile. There were no renal symptoms and the urine was normal. A negative result likewise followed the exploration of the nose, the nasopharynx, the larynx, and the rectum. There was no affection of the special senses, and the fundus oculi and the ear were normal.

The Spontaneous Cure of Senile Cataract.—A case of this nature is reported by Sidney Stephenson, whose patient was a woman aged fifty-five years. She was, when first seen, wearing glasses—11 D. spherical, which she had obtained from an optician. Right vision: fingers at one meter and Jaeger No. 1 at 8 cm.; left vision: fingers at 4 meters and Jaeger No. 1 at 4 cm. The vision of the left eye was improved to 1-6 normal with a-9 D. spherical lens. The tension of the eyeballs was normal. The right crystalline lens was opaque in its deeper parts, with a posterior polar opacity. The left lens exhibited opaque striæ and also a posterior polar opacity. "Floaters" were present in the vitreous humour of each eye. Eight years later the patient was seen again. Upon examination, with the right eye vision was equal to counting fingers at 35 cm. and No. 4 of Jaeger's type could be read at 8 cm. The vision of the left eye with a + 10 D. lens was ⅔ normal and with a + 14 D. lens the smallest type on Jaeger's card could be read. A nearly mature cataract existed in the right eye. In the left eye the anterior chamber was deep, the pupil clear and black, the iris sluggish and tremulous, and the tension normal. With the opthalmoscope the dislocated lens was found to be lying in the lower part of the vitreous chamber. The patient was seen for the third time, two years later. Upon examination the pupil of the right eye was found to be clear and black, the iris tremulous, the anterior chamber deep, and the crystalline lens dislocated into the lower part of the vitreous chamber. Tension was normal. Sight with a + 9 D. lens was [illegible] normal and with a + 12 D. lens the smallest print could be read.

British Medical Journal, April 26, 1902.

Kernig's Phenomenon.—J. Rutter Williamson has met with a case in which all the classical symptoms of early spastic paraplegia were present, in which the typical Kernig's sign was noted. The man had no history, nor did he present any symptoms of having had any meningitis.

Two Cases of Acute Intestinal Obstruction Successfully Treated with Quicksilver.—These cases are reported by J. McKean Harrison. The first patient was a man of sixty years, whose condition was most serious. There was constant vomiting, hiccough, and great abdominal distension, weak and running pulse and dry tongue. He was given ½ lb. of metallic mercury and 1 gr. of opium was administered every four hours. His condition gradually improved. The mercury came away ten days after it was given. He made a good recovery. The second patient was a man of eighty years, suffering from acute intestinal obstruction. He had ½ lb. of mercury and opium pills every four hours. By the twelfth day after administration, the mercury came away, and in about a month the patient's condition was most satisfactory.

The Seton in Migraine and Allied Affections.—Sydney Cornish reports the case of a laborer aged twenty-five, who had suffered from headache as long as he could remember. This affection was extremely severe and persistent. The seton was inserted under anæsthesia. From that time till this report (more than four months) he has had but one slight headache, and that after a heavy meal. He has become bright and active, and is back at his work. The tape is changed fortnightly, and the wound is dressed with one boracic fomentation a day. The writer thinks the seton acts by counter-irritation.

Observations on Caisson Disease and Its Prevention.—A. H. Muir Macmorran says that a considerable proportion of otherwise able-bodied men are, on examination, not considered fit to work in compressed air. The greatest care is necessary in the selection of men for this work. Prophylaxis consists in great part in supplying plenty of fresh air in maintaining a uniform temperature, and in the careful selection of the workmen. It has been conclusively established that an undue proportion of carbonic acid gas in compressed air causes an increase in the number of cases of caisson disease. As to the treatment, nerve sedatives are better than opiates, and in cases of severe pain, cannabis indica gives great relief. Potassium nitrate, potassium acetate, and ammonium acetate are good in the convalescent stage, or when the pain diminishes, but may be given from the first with good results. By far the best treatment is the medical lock, into which purified air should be pumped until the pain goes; then the pressure is very gradually reduced. All new hands should be examined after work each day for a week, and the gang going off and that going on twice each week, and those who are indisposed, kept above ground till well. Should the pulse have a high tension, the man should be kept under observation every day, and should there be a booming sound in the heart, or reduplication of the second sound, he should be suspended altogether.

Deutsche medicinische Wochenschrift, April 10, 1902.

Granular Degeneration of the Red Blood Cells.—Waldemar Loewenthal reports the results of his experimental observations upon the basophilic granular degeneration of the red blood cells. As is well known, this condition is regularly observed as one of the earliest manifestations of lead poisoning. Loewenthal endeavored to ascertain the effect of tin and cerium upon the red blood cells of the guinea-pig. Accordingly several of these animals were inoculated (intraperitoneally) with ascending doses of chloride of tin and sulphate of cerium. It was at once apparent that great care must be exercised in judging the effects thus produced, as guinea-pigs are extremely susceptible to these metals, and it is very difficult to control. The susceptibility varies greatly in different guinea-pigs, and furthermore according to the external conditions under which they have been placed. Granular degeneration of the red blood cells is produced in guinea-pigs by intraperitoneal inoculations of tin chloride and cerium sulphate, but it cannot be definitely stated that such is due to the poisonous action of these metals. Guinea-pigs are, in a certain sense, unsuitable for such experiments, since normally they show more or less granular degeneration of the erythrocytes. When confined in dark places or exposed to damp weather they habitually show such a degeneration, which more or less completely disappears when they are placed under more favorable surroundings. Observations upon the erythrocytes of man under similar conditions are extremely desirable.

Paratyphoid.—Albert Brion and Heinrich Kayser report a case which was clinically one of typical typhoid fever with the presence of the roseola. That, however, the clinical picture was not due to the bacillus typhosus is shown by the facts (1) that no positive Widal reaction was ever obtained, and (2) that a bacillus was isolated from the blood which was agglutinated by this blood in a 1 to 1000 dilution. It is, therefore, certain that this bacillus was the cause of the infection. In many respects this bacillus resembles the bacillus typhosus, and is hence to be classified among the so-called paratyphoid bacilli. In addition to being present in the blood, the bacillus was also found in the urine and vaginal secretion, and in the latter the gonococcus was also found. The bacillus is actively motile, does not retain Gram's stain, and gives rise to characteristic typhoid colonies on agar or gelatine plates. The stab growths in gelatine are also characteristic of the bacillus typhosus. It ferments maltose, dextrose, and lactose with the formation of gas; less gas, however, is produced in lactose media than in those which contain maltose or dextrose. Saccharose and starch are not fermented. It possesses no hæmolytic power upon dogs' blood. It is markedly pathogenic for white mice and guinea-pigs, and less so for rabbits. It may be considered as identical with the bacterium typhi (type A) of Schottmüller, since it is agglutinated by the anti-serum of that microorganism in a 1 to 1000 dilution. It was not agglutinated by an experimental anti-typhoid serum in any dilution. The study of this case shows that in all cases of clinical typhoid fever which fail to show a positive Widal, the agglutinating power of the blood against the various species of paratyphoid bacilli should be ascertained. Only in this manner can the frequency of paratyphoid infections be ascertained.

Cholelithiasis.—J. Boas draws attention to the value of electricity in the diagnosis and treatment of this disease. In the diagnosis the presence of tenderness in three locations, either singly or combined, is of great importance. These locations are (1) the region of the gall-bladder; (2) the inferior border of the liver; (3) a more or less circumscribed area immediately to the right of the tenth to twelfth dorsal vertebra. In many cases tenderness in one or more of these locations may be demonstrated by the use of ordinary palpation or percussion, but in other instances the tenderness can only be elicited by the use of the electrical current, either faradic or galvanic. Here the degree of tenderness, and consequently the intensity of the process can be accurately ascertained by beginning with a very weak current and gradually increasing its strength until tenderness is produced. It is certain that for this purpose electricty is a much more delicate test than either palpation or percussion. While it is not true that the tenderness here described is pathognomonic of cholelithiasis, yet its presence is of great aid in the differential diagnosis between cholelithiasis, and such conditions as right floating kidney, gastric hyperacidity and gastric ulcer. Furthermore, it is a reliable indicator with respect to the value of the treatment which is being employed. Such tenderness regularly diminishes as the case proceeds toward recovery. Dietetic measures and the prolonged use of small doses of Carlsbad waters constitute the most beneficial form of treatment. In general, all fats should be excluded from the diet, which should especially be non-constipating in character. Massage is always contraindicated in this disease. It is certain that it may induce attacks of biliary colic in cases where they have not previously been present, and may increase the intensity and frequency of attacks in cases in which such have formed a part of the clinical picture.

The Tuberculosis Question.—Arnold Heller as the result of his experience, takes exception to the views recently expressed by R. Koch with respect to the non-transferability of bovine tuberculosis to man. Three possibilities exist for the acquirement of tuberculosis by man: (1) It may be hereditary; (2) It may arise from the ingestion of the meat or milk of tubercular animals; (3) Direct or indirect contagion may take place from man to man. With respect to the third possibility, it is, of course, absolutely certain that it is responsible for the presence of a large amount of human tuberculosis. With respect to the occurrence of hereditary transmission, it may be said that, while such is possible, yet it is certainly of very little practical importance. The observation of animals (guinea-pigs) which are very susceptible to tuberculosis shows that this must be the case. All the guinea-pigs of the Pathological Institute in Kiel are descended from two of these animals, which by inoculation were rendered tuberculous in 1890, before their first offspring were born, yet tuberculosis has never appeared spontaneously amongst these animals except in two short periods between 1895 and 1897, when the development of the disease in such as were affected could be definitely traced to other causes. In substantiation of his views regarding bovine and human tuberculosis, Koch lays great stress upon the fact that intestinal tuberculosis is a rare condition. Proper observations, however, show that such is not the case. It is well known that tuberculosis follows diphtheria quite frequently. Post-mortem examinations were made in 714 fatal cases of diphtheria, in order to ascertain whether or not tuberculosis was present and if so, to determine its location. Of these 714 cases 140 were tuberculous, and of this number 53, or 37.1 per cent. showed primary intestinal tuberculosis either alone or in combination with tuberculosis of the mesenteric glands and other organs. Contrary to the general opinion, intestinal tuberculosis is more frequent in adults than in children. Of 836 fatal cases of tuberculosis in adults, in 62.9 per cent. intestinal tuberculosis was present at autopsy, while in 419 similar cases in children an intestinal tuberculosis was found in only 40.5 per cent. In the decision of this question cases are of great importance in which it can be practically proven that bovine tuberculosis has been directly transmitted to man. A case of this character is here reported in which a man tatooed the backs of both his hands, using for this purpose cow's milk. Lupus soon developed at both of the places which were so tatooed. It is interesting to note that the tatooing was practised on different days, and that milk from the same source was always used, and, furthermore, that the lupus developed simultaneously in both locations. The microscopical examination of the lupus tissue showed the presence of characteristic giant cells, but no tubercle bacilli were found.

Berliner klinische Wochenschrift, April 7, 1902.

Menière's Disease.—Josef Gescheit reports a case of this disease, which is of especial interest as showing the beneficial results of galvanization. The patient was a man forty-eight years of age, who had suffered from this disease for four years. During this time the attacks varied in frequency and intensity. Frequently there had been as many as seven attacks daily. Latterly, the attacks had markedly increased in severity. The treatment had been very diversified, but had been entirely without avail. Gescheit at first advised the use of quinine, but as no result was obtained this was soon discontinued. The galvanic current was next applied by means of Erb's electrode, the positive pole being applied to the tragus of the affected ear and the negative pole over the cervical vertebra The strength of the current employed was from 3 to 4 milliampères. The single sittings lasted about three minutes and were repeated every second day. During the applications the patient experienced increased dizziness and some nausea. Following them, however, the patient was much improved. Twenty-five to thirty sittings sufficed to bring about a complete cure with the exception of a slight ringing in the ear. The attacks, however, did not reappear, and the patient was able to resume his ordinary occupations, which he had not been able to pursue during the preceding four years.

The Unity of Pathogenic Streptococci.—Alexander Marmorek has endeavored to solve the question of the unity or multiplicity of the various so-called species of streptococci upon biological grounds. The different streptococci which he examined were obtained from cases of erysipelas, puerperal fever, scarlatinal angina, pneumonia complicating measles, pustular and phlegmonous lesions, diphtheria, tuberculosis and influenza. For comparison he also tested two species obtained from horses, one from a case of petechial fever, and the other from a case of glanders. There are two biological characters which are common to all the varieties of streptococci obtained from man, but which are not possessed by those obtained from horses. These are first their hæmolytic action upon rabbit's blood and second their inability to grow in their own culture filtrates or those of other pathogenic streptococci. With respect to the first characteristic it may be said that the hæmolytic power of the various pathogenic streptococci against rabbit's blood varies with the virulence of the microorganism, and also in some measure, according to the source from which it is obtained, but it may be definitely stated that this is a biological character possessed by all pathogenic streptococci. The inability of certain pathogenic streptococci to grow in the culture filtrates of other pathogenic streptococci is one of the strongest points in favor of the theory of the unity of the streptococcus. In no single instance was the author successful in his endeavors to cultivate one streptococcus in the culture filtrate of another. In his immunization experiments Marmorek was able to protect rabbits against one species of streptococci by the inoculation of the antiserum of another species. The quantity of the anti-serum necessary to do this, however, varied greatly in different cases. This variation is not to be ascribed to a fundamental difference in the species, but to the various external influences to which they have been subjected (symbiosis, etc.). As the result of this work the author believes that there is no scientific ground for maintaining the multiplicity of species of pathogenic streptococci and regards them as all of the same derivation.

Berliner klinische Wochenschrift, April 14, 1902.

Temperature Crises in Tabes.—Bruno Oppler reports the case of a man, forty-one years of age, who first came under observation in 1897. A history of syphilis was absolutely negative. For some years the patient had been addicted to the excessive use of alcohol and tobacco. For ten years previous rheumatic pains had been experienced, at intervals, in the lower extremities, and for eight years indefinite stomach disturbances had been present. In May, 1897, a typical gastric attack occurred. Examination at that time showed the reflexes to be intact. No fever was present in spite of light chills and an accelerated pulse. These attacks were repeated at six or eight weekly periods, and a probable diagnosis of periodical hypersecretion was made. In the summer of 1898 the patellar and pupil reflexes disappeared, the pains in the lower extremities became more severe, and ataxic symptoms developed. In February, 1899, the symptom-complex of the crises suddenly changed in that the stomach symptoms were greatly lessened in intensity and great prostratiom with violent chills and fever appeared. During these attacks the axillary temperature rose to 40.4° C., and in the course of a few days gradually subsided to normal. No spleen enlargement or herpes labialis were present. These attacks were repeated seven times between February and October, 1899. Since that time, as the result of treatment, principally phenacetin, protargol and various water cures, the patient has somewhat improved, although the ataxic symptoms have remained in *statu quo.* Malaria, osteomyelitis, etc., may be absolutely excluded, and it may be regarded as certain that the crises are tabic in nature. The case is very similar to one reported by Pel in the *Berliner klinische Wochenschrift*, June 26, 1899, and is of interest, since, with this exception, the condition has not been previously described.

Is the Gonorrhœa of Prostitutes Curable?—In answering this question Thomas von Marschalko relates his personal experiences. In 161 cases of gonorrhœa in prostitutes, the urinary passages were involved in ninety-nine, the glands of Bartholini in thirty-seven, and the uterus in 108. In the first class of cases (the urethral) the earliest disappearance of the gonococcus after the beginning of treatment was five days, the latest 117 days, and the average twenty-eight days. In the second class of cases the earliest disappearance was seven days, the latest ninety-two days, and the average twenty-seven days. In the third class of cases these periods were thirteen, 153 and fifty-six days respectively. The treatment in the first two classes of cases consisted in the local use of 1 to 2 per cent. nitrate of silver solution or 1 to 5 per cent. solution of protargol; occasionally in stubborn cases 10 to 20 per cent. protargol-glycerin solutions were used. In the cases of uterine gonorrhœa 5 per cent. solutions of natrium lygosinatum were chiefly used, although a few were treated with 5 to 10 per cent. protargol solutions. Two intrauterine treatments per week were given. Such treatments were, as a rule, well borne, although occasionally in the beginning slight attacks of uterine colic were produced. The danger that tube infection will result from the intrauterine applications is insignificant, and is not to be considered in such a condition as uterine gonorrhœa to which tube infection is a natural sequel. The opposite position taken by most gynecologists is due to the fact that the majority of cases which come under their observation are in women who have borne children, and a large number of these have had disease of the uterus and its appendages previous to the gonorrhœal infection. The majority of the author's patients were young women who had never been pregnant. From the above results it is seen that the gonorrhœa of prostitutes is by no means incurable, when treated along the proper lines, at least in so far as the disappearance of the gonococci is concerned.

French and Italian Journals.

Tuberculous Hepatitis.—Charles Laubry speaks of the treatment of this affection, which he considers very grave. Prophylactic treatment should consist in abstinence from alcoholic drinks, from excess of all kinds, and in intestinal antisepsis (lavage of the stomach and purgatives). In the chronic form an absolute milk diet is indicated,and recourse may be had, but with precaution on account of pulmonary tuberculosis, to iodide of potassium. In the acute form, digestive symptoms are combated by applications of ice, hemorrhages by chloride of calcium and delirium by chloral. Stimulants are indicated at times. —*La Tribune Médicale*, April 9, 1902.

Contribution to the Study of Hysteria.—Lefèvre concludes that the manifestations of hysteria are of an infinite variety. There may be deafness, buzzing in the ears, blindness, narrowing of the visual field, aphonia, anæsthesia, paralysis, etc. The combination and distribution of these various troubles may follow a thousand different ways, without relation to anatomical facts, without accordance, even, with physiological laws. If, then, troubles the most bizarre are dependent upon hysteria, it is always well to think of this affection when in the presence of symptoms which are very difficult to explain, and which do not seem related to any definite malady. Hysterical phenomena do not correspond to any organic lesion They are dependent upon a psychical trouble and upon auto-suggestion. The hysterical patient is often cured of his trouble by sudden emotion, especially surprise.—*Archives Médicales Belges*, March, 1902.

Premature Infants.—L. Hahn enumerates various characteristics of the premature infant and discusses the affections to which it is peculiarly liable. The body is small, the skin is thin, soft, and of a uniform redness, often having a yellowish tinge, and transparent. The nails are thin and short. The face is small and the chin pointed. There is general torpor and somnolence, inertia and muscular flaccidity. Ossification of the cranial bones is incomplete. The fontanelles are large. The power of sucking is very weak, and the cry is without vigor, rare and monotonous. Respiration is superficial and irregular. The vesicular murmur is scarcely perceptible. The heart-beat is feeble. Later, premature infants often are afflicted with incontinence of urine, with strabismus, with nystagmus, anæmia and rachitis. Acute gastroenteritis is very common in these infants. Gastrointestinal hemorrhage is not infrequent. Other maladies to which the premature infant is subject, are athrepsia, thrush, jaundice, atelectasis, pneumonia, cyanosis, œdema, uræmia, and various affections of the cord.—*Journal des Praticiens*, March 29, 1902.

Kernig's Sign in Sciatica.—Aldo Magri reports the case of a patient suffering from sciatica who gave to perfection the sign which Kernig claimed to be pathognomonic of meningitis. This sign consists in flexion of the lower extremities assumed by the patients when put in a sitting posture, although when supine they present no contractures of the muscles of the limbs. The position of flexion once taken, it is found that if the trunk is held firmly it is impossible to extend the limbs, no matter how great the force exerted. They can, however, be extended if the trunk is at the same time freely able to bend backward. The author concludes that this sign cannot be pathognomonic of meningitis, since it has been found in persons in whom the meninges are intact.—*La Riforma Medica*, April 9, 1902.

Malignant Pustule Treated by Sclavo's Serum.—Claudio Mancini reports a case in which a cure followed the use of this serum. The remedy seems to act in two different ways, according to the nature of the case: In adynamic cases without fever the serum causes a rise in temperature as an expression of the exertions put forth by the organism for the overcoming of the infection; while in cases in which the strength has been kept up the fever falls as the immediate effect of the increase of the natural defensive power. "By means of the serum," says Sclavo, "we place the organism in about the condition of an animal which has been properly vaccinated, and in which the bacillus of malignant pustule is destroyed at the seat of injection without causing general disturbance or affecting the temperature."—*La Riforma Medica, April* 11, 1902.

Splenectomy and Talma's Operation in Banti's Disease.—I. Tansini describes the case of a woman who was apparently in the last stages of Banti's disease, or splenomegaly with cirrhosis of the liver. The author is convinced that a poison is formed in the spleen which causes the hepatic affection in such cases, for which reason he determined to remove the spleen, in spite of the grave condition of the patient, owing to emaciation, and an enormous amount of ascites, which was quickly reproduced after paracentesis. On the other hand, the blood was in good condition, the patient young, and the liver, in spite of its lesions, had not lost its normal size. He therefore operated. associating splenectomy with Talma's procedure for inducing deviation of the portal circulation. The result was extremely satisfactory; the patient has improved in health and vigor, and the ascites has not been reproduced in even slight degree.—*La Riforma Medica, April* 1, 1902.

Rectal Alimentation in Certain Cases of Typhoid Fever.—A. Claps reports a case of typhoid fever in which every symptom pointed to a fatal termination of the disease. It was found impossible to give nourishment by the mouth, as each attempt brought on violent nervous crises, therefore rectal injections of concentrated broths with somatose, yolk of egg, pepsin, and marsala were given two or three times a day. In about ten days the patient was somewhat improved, so that a few spoonfuls of marsala and of coffee could be given by the mouth. The rectal feeding together with these few spoonfuls of liquid nourishment was continued for twenty-five days, at the end of which time the patient was able to take nourishment in the usual way. Recovery followed. The author reports several other cases, in all of which he is absolutely convinced that the rectal alimentation was the exclusive factor in recovery.—*La Riforma Medica*, April 12, 1902.

Progressive Hemiplegia in a Patient Who Had Had Syphilis; Discovery of Cerebral Glioma at Autopsy.—Tolot reports the case of a patient of thirty years, who, about two years before entering the hospital, had suffered from a prolonged sore throat accompanied by an eruption, and swelling of one of the labia majora. The iodide treatment dispelled these phenomena. The diagnosis of syphilis appeared certain. The patient entered the hospital with a left hemiplegia, the beginning of which had been noticed about four months before. The development had been progressive. There had been no headache, nor any other phenomena of that nature. There was a certain degree of cerebral torpor, and the patient laughed without any cause, but there was no active delirium. The entire left side was affected. The reflexes on each side were exaggerated. It was difficult to make all of the desirable examinations on account of the indocility of the patient. There had been no vomiting. The splanchnic organs revealed nothing abnormal. Iodide of potassium was administered, but without avail. The patient died in about three weeks. At autopsy the left hemisphere appeared normal, but in making sections of the right hemisphere, two neoplasms were discovered of the size of large nuts. They were just under the lenticular nucleus, and on the inner side, at the level of the internal capsule, there was a softening, which had certainly been the cause of the hemiplegia. The new growth was hard and grayish. Although syphilis had not shown itself for two years, one could but think of gumma, especially as the growth was not soft as gliomata are apt to be. Histological examination, however, showed it to be a glioma. This last test alone was able to clear up the diagnosis, as the clinical phenomena were not definite enough to be convincing.—*Lyon Médical*, April 6, 1902.

Archives of Pediatrics, April, 1902.

A Case of Mongolian Imbecility.—Philip P. Barbour reports the case of a negro boy of eleven years, first seen four or five years ago, presenting the typical appearance of Mongolian imbecility. Thyroid treatment was given, but there has been no change in his mental condition. The author thinks it probable that the very rapid growth occurring under treatment may be ascribed to the thyroid medication.

Enlarged Bronchial Lymph Nodes in Children.—Alfred Friedländer says that the child who, without being positively ill, is never very well, who catches cold easily, is subject to "stomach cough," whose digestive functions are not good, whose appetite is capricious, and who does not gain in weight regularly, steadily, even though slowly, is the child upon whom should rest the suspicion of incipient tuberculous adenitis. The essentials of treatment are good food, good air and rest. The special idiosyncrasies of the individual child in respect to food must be studied, but in general terms it may be said that milk, eggs, meat, and bread, with a great abundance of butter, should form the main articles of diet. Excess of starchy foods must be avoided. Fruits, light desserts, and, if there is no constipation, pure stick chocolate may be allowed. Salt baths are advisable, and rest in pure air will be better than too much exercise. Three drugs are of especial value, the iodid of iron, cod liver oil and creosote.

Pyloric Stenosis in Infants.—In the treatment of this affection, E. W. Saunders recommends belladonna, bromides, and chloral to overcome the violent contractions of the pylorus. Opiates should not be given. Treatment of the secondary gastric irritation consists in washing out the stomach and giving it a rest. Rectal feeding should be resorted to from time to time, and for twenty-four or more hours, nothing but water given by the stomach. When food by the mouth is again allowed, the stomach should be washed out occasionally to remove a possible residuum of undigested food. The diet of the child should consist of food which forms no coagulum in the stomach. Whey or peptonized milk, or both, is the best. The end to be accomplished is hypertrophy of the gastric wall without dilatation, hence the quantity of food should not be large. If, in spite of all rational treatment, the child fails, surgical intervention must be advised.

A Note on the Treatment of Gastrointestinal Hemorrhage in the Newly Born by Suprarenal Extract.—L. Emmett Holt was called in consultation in regard to an infant which, when sixteen hours old, began to vomit blood, and continued to do so at intervals of a few mnutes. One grain of saccharated extrac of suprarenal gland was ordered every hour, suspended in water. This was given regularly for six or eight hours, and then the dose was reduced to half the quantity, and the intervals were made longer. Twelve hours after beginning the treatment, the hemorrhages entirely ceased, and did not recur. The entire period of the hemorrhages lasted about thirty hours. By the fifth day the minute hemorrhages beneath the skin had disappeared, as also those on the mucous membrane of the mouth. The subsequent history of the child was uneventful. The solution of the active principle, adrenalin, is possibly to be preferred for internal use to the powder, as one grain of the extract makes rather a large dose for a young infant. The local effect of the extract seems to be proved in the case reported, but whether any marked effect upon general hemorrhages is to be expected by its internal administration is problematical.

Society Reports.

ASSOCIATION OF AMERICAN PHYSICIANS.

Seventeenth Annual Meeting, Held in Washington, D. C., April 29 and 30, 1902.

J. C. WILSON, M.D., OF PHILADELPHIA, President.

FIRST DAY.—TUESDAY, April 29.

The meeting was called to order in the New Willard Hotel at 10.15 A.M., by the President, Dr. J. C. Wilson of Philadelphia.

President's Address on Medical Societies.—Dr. J. C. WILSON in this address gave a sketch of the growth of medical societies of the country. One of the great pioneers was the Massachusetts Medical Society, founded in 1781, while the organization of the American Medical Association in 1847 marked a new era in this movement. The speaker said that association had done a great and good work, and had encouraged its many members to loftier aims, yet, from the very nature of its organization it possessed inherent defects. Being based on political lines, it had frequently been swayed by political influences, and the scientific work had suffered in consequence. Reorganized, as it now was, the routine and political work was more widely separated from the scientific, thus leaving the sections untrammeled, and with its exceedingly valuable journal the future of that association was certainly promising. But because of the defects of medical societies of this class there had sprung up others of a more distinctively scientific character. Among the earlier ones founded on these lines were the American Surgical Association, the American Gynecological Society and the Association of American Physicians.

Comparative Toxicity of Ammonium Compounds: a Study of Autointoxication.—DRS. K. RACHFORD and W. H. CRANE of Cincinnati presented this paper, which was read by Dr. RACHFORD. Their method of investigation consisted in the injection into ordinary house mice of a sufficient quantity of a 5 per cent. solution to produce death. Sodium chloride, nitrate and phosphate were found not to be tonic, while the same ammonia salts of the acid ion were quite tonic. When the tonic dose was not quite sufficient to produce death, the convulsive movements and gasping respiration gradually subsided. The body acids were excreted as ammonia compounds. The ammonium ion when combined with an organic acid lost, for the most part, its toxicity. The ammonium salts of acetic, lactic, sarcolactic and Beta-oxybutyric acid were comparatively non-tonic. The sodium was not drawn upon very much to neutralize the acids in the body except when introduced as medicine. When given medicinally it might be used to protect the ammonia in the tissues. The sodium salts were not directly responsible for any of the symptoms observed in acid intoxications. It was possible that potassium played an important rôle in the neutralization of acids. The potassium ion possesses about half the tonicity of the ammonium ion when combined with the same inorganic acid. The symptoms of potassium poisoning in mice were rapid and labored breathing, terminating in asphyxia.

Acid Ions.—Sulphuric, hydrochloric, nitric and phosphoric acids were comparatively non-toxic, and were found not to act as direct symptom producers in acid intoxications. On the other hand, ammonium chloride, sulphate, phosphate, and nitrate were comparatively toxic, but this was due chiefly to the contained ammonium. In an advanced stage of diabetes mellitus there might be as much as fifteen or twenty grams of betaoxybutyric acid excreted in combination with five grams of ammonia without producing symptoms of ammonia poisoning. When lactic acid was combined with a non-toxic base, such as sodium, the resulting salt was non-toxic; hence it was evident that lactic acid itself was not toxic. When combined with ammonium the toxicity of the ammonia base was diminished Oxalic acid, when combined with ammonia, made a very poisonous salt. Oxalic acid poisoning was largely due to the oxalic acid itself and not to the base with which it was combined. Carbonic acid was an acid ion constantly found in the body. Carbonate of ammonia was converted in the body into urea.

DR. C. A. HERTER of New York thought one was not justified at the present day in attributing to the salts of ammonium any considerable degree of toxicity in the organism. When the salts of ammonium were excreted by the urine in excess, the evidence was that this increased excretion depended primarily upon the presence of acid. No other pathological conditions were known in which the ammonia excretion was increased. So far as he knew, whenever the ammonia excretion was augmented it was due either to the presence of organic acid in excess or to the use of those varieties of food containing phosphorus or sulphur, which, as in the case of milk and meat, were readily oxidized into phosphoric acid and into sulphuric acid respectively. It would be better, he thought, to make these comparisons of the toxicities of the different salts of ammonium.

An Estimate of the Amount of Toxin in the Blood of a Horse Infected with Tetanus.—DRS. B. M. BOLTON and CARL FISCH of St. Louis were the authors of this paper. They had been unable to find the toxin in either the cerebrospinal fluid or the blood of any of the children dying of tetanus in St. Louis. The first horse was inoculated with a small amount of earth containing the tetanus germs, yet there were no signs of infection. At the end of twenty-one days the animal was again inoculated, this time with a larger quantity of the earth. The animal showed no signs of illness until the sixth day. Two days before death the blood contained the greatest quantity of tetanus toxin. In another horse, in which death occurred on the sixteenth day, no tetanus toxin was found in the blood until four days before death. The blood from all the horses was drawn at intervals of twenty-four hours after inoculation, and the amount of toxin in the serum determined by injection into guinea-pigs and other small animals. A great variation in the quantity of toxin was noted.

DR. A. C. ABBOTT said that last winter he had examined the blood of a child dying of tetanus. The blood was collected from the heart within twenty-four hours of death, and injected into white mice, which are very susceptible to tetanus. The injection was entirely negative.

The Etiological Significance of the Acid-Resisting Group of Bacteria, and the Evidence of Their Botanical Relationship to Bacillus Tuberculosis.—DRS. A. C. ABBOTT and N. GILDERSLEEVE presented a communication on this subject. They stated that these organisms were strikingly like tubercle bacilli, but the latter would withstand the effect of acid decolorizers very much longer than any of the members of the group under consideration, and the use of very much stronger acid. They had found that practically the whole group were almost instantly decolorized by the usual acid mixtures employed for decolorization in connection with examinations for tubercle bacilli. This was true not only of the old nitric acid decolorizer, but when the now popular 5 per-cent. solution of sulphuric acid was employed. As a result of their observations, practically all of the characteristics of tubercle had been found, but not all of the characteristics in any one nodule. There was no special evidence of caseation, and none whatever of dissemination, but as the nodule continued to grow, there would ultimately result organization or suppuration—in other words, the picture was less like that of an ordinary tubercle as of the growth of an actinomycotic nature. In the acid-resisting organisms it was the rare exception to find any involvement of the lungs by these nodules, though they were practically uniformly present in the kidneys. In the very earliest stages of their development one might confound these growths with tubercle, but this should not occur in the more advanced stages, either on gross or microscopical examination. They had noticed within these growths certain organisms which were not like the tubercle bacillus. In practically all of these nodules one or more of these actinomyces could be seen. As these acid-resisting organisms were found quite commonly in butter, inoculation experiments were undertaken to determine the significance of these organisms. Six calves received injections of 12½ to 15 c.c. of an opaque suspension of these organisms directly into the jugular vein. The organisms were not recovered from these animals, even as long as twenty to thirty-three days after the inoculation. Injections into the lungs gave equally negative results. There was nothing to indicate that these microorganisms were harmful. With regard to their relation to the tubercle bacillus, it was known that, under certain modes of growth, organisms resembling actinomyces would develop. Animals that had been inoculated with very large numbers of these organisms had, in no instance, given a reaction with tuberculin. The trend of present opinion was that the term "bacillus" was a misnomer, not only for the so-called tubercle bacillus, but for the acid-resisting organisms and the actinomyces, and that they should all be called actinomyces.

Dr. S. Flexner of Philadelphia said that he had had an opportunity of examining the specimens made by Dr. Abbott, and there could be no doubt that the nodular growths referred to were not true tubercles. They contained not infrequently giant cells, but these were of the type generally regarded as foreign body giant cells, and not the giant cells typical of tuberculosis. The whole structure of the nodule reminded one of granulation tissue. A few years ago he had studied the lesions produced by the pathogenic yeasts, and the growths formed by those organisms were pseudo-tubercles, and closely resembled the nodules under discussion in this paper. The absence of softening and of fibrous tissue around the lesion in actinomycotic tubercle should serve to distinguish it from the true tubercle.

Dr. Abbott said, in reply to questions, that the only certain way to get results with animals was to select small animals and make injections directly into the circulation, and not merely under the skin. They had found it so easy to differentiate these acid-resisting organisms by the old and well-known methods of decolorization that they had not extended their observations to other and newer modes of preparation.

Histological Alterations of Cytotoxinic Intoxication.—Dr. Simon Flexner of Philadelphia was the author of this paper. He called attention to the fact that it had been demonstrated by Bordet, Ehrlich, Metchnikoff and others that many kinds of body cells when injected into animals of another species—alien animals—gave rise to the production of cytotoxins, agreeing in many physiological properties with bacterial and other toxins. They seemed to act specifically upon cells of the kind from which they had been derived. The injurious action of these cytotoxins upon cells had been studied as yet very little histologically. It had occurred to the author that new light might be thrown upon this interesting subject by an investigation of their action upon the lymphatic system, as the lymphatic organs seemed peculiarly well adapted for demonstrating lesions of a tonic nature. For many months he had experimented on guinea-pigs, using the rabbit as a source of toxin, but had found that rabbits are so exceedingly susceptible to infection that these observations were conducted with great difficulty. More recently he had experimented with geese. The lesions produced in the lymphatic glands were general throughout the body, and they agreed quite exactly with the lesions of such an infection—for example, as experimental diphtheria. The general swelling of the lymphatic glands and the changes in the centers of these glands were almost exactly similar in the two classes of experiments. Apparently the non-lymphatic organs were not attacked. He had kept under observation for some time animals in which these toxins had been produced by introducing the cells of one animal into other animals of the same species. It was possible that such an infection would throw light upon our knowledge of various sclerotic processes.

The speaker said that some years ago the subject of terminal infection had been presented by him to this association. The question had been raised as to whether any changes took place in the "receptor" and the "complement." This work had been carried on during the past year with some interesting results. In these terminal infections it was found that there was, in the great majority of cases, a marked reduction in the "complement," or an absence of it, so far as demonstrable from its action on the typhoid bacillus and the colon bacillus. Susceptibility to bacteria meant, therefore, that for some reason or other, the means for destruction had disappeared.

Dr. A. C. Abbott said that in animals which had been given alcohol for three or four weeks there had been noted a marked loss of weight and marked interference with nutrition. There was also a reduction in the complementary substance of from 15 to 20 per cent. This he mentioned because of its bearing on the statement made by Dr. Flexner regarding terminal infection.

A Study of Bacterial Cells.—Dr. V. C. Vaughan of Ann Arbor, Mich., presented in this paper a review of the following investigations, which had been carried on, for the most part, in his laboratory: "The Toxicity of the Cell of the Colon Bacillus and the Production of Immunity with the Colon Toxin," by L. M. Gelston and C. E. Marshall; "The Chemistry of the Colon Cell," by Mary F. Leach; "The Chemistry of Sarcines," by May Wheeler (Rockefeller scholar in Hygiene); "The Toxin of the Cell of the Diphtheria Bacillus," by L. M. Gelston; "The Pigments of Certain Bacteria," by A. J. Detweiler; "The Action of the Sarcines and the Micrococcus Prodigiosus on Animals," by A. J. Detweiler; "The Chemistry of the Anthrax Bacillus," by J. Walter Vaughan. In this work great help had been derived from the use of the tank which he had devised for growing germs on a very large scale. This same process had enabled him to study and collect the pigments formed by certain bacteria.

Dr. Vaughan exhibited three handkerchiefs, two of which had been beautifully dyed by the pigments from the bacillus prodigiosus. An extended series of experiments in immunization had been carried out on animals. From immunized rabbits he had obtained a serum which would immunize other rabbits. The great desire among bacteriological chemists had been to find the antitoxin of anthrax. Dr. Vaughan exhibited a powder composed of the broken-down cellular elements of anthrax. This powder, in doses of 200 to 250 milligrams, would kill a guinea-pig weighing 250 milligrams.

Dr. Vaughan then went on to review the theory of Ehrlich, and to show that it might be replaced, in part at least, by another theory, which would explain more satisfactorily the results obtained. The work already done indicated that bacterial cellular toxins contain two or more toxic groups, one of which is much more readily split off than the other. This explained the decrease in toxicity, which had been generally observed in solutions of bacterial toxins on standing. The work also suggested a new theory concerning the action of antitoxins. The author held that this work might modify our conceptions of what constituted life in its unicellular manifestations.

Some Effects of Tobacco on the Tissues of Rabbits.—Dr. I. Adler of New York presented this preliminary communication. The experiments upon which the paper was based were still in progress, and were far from being completed. The animals were kept in box stalls, the floors of which were covered with excelsior, as the rabbits would not eat this. Each rabbit was fed on fresh cabbage, mixed with varying quantities of infusion of tobacco. This infusion was made from very cheap cigars. At first each rabbit received daily a pint of infusion made from two cigars, but gradually this pint of infusion was made to represent the strength of three, five, six and even eight cigars. He now had under observation one rabbit which had been fed on tobacco infusion for six months, it was fat and apparently well. None of the animals had died under this treatment. After feeding in this way for three weeks none of the organs, in the rabbits then killed, was found to be diseased. An animal killed after two months and a half of such feeding, and while apparently in perfect health, showed no pathological changes in any organ except the liver. This organ was larger and paler than normal, and felt gritty when cut with a knife. The lobulation was very marked, and there was a decided interlobular proliferation following the course of the portal vessels and bile ducts. Not the slighest change in the parenchyma could be detected. A rabbit killed after four months presented the same general appearance, though the liver was harder and more granular. Microscopical examination showed the interlobular process to be more advanced. These experiments, though incomplete, seemed to bring out at least one fact, *i. e.* that one tonic substance, alcohol, acting with extreme chronicity, exerted an effect upon the interstitial tissues, at least in the early stages, without affecting the parenchyma of the liver, or being associated with lesions of the other organs.

Dr. J. G. Adami of Montreal thought there was something paradoxical in these observations. It was an established fact that the so-called proliferative bile ducts in cirrhosis were not true bile ducts, but modified and altered liver cells at the edge of the lobules. Dr. Adler had admitted that there was proliferation of the bile ducts, and as this was really the result of change in the liver cells he could not wholly accept the author's conclusions.

Dr. C. A. Herter of New York said he would be loath to transfer the results of these experiments on animals to the human subject on account of the very large doses employed.

Dr. Adler said that he had been misunderstood. He had not attempted at all to produce cirrhosis of the liver, nor to draw any analogy between these observations and the processes going on in the human subject. Whether the changes he observed were true bile-duct proliferations or not, he would only say that he would be happy to show his microscope slides to Dr. Adami. He could vouch for the fact that the liver cells had not been at all affected. He wished again to say that the paper was not at all upon liver cirrhosis.

A Case of Hæmatoporphyrinuria.—Drs. J. Tyson and A. C. Crofton of Philadelphia reported this case. The patient was a woman of fifty years, who had been taking from twenty to sixty grains of sulphonal every night for several years in order to produce sleep. Last November she had consulted her physician because of severe abdominal pain and tympanites. She had been first seen by Dr. Tyson on December 7, and at that time, in addition to the symptoms just noted, there were dry tongue and a feeble frequent pulse. An examination of the urine in the sick room showed it to be a dark red fluid. It was carefully studied by Dr. Crofton. Dr. Tyson said that sulphonal had been introduced into practice in 1888, and that since that time there had been reported about one hundred cases of hæmatoporphyrinuria. Four specimens of this patient's urine had been examined on the four days following the cessation of the use of sulphonal. None of the specimens contained bile pigment or bile sugar. The fourth contained only a trace of hæmatoporphyrin, and the urine was of nearly normal color. The presence of hæmatoporphyrin had been detected both by chemical and spectroscopic tests. It was estimated that about one-seventeenth of the hæmoglobin in the body of this patient had been destroyed and excreted in the form of hæmatoporphyrin. It was natural, therefore, that this great loss should have given rise to a severe grade of anæmia.

Dr. C. F. Withington of Boston reported a similar case, occurring in a woman of thirty-eight. Her urine was known to have been normal previously. Trional was given in doses of thirty grains and resulted in scanty urine and hæmatoporphyrinuria, the patient dying a few days later.

Dr. M. Allen Starr of New York said that his clinical assistant had reported a case in which trional had caused both hæmatoporphyrinuria and multiple neuritis.

Pneumococcic Arthritis.—Dr. J. B. Herrick of Chicago presented this paper. He said that this complication was relatively rare, being present about once in eight hundred cases of pneumonia. Up to 1901 only thirty-one cases had been reported, but to this number he was able to add several others, including three of his own. It had been noted by several observers that traumatism and previous disease of the joints, such as gout, were predisposing causes. Pneumococcic arthritis often did not develop until fifteen or twenty days after the crisis. Experimental work corresponded well with this clinical fact, for it had been noted experimentally that pneumococcic arthritis was most apt to occur when attenuated cultures of the pneumococcus were used or the animals were relatively immune. The resemblance of pneumococcic to gonorrhœal arthritis was striking. In both, the larger joints, especially the knee, were involved, and the affection was usually monoarticular. The prognosis was generally bad because of the severity of the primary pneumonia or of the accompanying bacteriæmia, or because some other vial organ was simultaneously affected. The treatment was necessarily surgical in most instances, but he would suggest that a radical operation was not always necessary, as there was a certain tendency toward spontaneous recovery or recovery after aspiration or simple incision.

Dr. William Osler of Baltimore said that there were three groups of cases of pneumococcic arthritis, viz.: (1) Those of localized arthritis without other lesions; (2) Those following or associated with pneumonia, and (3) Those in which the arthritis is associated with a general pneumococcus septicæmia. A case was reported in which several joints were affected and turbid fluid was withdrawn by exploratory lumbar puncture. This fluid, as well as the blood, contained numerous diplococci. The autopsy showed meningitis, along with suppurative arthritis of the knees and ankles.

Dr. J. H. Musser of Philadelphia reported a similar case.

The Pathology of Herpes Labialis and of Herpes Zoster Occurring in Acute Croupous Pneumonia.—Dr. W. T. Howard, Jr., of Cleveland, O., was the author of this paper. He reported two illustrative cases. Histological study of the Gasserian ganglia showed hemorrhage into the ganglion on one side, with cellular proliferation, compression and destruction of some of the ganglion cells. In the second case there was a marked herpes zoster in the sixth dorsal region on the left side. Sections of the left eleventh dorsal region at autopsy showed congestion of and hemorrhage into its capsule. In one small area were a few disintegrated ganglion cells with slight round-cell infiltration. Degenerations could not be demonstrated in the nerve, posterior roots or spinal cord. The author concluded that, as the lesions in the ganglion and in the skin in cases of herpes of the nose and lips, and of herpes zoster occurring in pneumonia, were the same, and as they had the same pathology as ordinary herpes zoster, it was probable that the various forms of herpes are identical.

Dr. William H. Thomson of New York remarked that his clinical experience indicated that the occurrence of herpes labialis was of favorable import.

A Case of Hodgkin's Disease with Recurrent Fever.—Dr. H. F. Vickery of Boston reported this case. The patient was a girl of nineteen, who was under observation seventy-eight days and who presented six febrile periods, of six to eight days, with febrile intervals of about the same length. There was no reaction to tuberculin or other distinct evidence of tuberculosis. The diazo reaction was absent at first, but subsequently became positive. One of the glands excised presented the structure of a mixed-cell sarcoma. Death occurred in coma. No autopsy was obtainable.

Dr. M. Allen Starr of New York said that although Dr. Musser had reported last year a large number of cases, this disease was not generally recognized by the profession. Last November he had been called in consultation by an excellent practitioner to see a patient who had been under his care for some time with some nervous symptoms. The patient was a woman of thirty-six, of tuberculous family history. In 1899 Dr. W. T. Bull had removed a number of glands from the neck, which, on examination, proved to be tuberculous. In May, 1900, she had begun to suffer with febrile attacks, lasting from seven to ten days. These attacks were followed by a non-febrile period lasting from ten to forty days. It was thought that physical exercise or excitement, or painful menstruation, was responsible for these attacks of fever. They continued up to the time of his seeing her in November, 1901. In October Dr. Bull had removed some glands from the other side of the neck. These had been examined by a careful pathologist, who reported only a connective tissue hyperplasia. Examination of the patient showed a slight splenic enlargement, but nothing was found in the lungs, or any evidence of enlargement of the glands back of the sternum. On December 24, when the temperature was 102° F., the hæmoglobin was 90 per cent. The red blood cells were 4,040,000, and the white cells 5,800.

Dr. Francis P. Kinnicutt of New York said that he had seen this patient last February. Since February 15 there had been three periods of pyrexia of ten to thirteen days' duration, and three intervals of five to eight days. The temperature rose slowly, as in typhoid fever, and descended slowly. The spleen was distinctly enlarged, hard, and more or less nodulated. The liver was enlarged, and from the dulness there was apparently an enlargement of the mediastinal glands. The blood count was very much the same as in the case reported by Dr. Vickery. There were two views regarding lymphadenoma; one that it was a distinct infection, the organism of which had not yet been discovered; the other, that a number of diseases, clinically the same, but pathologically different, had been grouped together under this name.

Dr. J. H. Musser of Philadelphia said that the large proportion of cases called Hodgkin's disease were really examples of tubercular adenitis. Unless inoculation experiments were made, it was hardly right to exclude tuberculosis as a cause. The term, pseudoleukemia, was no more satisfactory than to call all diseases having fever, but in which there is an absence of the features of typhoid fever, pseudotyphoid fever.

Dr. William Osler of Baltimore referred to a case which clinically appeared to be Hodgkin's disease, but which proved to be lymphoma. A differentiation could be readily made by histological examination.

Splenic Anæmia and Its Varieties.—Dr. William Osler of Baltimore read this paper. He said that many of the cases had lasted from ten to twelve years. The enlarged spleen was the most marked feature on physical examination. In some cases the size of the spleen had remained unchanged for a number of years. In none of his cases had the lymph nodes been enlarged. The blood changes were those of a chloroanæmia. In some of the cases the red cells had been above four million, and the hæmoglobin below 30 per cent. There had been an exceedingly low leucocyte count in six or eight of the cases. In ten hemorrhages from the stomach had been marked and a characteristic feature, though this was much larger than the usual percentage. In some instances the hemorrhages had recurred at intervals of a few months for a period of many years. When it was remembered that at least 40 per cent. of the blood from the stomach was discharged into the portal vein, it was not a matter of great surprise that hemorrhages should frequently come from the stomach. Pigmentation of the skin had occurred in seven of his cases. In the late stages there had been a change in the size of the liver, sometimes an increase and sometimes a diminution in size. Jaundice might be an early symptom, and was not necessarily associated with cirrhosis of the liver. Recurrent attacks of anæmia and jaundice and ascites had marked a recent case of this disease. The anatomical changes had been stated to be characteristic, but in only one of the three spleens that he had examined had there been present the changes supposed to be characteristic of the disease. At the Johns Hopkins Hospital they had operated upon three cases, two of which had terminated fatally. The only point in favor of the view that the spleen might have something to do with this disease was the fact that a certain number of cases had recovered after the removal of the spleen. He was inclined to think that the etiology was unknown, and that the enlargement of the spleen was only one feature. He had received from members of this association reports of forty-two cases, showing that the disease was not so very uncommon.

Dr. J. H. Musser of Philadelphia reported two cases, one of them having been under observation seven years.

Dr. R. C. Cabot of Boston reported eight cases, occuring in adults. All of them had enlargement of the spleen, while in none were the lymph nodes enlarged. Three out of the eight had profuse vomiting of blood. In two cases there was enlargement of the liver, and one of these had ascites as well. None of the cases showed any pigmentation of the skin. There were also two cases of polycythæmia associated with enlargement of the spleen. The speaker said he saw no reason for the term splenic anæmia. All of his cases had been chronic, but in very few of them had it been possible to fix the beginning of the disease. The blood examinations had not been characteristic. There was just as low a percentage of hæmoglobin in other cases; on the other hand, the extremely low white count noticed in four out of the eight cases was peculiar, but not enough to justify looking upon this as a special kind of anæmia. There were many cases of secondary anæmia of unknown cause, and also many cases of enlargement of the spleen of unknown origin. In some of the cases the association of enlargement of the spleen with leukæmia was probably only a coincidence.

Drs. Billings and Stengel also reported cases.

Dr. Stiles of the Department of Agriculture said that he had been studying lymphatic disease in animals. In one outbreak occurring among cattle he had been able to trace it to a parasitic infection of the walls of the fourth stomach. The parasites studded the wall so thickly as to suggest trichinosis. He had been struck by the fact that, in the cases so far reported to-day, nothing had been said about any examinations having been made of the gastrointestinal tract. He would suggest that in obscure cases of anæmia careful search should be made for intestinal infections. He had in his possession specimens of parasitic infection of this kind, coming from Virginia, Texas, and Porto Rico.

Dr. William H. Thomson of New York said that in his own experience with these cases of enlarged spleen the autopsies had yielded extremely varied results. If the function of the spleen was so subordinate that this organ could be removed without sacrificing the life of the person, it was hardly reasonable to suppose that primary disease of the spleen should give rise to such profound constitutional changes.

A Case of Albuminuria Associated with Pernicious Anæmia.—Dr. H. F. Vickery of Boston reported this case. The patient was a man of forty-seven with albumosuria and the general course of a progressive anæmia. However, there were only two megaloblasts present to seventeen normoblasts. There were no symptoms or external evidence of bone disease, and an *x*-ray examination was negative. The case terminated rather suddenly by an attack of syncope. No post mortem was obtained.

Dr. J. H. Musser reported a similar case, in which the chief feature of interest was an extraordinary fatty degeneration of the muscles.

Dr. A. Jacobi of New York said that in grave anæmias, and particularly in pernicious anæmia, albuminuria was not at all uncommon.

Angiomyositis.—Dr. W. S. Thayer of Baltimore read this paper, reporting a case in which there were repeated attacks of œdema and hemorrhage into the different muscles. The case apparently corresponded with those classified by Lorenz as polymyositis hæmorrhagica, the angiomyositis of Lepine. The etiology of polymyositis was apparently yet in doubt. The case reported by him occurred in a man of thirty-four years. The first thing noticed by the patient was a sudden snapping in the muscles of the arm while lifting. This was followed by pain and a discoloration, as if a vein had burst. This cleared up, but in the course of a few months these signs and symptoms recurred without apparent cause. Last fall a similar condition had suddenly developed on the dorsum of the left foot. With the exception of these attacks the man had been perfectly well. In the attack in which he had been seen by Dr. Thayer the region of the biceps muscle on the arm was the seat of discoloration, œdema and dull pain. There was no great tenderness on deep pressure. On incising what appeared to be muscle there had escaped about 150 c.c. of blood-stained fluid. Sections from the biceps muscle were exhibited under the microscope. The history did not favor the theory of the infectious origin of this myositis.

Dr. R. C. Cabot asked what was the reason for believing that this was a myositis.

Dr. A. Jacobi said that the simple form of myositis was known to be of traumatic origin—for example, those cases occurring in the newly born in the sternomastoid muscle. Again, traumatic hæmatoma of this muscle was sometimes seen in boys who had been flying kites. A multiple myositis like the one described in the paper was more commonly seen by general practitioners than by hospital physicians in cases of purpura. Purpura appeared to him to be a microbic disease, and in many cases of this affection there was a marked sensitiveness of the muscles, lasting sometimes for weeks or months. He thought most of these cases of myositis should be considered as only a part of the purpura.

Dr. Thayer said that there must be some doubt as to the proper classification of a case of the kind he had reported, because there could be no question that in the pectoralis major and the deltoid there was hemorrhage into the muscle substance associated with swelling and slight tenderness, and that these were followed by subsequent atrophy. The history would suggest some form of angioneurotic œdema or some disorder of the purpuric group.

A Report of the Cases of Thermic Fever Treated at the Pennsylvania Hospital in the Summer of 1901.—Drs. M. J. Lewis and F. A. Packard of Philadelphia presented this report. There were thirty-one women and sixty men, and in 50 per cent. of all the cases there was an alcoholic history. In many cases abstraction of blood had been practised, the quantity withdrawn varying from seven to twenty ounces. In no instance did it do any harm, and in many instances it was followed by marked improvement. Saline infusion into the median basilic vein proved useful in some instances.

Dr. Frank Billings of Chicago cited a case in which the temperature, on admission to hospital, had been too high to be measured by the ordinary clinical thermometer. After a cold bath the man had gone into collapse, but had been revived, and then the temperature had quickly risen from 100° F. to 110°. The man had eventually recovered.

Dr. J. H. Musser said that of six cases, having a temperature between 109° and 115° F., two recovered, and in these saline solution had been injected.

Dr. F. A. Packard of Philadelphia said it was the opinion of all of those who had seen the saline solution used that more persons had been saved by this procedure than would have been saved without it.

A Clinical and Experimental Investigation of the Value of Gelatin as a Hæmostatic.—Drs. A. Stengel and D. L. Edsall of Philadelphia presented this communication. The authors stated that, from their experiments with gelatin in typhoid fever, they were of the opinion that more grave cases of this disease had recovered than would have been expected to recover without the gelatin, and that the experiments should encourage more extensive observations in this field. Their studies had been undertaken with the object of ascertaining whether the action of gelatin was because of its acidity, because of its calcium content, because of its ability to agglutinate the corpuscles, or because of its effect in slowing the peripheral circulation. The direct injection of gelatin into animals did not show any tendency of the blood to coagulate, but all such experiments had shown a tendency to coagulation in small vessels and to hemorrhages in the lungs and intestinal tract. Their own experiments had revealed the production of an intense congestion at the base of the lung. They had proved that gelatin was normally an acid substance. Used with salt solution, gelatin was found to cause rapid and striking agglutination of the blood-corpuscles and the formation of small bodies resembling blood plaques. The viscosity of the gelatin itself seemed to be largely responsible for these results, as a similar action was observed when tragacanth was substituted for the gelatin. Ferric chloride, cuprous sulphate, alum and zinc sulphate produced a similar effect on the blood-corpuscles, while weak solutions of ammonium chloride, calcium chloride, bichloride of mercury and chloroform water had no such effect. None of the cases studied showed any increase of already existing kidney disease, or any development of such disease; nevertheless gelatin and similar substances were excreted as such—that is, as foreign bodies. No difficulty was experienced in feeding gelatin to the typhoid patients, except that it sometimes caused nausea when persisted in in considerable quantities.

Dr. M. H. Fussell of Philadelphia said that he had only used gelatin in one case of hemorrhage in typhoid. The hemorrhages had lasted for three days and the patient was greatly exhausted thereby. He fed the gelatin to the patient, and also injected it under the skin. Within a very few hours after beginning the use of the gelatin the hemorrhage had stopped. Each injection of gelatin under the skin was followed by a slough of the integument, about one and a half to two inches in diameter.

Dr. George L. Peabody of New York said that he had experimented with a 1 per cent. solution of gelatin, and had found that if the solution were not thoroughly sterilized it would produce redness and pain, but that this would quickly disappear under the use of an ice bag. When the solution was sterile it caused no such trouble.

Dr. S. J. Meltzer of New York said that in cases of typhoid fever subcutaneous injections or other slight injuries frequently led to local infection, even though done under aseptic precautions.

Dr. **Frank Billings** of Chicago said that after having tried the gelatin injections in typhoid fever for the control of hemorrhage he had given it up because of the great pain caused by the injections. He had always used sterile solutions, and had observed no sloughing. Moreover, the results of such gelatin injections had been so variable as to lead him to think that the good results occasionally noted were largely coincidences. A colleague had been studying the coagulability of the blood, and had found that if one or two grams of chloride of calcium were given by mouth two or three times a day the coagulability of the blood would be markedly modified in the course of a few weeks. He had made use of this medication for the purpose of bringing a patient with gallstones into proper condition to allow of operation without danger from excessive hemorrhage. He had done this repeatedly, and had been profoundly impressed with the power of chloride of calcium to increase the coagulability of the blood.

Dr. **Tyson** said he had used gelatin in quite a number of cases of typhoid fever, and had found it impossible to draw any conclusions as to its value. On the other hand, he had practised injections of gelatin in a case of aneurysm for fifty days in succession, using 10 c.c. at a time, without producing any unpleasant or other local effects. He had been surprised that it could be kept up so long without harmful results, although it certainly caused moderate pain.

Dr. **Stengel** said that several cases had been reported of tetanus following the injection of gelatin, but this could hardly arise from the use of the gelatin as such, because it was well known that tetanus bacilli did not grow readily on gelatin. It was an interesting question to decide whether gelatin possessed any agglutinating power other than what it derived from its calcium content. As calcium salts were not readily or rapidly absorbed from the intestinal tract they should, on theoretical grounds, be used hypodermically; nevertheless, they could be used with perceptible effect by the mouth in moderate doses, three times a day. The injections were certainly painful, but he had never seen any sloughing, having been careful always to make use of sterile solutions.

Hæmolymph Glands—A Lantern Slide Demonstration.—Dr. **Simon Flexner**, in the unavoidable absence of Dr. A. S. **Warthin**, presented Dr. Warthin's lantern slides. He said that, since 1890, four or five descriptions of the hæmolymph glands had been published. Apparently the pathology of these glands had been entirely uninvestigated until Dr. Warthin had undertaken their study. This investigator's attention had been called to the glands first by the presence in the prevertebral fat of man of certain glands, which were redder than normal and different in structure from the ordinary lymph glands. Dr. Warthin then took the first eighty autopsies available, and searched for these glands. About half of these were studied in the region of the vertebral column, the mesentery and the region of the kidney. In the other cases a search for these glands was also made in the mediastinum and about the neck. He found that they were extremely numerous, and of all sizes, some being scarcely visible, and others quite large enough to be readily seen microscopically. It was difficult, however, to distinguish them from ordinary lymph glands, because after death they were deprived of their blood. Dr. Warthin then studied them in sheep, where they are very prominent and very numerous. In the human subject there were about one of these to ten of the ordinary lymphatic glands. Since then the investigation had been directed toward the elucidation of their structure. He had discovered two kinds, one of which the spleen was the type, and the other of which the marrow might be considered the type. In the two extremes the spleen and the marrow were quite closely reproduced. Two genera forms were described, one in which the glands were rounded, and the other in which the glands were flattened. In the former there was a well-developed capsule. The elongated glands were more likely to be of the marrow type, while the globular ones were of the splenic type. The capsule penetrates the interior of the gland, constituting the trabecular network. Perhaps the chief histological distinction was the presence of blood where, in the other glands, lymph was to be found. These glands are made up of reticulated or so-called adenoid tissue, and the spaces are filled with blood containing, perhaps, an excess of white cells. It was doubtful whether the sinuses in the spleen all connect with a closed vascular system, and this point was likewise obscure in the hæmolymph glands. The collections of lymphoid cells in these glands had been compared with the lymphoid nodule of the spleen, but it was only exceptionally, as Dr. Warthin had shown, that there was a central vessel corresponding with the vessel of the Malpighian body. It was found that the large cells filled themselves with red corpuscles, very much as was observed in the spleen. In addition, pigment was found, either free or contained in phagocytes. Dr. Warthin was of the opinion that, under normal conditions, they had nothing to do with blood formation, although under pathological conditions it was probably that they might act vicariously in connection with blood formation.

Mitosis in the Circulating Blood.—Dr. **Barnes** presented, on behalf of Dr. **George Dock** of Ann Arbor, a series of slides illustrating this subject.

Report of the Presence of Anguillula Aceti in the Urine of Two Patients Mistaken for Strongyloides Intestinalis.—Dr. **Frank Billings** and Dr. J. L. **Miller** of Chicago made this report, and exhibited lantern slides. The case had first been regarded as one of filaria sanguinis hominis, but repeated examinations of the blood, made at night, failed to show the presence of filaria, and then it was discovered that the worm was too large to belong to this group. It was finally identified as an intestinal parasite, known as strongyloides intestinalis.

Dr. **Stiles** of Washington, D. C., said that the report failed to state whether the urine had been drawn by catheter or had been sent to the physician in a bottle that had contained vinegar. He had met with a similar case, in which the same erroneous diagnosis of filaria sanguinis hominis had been made. On taking a specimen of the urine by catheter none of these worms was found, but they were present in the vinegar used in the patient's house. There was just a bare possibility that the worm had been taken into the mouth in vinegar and had wandered from the stomach to the bladder, but the doctrine of chances made this view exceedingly improbable. He thought it was not impossible that in Dr. Billings' male patient the worm had been transmitted from the female, just as occurs in the case of the trichomonas vaginalis. It was well to recollect in this connection that some women were in the habit of endeavoring to prevent conception by the use of douches containing vinegar. The two spicules found on the worms in Dr. Billings' case marked the worm as the ordinary vinegar eel. The two cases reported to-night, and the one he had referred to as having occurred in Washington, were the only ones of the kind with which he was familiar, though various simliar worms had been found in the urine. He had recently published a key by which the differential diagnosis of these worms in the urine could be readily made.

Dr. A. **Jacobi** of New York said that in a girl of thirteen he had at one time found in two specimens a peculiar worm. He had examined many specimens of the urine since that time, but only on these two occasions had it been found with an interval of about four weeks.

Vaccine Bodies in Cases of Smallpox.—Dr. **James Ewing** of New York spoke of the vaccine bodies which he had studied carefully during the past year, and dwelt particularly on a special form lying in vacuoles in the cells and exhibiting peculiar staining properties. His remarks were illustrated by lantern slides, and were presented as an introduction to a paper on smallpox, to be presented to the association at a later session. The number of vaccine bodies was found to bear a pretty close relation to the severity of the hemorrhagic lesion. His study of this subject had comprised about thirty cases, and it was not until he had reached the twenty-eighth case, one of exceedingly severe hemorrhagic smallpox, that he discovered that red cells enclosed in epithelial cells might undergo transformations which rendered them indistinguishable from vaccine bodies. The typical vaccine body, treated by ordinary methods, always picked out the basic dyes, but he had found another type of vaccine bodies taking by preference the basic dyes, but capable of being stained by acid dyes also. In specimens hardened with formalin it was almost impossible to find these vaccine bodies, but if hardened with formalin-Muller solution, and stained with eosin, they could be readily demonstrated.

In answer to a question from Dr. W. H. Welch, Dr. Ewing said that he had not made any study of the vaccine bodies in the cornea of a rabbit, because his attempts to inoculate the cornea had, for some unexplained reason, been unsuccessful, although the same vaccine virus had readily produced typical lesions when inoculated into the skin of the rabbit.

SECOND DAY—WEDNESDAY, APRIL 30.

The Prognosis of Pleurisy with Effusion.—Dr. R. C. Cabot of Boston presented this communication, which was based on a study of 300 cases. He had experienced the usual difficulties in tracing the cases, only one-tenth of them having been found by letter. Then, by calling at the original addresses and making inquiries of the neighbors, many more had been traced. Some help had been derived from the records of the department of vital statistics, and from those of the overseer of the poor. He thought this method of tracing patients very useful and satisfactory. He had traced 152 cases. of this number eighty had remained in sound health. Those in sound health for fifteen to twenty-one years were twenty-one; those for ten to fifteen years, twenty-three; those for five to ten years, thirty-six; in other words, 80 per cent. of the cases of uncomplicated serous pleurisy were in good health for over five years, and 90 per cent. in fair health for a period of from two to five years after the pleurisy. Fifteen per cent. of the cases had developed sooner or later a demonstrable tuberculosis of the lungs, but in only 3 per cent. had tuberculosis manifested itself within two years after the pleural effusion. The attack of tuberculosis in these cases was, as a rule, mild and of slow progress, death not occurring for five years or more after the pleurisy in half of the cases developing tuberculosis. Nevertheless a very rapid form of tuberculosis might develop many years after the pleurisy. There had been in this series two such cases developing ten or fifteen years after the pleurisy. A study of the clinical records of the whole group showed that of those remaining in perfect health for five years or more only one-fourth gave a family or past history of tuberculosis, while of those known to have become tuberculosis, two-thirds had a marked family history of that disease. A careful history was, therefore, of great importance in making the prognosis of a case of pleural effusion. On the other hand, the physical signs in the course of convalescence from the pleurisy was in no respect different in the cases in which tuberculosis subsequently developed from those which remained in good health. The history was, therefore, of greater importance than the physical signs. Reaccumulation of fluid immediately after tapping had been rare, occurring in only 1.3 per cent. of the series. Among the fourteen patients who, after recovering from the pleurisy, died of some other disease, not one developed a disease which could be reasonably considered as connected with the pleurisy. In conclusion, the speaker called attention to the fact that no attempt had been made to discover what percentage of the cases were due to tuberculosis. So far as his statistics went, they might all have been of tuberculous origin. He only desired to call attention to the fact that the outlook was bright in cases of pleurisy not having a family history of tuberculosis, and that even if pulmonary tuberculosis developed subsequently, the type of the disease was unusually mild.

Dr. William Osler said that these figures were very much more favorable than those formerly given by Dr. Bowditch.

Dr. Thomas Harris of Manchester, England, said that he had been interested in this paper because he had been under the impression that the prognosis in simple serous pleurisy was much graver than these figures would lead us to believe; certainly the statistics in England were very much more unfavorable. Of course, these cases just studied were mixed cases, and it was difficult to separate the tubercular from the ones which were perhaps not tubercular. In England pleurisy was looked upon with suspicion by the large life insurance companies, who made it a rule not to accept as insurance risks any person who had been ill with pleurisy within five years. In view of the figures just presented it would seem probable that this rule was too severe and too much in favor of the insurance companies.

Dr. A. Jacobi said it was exceedingly common to find in general practice persons presenting the physical signs of a pleurisy that had probably occurred many years previously. This would seem to support the accuracy of the encouraging statistics presented in this paper.

Dr. V. C. Vaughan said that these figures seemed to him to be a little too rosy. There were 300 cases, only 152 of which had been traced. On account of the long period covered by the investigation, he thought it reasonable to assume that most of the 148 cases that had not been traced were dead.

Dr. Cabot, in closing, said that he had examined the records of one thousand autopsies at the Massachusetts General Hospital, and had compared them with the clinical histories. This showed that in 25 per cent. there was an obliterating pleurisy without any clinical record; hence it was reasonable to assume that a large number of persons ill with pleurisy recover. The deaths had been pretty evenly distributed through the two decades, as had also the cases that had been traced; hence there was no good ground for assuming that most or all of the cases that he had failed to trace had terminated fatally.

A Clinical Study of Cases of Empyema Based on the Bacteriological Findings in the Exudate.—Drs. C. F. Withington of Boston presented this communication, which was based upon 135 cases of empyema occurring in the Boston City Hospital in the last six years. There were twenty-eight cases giving pure cultures of the diplococcus lanceolatus, of which eight died; there were thirty-five cases of streptococcus infection, with nine deaths. The staphylococcus cases showed a higher mortallity than the streptococus cases. The average time at which pus had been detected after the onset of the pneumonia was tweny-five days. Tuberculosis was known to be present in about twenty cases. Operation was done in 155 cases. Of the twenty non-operative cases, ten died. Some of the cases were unsuitable for operation, because they were either recovering or were too far advanced. About one-half of the operative cases were irrigated one or more times after the operation. The mortality in the whole series of cases was 29 per cent. The mortality in the streptococcus cases alone was twenty-six; in the cases of combined infection with the streptococcus and the lanceolate coccus, 11 per cent.; in the cases having the streptococcus associated with other organisms than the lanceolate coccus, 77 per cent. and in the pure lanceolate coccus cases, 28 per cent.

Dr. **William H. Welch** spoke of the difficulty sometimes experienced in determining whether the empyema was due to the streptococcus or the diplococcus lanceolatus. There was an intermediate group, in which there was a short chain, making it impossible to make a positive diagnosis without a careful morphological examination, together with animal inoculations. A limited experience with the methods employed by Dr. Hiss in the laboratory of Dr. Prudden had led him to think that these were of great value in this connection.

Dr. **T. Mitchell Prudden** of New York said that he had come to regard many of the earlier statistics as not very reliable so far as they endeavored to distinguish between the lanceolate coccus and the streptococcus.

Dr. **Henry Koplik** of New York said he was surprised at the large proportion of metapneumonic cases among the adults. He thought it possible that in some of the streptococcus cases, if the fluid had been centrifuged, tubercle bacilli would have been found. In fully 90 per cent. of his own cases of empyema in children the disease had been metapneumonic.

Dr. **William Osler** asked if Dr. Withington had any figures pointing at the very great increase of empyema following pneumonia during the past ten years. Very marked evidence of this kind had been collected at Guy's Hospital. These statistics showed that the number of such cases there had been doubled, and he thought the experience of most physicians here bore out the view that empyema cases of this kind were very much more common than formerly, probably because of the prevalence of grip.

Dr. **Withington** said that his study included only the past six years, or that period in which there was reason to believe the laboratory work had been conducted with the greatest accuracy. The records showed that a very large number of cases of empyema had occurred in the past two or three years.

Spontaneous Non-Tubercular Pneumothorax.—Drs. **M. H. Fussell** and **David Riesman** of Philadelphia presented this paper. They reported three cases of spontaneous non-tubercular pneumothorax, and stated that they had been able to find on record fifty-six cases of this kind. In these, 2 per cent. were in females. The pneumothorax might last only a few days, though its effects might persist for a number of weeks. There was a remarkable case on record in which the pneumothorax had lasted for nine years. In the majority of cases it occurred after violent exercise. While dyspnœa might be absent altogether, it was usually present, and was of a peculiar character. At the beginning, the dyspnœa was urgent on the slightest exertion. Fever rarely occurred. The affected side was usually larger than the other, although in young individuals the opposite was the case. A recurrence of symptoms took place in seven of the tabulated cases, in one instance eight weeks after the first attack. In one remarkable case there were four distinct attacks at intervals of several years.

Dr. **Francis P. Kinnicutt** of New York said that he had seen, in the past two years, a single instance corresponding to those reported in the paper. It occurred in a young man who had been seized with severe pain in one side of the chest after lifting a heavy object. He had made a good recovery, and had been discharged from the hospital in four weeks, all of the signs of pneumothorax having disappeared. He had been seen some time afterward and found to be perfectly well. Dr. Kinnicut said that he had always believed that in these cases local tubercular lesion, too small to be detected by ordinary methods of examination, was the beginning.

Dr. **S. Solis Cohen** of Philadelphia said that one of the cases reported in the paper had occurred in his hospital service, and he would not be willing to say that the case was non-tubercular, although he had failed to discover tuberculosis. In one instance he had made a diagnosis of the pneumothorax in a case in which there was such an enormous cavity as to make it practically a pneumothorax.

Dr. **F. C. Shattuck** of Boston said he agreed with the last two speakers that there was probably in these two cases a tuberculous element. Within the year there had been at the Massachusetts General Hospital two colored boys with perforating wounds of the abdomen. Laparotomy had been done, and tuberculous mesenteric glands discovered. In spite of this, these boys had recovered perfectly. A fact that had been forced home upon him repeatedly in the last few years was the latency or the innocuousness of tuberculosis.

Dr. **E. G. Janeway** of New York said if there was a slight local tuberculous process in the lung in the vicinity of two or three emphysematous blebs, the conditions were favorable for the development of a pneumothorax. Our inability to detect small tuberculous processes in the lungs was well known; often the physician searched in vain for the physical signs of such a process, even after the occurrence of a hæmoptysis had made it practically certain that such a process was present.

Dr. **G. L. Peabody** of New York referred to a case that he had seen in Vienna. A child with traumatic œsophageal stricture was having the stricture dilated gradually by bougies. On one occasion there was more than the usual amount of coughing accompanying this dilatation, and immediately afterward one side of the chest became full of air. He believed that tuberculosis was likely to be the foundation of pneumothorax.

Dr. **William Osler** referred to a case of pneumothorax occurring in a robust-looking individual. He had given large doses of tuberculin to this man without producing any reaction. His attention had been called in 1873 to a case in which, although the chest was full of air, it was absolutely flat on percussion. He had met with two cases of the kind since that time.

Some Pulsations in the Chest Other Than Aneurysmal.—Dr. **Arthur R. Edwards** of Chicago read this paper. In it he reported a case of pernicious anæmia, in which there was a diffused expansile pulsation in the chest and upper abdomen without anatomical findings. The clinical diagnosis was arteriosclerosis and abdominal aneurysm, pointing toward the diaphragm, or a low thoracic aneurysm and a secondary anæmia. The post-mortem showed degeneration of the myocardium, dilatation and hypertrophy of the left ventricle, a series of yellowish placques in the left coronary artery, a number of adhesions of the spleen to the abdominal wall and diaphragm, and a marked anæmia of all of the internal organs. The chief clinical interest centered in the presence of marked pulsations, chiefly abdominal, associated with a bruit.

Dr. **G. L. Peabody** said that it was common to find extensive adhesions of the left lobe of the left lung and of the spleen without any such pulsations as those described in this case, and hence, this anatomical finding could not possibly explain the occurrence of the pulsations and bruit.

Dr. **La Fleur** of Montreal said that he had observed an exactly similar case within the last two months. There was a condition of marked anæmia and signs pointing toward aneurysm of the abdominal aorta. The pulsation was expansile, and there was, in addition, a paralysis of abduction of the left vocal cord, thus pointing still more strongly to the diagnosis of aneurysm. Pulsation in the lower portion of the thorax and the upper portion of the abdomen was notoriously an uncertain sign.

Dr. **S. Solis Cohen** said that he did not understand that a fluoroscopic examination had been made in this puzzling case reported by Dr. Edwards. In a recent obscure case he had found a skiagram useful as a means of positively excluding aneurism.

Dr. **Edwards**, in closing, emphasized the fact that the pulsation in his case was not merely one propagated from the underlying arteries, but was a dynamic expansile pulsation.

The Healing of Ulcerative Endocarditis.—Dr. J. B. **Herrick** of Chicago presented a communication on this subject. He said that occasional recovery from ulcerative endocarditis might be expected, because recovery was seen in not a few cases of other forms of septicæmia and pyæmia, even though severe. Moreover, there were many cases on record of recoveries from ulcerative or malignant endocarditis. He had himself seen a case of what he believed to be a pneumococcic endocarditis occurring in a child of three years, in which recovery took place. A very irregular temperature had been present, associated with chills and two crops of petechiæ. After a tedious convalescence the child recovered with a permanent leak at the mitral valve. Post-mortem findings also indicated the possibility of healing of the valvular lesion. It was desirable, therefore, to make an extra effort to differentiate between the different forms of endocarditis, perhaps identifying the special organism at work by means of a blood examination. This would give a sounder basis for prognosis, and would lead to more care and persistence in the treatment, including perhaps the use of anti-streptococcus serum or some of the recently introduced soluble salts of silver.

Dr. W. S. **Thayer** of Baltimore presented the chart from a case, the symptoms of which justified the diagnosis of malignant endocarditis. At the present time the patient was apparently convalescent. The case had occurred in the service of Dr. Thomas R. Brown. The patient was a young woman, whom she had seen repeatedly during the past eight years. She had a well-marked stenosis and insufficiency following repeated attacks of acute rheumatism. On several occasions she had shown an intermittent fever, lasting for periods varying from a week to a month or two. They had only been able to account for these attacks on the theory that they were dependent upon an acute endocarditis. Last February she had developed an irregular and extremely high intermittent fever, associated with very violent chills, profound anæmia, delirium and great prostration. In addition, there was a rapid and irregular heart action and evidence of a freshly-developed aortic insufficiency. At times the temperature rose to 106° F. These attacks lasted from the latter part of February to April 2, since which time the temperature had been normal or subnormal, and the patient's general condition had steadily improved. There remained well-marked evidence of aortic insufficiency.

Dr. F. P. **Kinnicutt** spoke of a case that he had seen several weeks after the beginning of a gonorrhœal infection. There had been no cardiac lesion of any kind. Following the gonorrhœal infection the man had developed a severe endocarditis, affecting first the aortic, and then the mitral valve. When seen by the speaker there was mitral as well as aortic insufficiency. The man's condition was bad and the prognosis given was absolutely unfavorable. This was two years ago. The man completely recovered in four or five months, and since then had been comparatively well.

Dr. E. G. **Janeway** reported the case of a man who had come to him every day for a week with chills and a temperature of 105°F. The blood examination showed no malarial plasmodium, but some leucocytosis. The man then presented evidences of marked endocarditis, and was sent to St. Luke's Hospital. He subsequently suffered from nephritis and infection of the lung, but had eventually recovered. There were numerous recorded cases of murmurs due to nothing but anæmia.

Dr. F. C. **Shattuck** referred to a case in which the sputa had contained enormous quantities of streptococci, and on this account he had used antistreptococcus serum with good result.

Dr. A. **Jacobi** remarked that recoveries from endocarditis in the child were more apt to be bona fide than in adults, who might have antecedent disease of the heart.

Dr. **William Osler** said that these cases of recovery belong to a very special group, which he had some years ago denominated the cardiac group. This group was very large, and the endocarditis was of the recurrent form, associated with an old valvular lesion.

The Condition of the Heart in Pregnancy.—Drs. **Alfred Stengel** and W. B. **Stanton** of Philadelphia presented this communication. They stated that the notion that the heart was regularly hypertrophied in cases of pregnancy was founded on a study of 130 cases of women dying of puerperal sepsis. The average thickness of the left ventricle in those cases was found to be 1.5 cm. However, in this study no account was taken of the effect of the puerperal sepsis on the heart. The Germans had contended that the supposed hypertrophy of the heart was in most instances spurious, and dependent upon dislocation of the apex of the heart. The authors said that they had taken tracings of twenty-six cases of the heart, and also sphygmographic tracings in women during pregnancy and after delivery. These tracings showed a movement of the apex of the heart downward and inward when the diaphragm was released. In cases in which after delivery there was a large and tympanitic abdomen this downward movement was not so marked, or was delayed. Mention was made of the difficulty of securing an accurate outline of the heart in pregnant women because of the enlargement of the breasts. An enlargement of the heart upward and toward the left had been observed in a very large proportion of the cases, and this they ascribed to an enlargement of the conus arteriosus. After delivery there was no such rapid subsidence of the enlargement of the heart toward the right as there was a return of the apex of the heart to its normal situation. In nine of the eleven primipara examined there seemed to be distinct evidence of enlargement of the conus arteriosus. With regard to the statistics of blood pressure, of which MacDonald of Edinburgh made so much, the authors stated that the blood pressure increased after the patients had been in the hospital for some time. This they endeavored to explain by the skin of the finger becoming thin, soft and tender, and in this way vitiating the readings made with the Gaertner tonometer. The blood pressure before and after delivery was substantially the same. Murmurs were found before delivery in nine out of twelve cases, and after delivery in seven cases. The author's conclusions were, that the outward displacement of the apex of the heart was entirely due to an upward displacement of the diaphragm from pressure; that there was prabably an increase of the size of the right heart and of the conus arteriosus; that the murmur so commonly heard over the heart in the latter months of pregnancy was due to the over-action of the right heart and the distention of the conus arteriosus, and that there was no appreciable difference in the blood pressure before and after delivery.

Dr. M. H. **Fussell** of Philadelphia was surprised at the large number of cases that apparently had heart murmurs, for, in a fairly extensive experience among pregnant women, he had not met with any such large proportion.

Pancreatic Lithiasis.—Dr. F. P. **Kinnicutt** of New York was the author of this paper. He said that the literature gave only six cases in which a positive diagnosis of pancreatic lithiasis had been made, or the condition suspected during life. The author then reported a case of pancreatic lithiasis with the recovery of the characteristic calculi from the stools, followed by an attack of cholelithiasis a year later, with the passage of characteristic biliary calculi. The patient was a woman of forty-two, whose family history was unimportant. In

1888 she had suffered from the first attack of pain in the right hypochondrium associated with nausea and vomiting. There were two other attacks, one in 1897 and the other in 1898. Then there were no more until 1901. This attack was very severe. On the sixth day six small calculi were passed in the stools, and analysis of four of the concretions, showing them to be composed chiefly of phosphate of lime, pointed to their origin in the pancreatic duct. The patient had first come under Dr. Kinnicutt's observation on December 25, 1901. Specimens of both biliary and pancreatic calculi passed by this patient were obtained, and were exhibited. Cultures made from the central portion of one of the recently passed calculi gave no growth. Repeated examinations of the urine failed to show the presence of sugar. The weighing of the fat ingested and excreted showed normal fat absorption. The presence of an unusually large number of striated muscular fibers in the stools, the speaker said, could not be regarded as of much diagnostic importance. The presence of fat in the stools was often due to the coexistence of jaundice, and its consequent interference with the digestion of fat. A deficient splitting up of the intestinal fat into fatty acids and soaps was, on the other hand, apparently a symptom of great importance. The absence of glycosuria could only be regarded as a negative sign in connection with pancreatic lithiasis, though its presence was a suggestive sign. The absence of a cachexia or other signs of a malignant disease of the pancreas in the case reported, and the presence of the other signs and symptoms detailed seemed to warrant the diagnosis of pancreatic lithiasis.

A Further Contribution to the Subject of Vasomotor Ataxia.—Dr. S. Solis Cohen of Philadelphia presented this paper. He said that since his paper on this subject ten years ago, in which he had reported twenty-four cases of vasomotor ataxia, he had seen, on an average, one case a week of this condition. Certain persons under certain conditions manifest phenomena which in other persons required causes of greater moment to produce—in other words, behind all of the organs there was the man. These phenomena depended upon irregular and sometimes widely distributed contractions and dilatations of the capillaries and the smaller blood vessels. They might be divided into three classes, viz.: (1) Those dependent upon excessive relaxation of the vessels, often associated with impaired cardiac inhibition; (2) Those dependent upon excessive contraction of the vessels, usually with disturbance of cardiac inhibition, but sometimes without definite cardiac phenomena, and (3) Those in which phenomena of the two opposite groups were commingled. This last group was the more common. Graves' disease presented an extreme type of the phenomena of excessive vascular relaxation with paresis of cardiac inhibition. We had been accustomed to hide our ignorance of the nature of many of these cases by designating them idiosyncrasies. Raynaud's disease was an excessive type of vascular constriction. Between these two extremes were many varieties and grades of severity, *e. g.* simple urticaria, angioneurotic œdema, drug idiosyncrasies, hay fever, tendencies to hemorrhages from various organs. Minute cutaneous angiomata and paroxysmal tachycardia. Frequently these persons were hysterical, but this was by no means a constant accompaniment. Far and above these there were many ill-defined conditions arising in response to different stimuli, such as temperature, toxæmias and emotions. The symptoms of the menopause were essentially vasomotor ataxic in character, but were a transient phase in the devolution of the female. Essential vasomotor ataxia was usually a congenital condition affecting, in different ways, several members of one family. At times, however, they seemed to be acquired as a result of disease or accident.

Dr. Morton Prince of Boston said he would rather call these phenomena the perversions of normal physiological functions. What had been described in the paper was practically what he had described as association neuroses.

Dr. B. Sachs of New York said he could not see the great benefit to be derived from making this large group of cases of vasomotor ataxia. Dr. Cohen had placed as the extremes exophthalmic goiter and Raynaud's disease, and while this speculation was interesting, it seemed to him more important to make concrete studies as to the true nature of these and other diseases.

Dr. A. Jacobi reported a case in which Graves' disease had developed immediately upon a severe fright and mental emotion.

Intestinal Hemorrhage; Its Relation to Ducdenal Ulcer.—Dr. Henry Jackson of Boston was the author of this paper. He said that the symptoms of ulcer of the duodenum and of the stomach were so similar that it seemed well nigh impossible to make a positive differential diagnosis. In his own cases hemorrhage had not been a factor of importance, and the hemorrhage was often confusing, because it might occur secondary to cirrhosis of the liver. The treatment of the two forms of ulcer were fortunately identical. If the anæmia were profound, normal salt solution should be given subcutaneously until the pulse indicated that the crisis had passed. Theoretically, this might increase the hemorrhage or start a fresh hemorrhage, but this had not been his experience, and the procedure was most valuable and often life-saving. The author then reported seven cases in which ulcer of the duodenum had been found at autopty. Four of the patients had died of perforation. In two of the cases the ulcer was of little importance as an etiological factor. In one case hemorrhage was the cause of death. In none of the cases was a correct clinical diagnosis made, nor was it possible in the light of the autopsy. Seven of the patients were men and five women. In four cases there were no symptoms suggestive of gastrointestinal disturbance. Experience seemed to show that large hemorrhages from the stomach or bowel were more likely to originate from an ulcer of the stomach than of the duodenum.

Dr. F. P. Kinnicutt remarked that his clinical experience fully demonstrated the great value of the saline solution, regardless of theoretical considerations.

Dr. William H. Thomson of New York called attention to the fact that ulcer of the duodenum was so much more common in men than in women that it afforded a point in diagnosis. Persistent intestinal hemorrhage, with symptoms referred to the abdomen, but not distinctly to the stomach, and occurring in men, pointed very strongly to ulcer of the duodenum.

Prognosis and Treatment of Tuberculous Peritonitis.—Dr. F. C. Shattuck of Boston presented this paper, which was based on his experience at the Massachusetts General Hospital for the past ten years. He said that from 1889 to 1900 there had been ninety-eight cases of tuberculous peritonitis treated in the wards of the hospital, of which fifty-seven had been traced. The shortest time that had elapsed was two years, and the longest eleven years. Of the ninety-eight cases thirty-one were males and sixty-seven females, and twenty gave a history of tuberculosis in the family. In sixty-six cases the onset had been gradual; in sixty-three there was fluid in the abdominal cavity. One patient in whom a probably tuberculous peritonitis was diagnosticated, received two injections of tuberculin without reaction, and subsequent operation proved the absence of tuberculous peritonitis. Of the ninety-eight cases over one-half occurred between the ages of fifteen and thirty. In eight out of thirteen cases the tuberculin reaction was positive, and in two-thirds of the cases there was no leucocytosis. In fifty-seven of the ninety-eight cases the end result was known. Of these twenty-nine died, of which in twenty-seven the cause of death was tuberculous peritonitis or one of its complications. Roughly, 50 per cent. died after leaving the hospital and 50 per cent. remained well. Seven of the ten cases dying after leaving the hospital lived only a few weeks or months. Tapping was resorted to on the medical division whenever necessary for the comfort of the patient. On the surgical division the treatment consisted in incision and removal of masses from the pleural cavity. Two-thirds of the medical cases were dead, while about two-thirds of the surgical cases had recovered. If after a month or six weeks the patient failed to improve, or even in less time if losing ground, surgical treatment should be tried.

Dr. J. Tyson thought it was hardly worth while to temporize with medical treatment in these cases. He favored the routine use of the tuberculin test in cases of enlarged liver with ascites, believing that many of them originate in a tuberculous peritonitis.

Dr. J. Winters Brannan of New York said that he had looked up the records of Bellevue Hospital for the past ten years, but had found only eighteen cases in which the histories were sufficiently accurate for use. Of this number nine died, or 50 per cent. Of the ten cases treated medically six died.

Dr. Frank Billings of Chicago divided cases of tuberculous peritonitis into three classes, viz.: (1) Those cases in which there was a serous or serofibrinous exudate with a local focus; (2) Those in which there were tumorlike masses or a tuberculous exudate into the glands of the mesentery and omentum, and (3) Those in which there were abhesions between the different parts—a fibrous form. Only in the first-class, in his opinion, was surgical treatment appropriate; in the other cases death almost invariably followed operation. Cases of the second class gave little hope of recovery under any treatment, but the outlook was rather better under medical than surgical treatment.

Dr. S. J. Meltzer of New York reported a case of tuberculous peritonitis now under his observation, which had been cured by laparotomy.

Dr. W. S. Halsted of Balitimore said that he had improved some cases of tuberculous peritonitis having large tuberculous glands. He had been using tuberculin systematically for eight years, and had yet to record a case, proved to be tuberculous, in which tuberculin had failed. When, in a suspected case, no reaction was observed, the reason should be very carefully investigated.

Dr. V. C. Vaughan said he had inoculated a large number of rabbits intraperitoneally. On some of these, after a few weeks, he had performed laparotomy, and in some had found numerous pin-point tubercles on the liver. The wound was closed, and the majority of them lived for about a year. On killing them then, many showed no lesions or the process had been completely arrested.

Dr. A. Jacobi said that as long as tuberculosis was a local process it was likely to heal, whether on the pleura or on the peritoneum. Cases of tuberculosis of the peritoneum unattended by pain or fever he called peritoneal tuberculosis, but when these symptoms were present, he designated them cases of tuberculous peritonitis. The cases of peritoneal tuberculosis should not be subjected to laparotomy, as they often recover under simple treatment or no treatment at all.

Dr. Shattuck, in closing, said that his statistics showed that the mortality in the cases with masses was 30 per cent., and in the cases of fluid without masses, 60 per cent.

A Pathological Study of Thirty Cases of Smallpox.—Dr. James Ewing of New York presented a paper on this subject, and demonstrated illustrative specimens. In the cadaver the trachea usually showed the most severe lesion. Twice the respiratory mucosa had shown a severe and active process when the lesions in the skin were scanty and disappearing. Lobular pneumonia was found to be a common cause of death. Three cases showed acute ulcerative endocarditis. Acute degeneration of the kidney was commonly met with. Aside from petechiæ, no lesions were found in the bladder. Five cases showed numerous variolous ulcers in the stomach. Swelling of the lymphatic structures was a constant change. From these observations it was evident that the first effect of the smallpox poison was the production of coagulation necrosis. In some cases the lesions were those of a diffusible toxin. The congestion attending the local processes was remarkable for its intensity. The exclusive preference of the smallpox poison for the epithelial tissue was a prominent pathological feature. Vaccine bodies were found in all stages of the specific lesions. Cultures were made from the skin in twenty-three cases, and streptococci found alone in seventeen cases, and he was inclined to think that by a better technique it would be found invariably present. The author's conclusions were as follows: (1) The streptococcus completely overshadows any other infecting organism present; (2) It was his belief that it might always be impossible to reproduce the fulminating types of the disease without the aid of the streptococcus.

Dr. W. T. Councilman of Boston said that the study of fifty-two autopsies on cases of smallpox had led him to believe that the most prominent pathological feature was destruction of the polynuclear leucocytes of the blood. The lesions in the bone marrow were totally different from those obtained in any other blood infection. In the septic cases of smallpox one found most extensive necrosis, and a complete absence of polynuclear leucocytes, or, in other words, no barrier to the pathological process. In the hemorrhagic cases this was most marked, and the secondary invasion had usually arisen from the mucous membranes. He was of the opinion that one rarely dies of smallpox *per se*, but from the secondary infections, which paralyze the powers of resistance; in other words, death really occurred from septicæmia. He did not think the various organisms included in the epithelial cells played any part whatever in the disease, except in connection with secondary infection.

Exhibition of Anatomical Lesions of Smallpox.—Dr. W. T. Councilman presented an interesting series of anatomical specimens on behalf of Drs. Magrath and Brinckerhoff of Boston.

Some Experiments on the Nature of Vaccine Virus.—Dr. William H. Park of New York read this paper. He spoke of the use of the monkey to differentiate between smallpox and chickenpox. In no instance had there been any positive result from inoculation with chickenpox, while in every case of inoculation with smallpox the inoculation had "taken." This seemed to him an absolutely safe method of differentiation in very obscure cases. Certain experiments seemed to show that calves could be vaccinated with concentrated, crushed and filtered vaccine virus, but these experiments were not yet complete.

A Case of Osteitis Deformans and One of Hyperostosis Cranii.—Dr. Morton Prince of Boston reported these cases. He took the ground that osteitis deformans is a trophic disorder, dependent upon some lesion of the central nervous system. This view seemed to be supported by autopsies in which the nerves and spinal cord had been carefully examined.

Some Clinical Manifestations of Hepatic Cirrhosis.—Dr. G. G. Sears of Boston read this paper, which was based on eighty autopsies. Alcohol was found to be the most potent factor, while malaria was also an important etiological element. The author concluded that hepatic cirrhosis was in most cases but one effect of a systemic poison. There was no evidence to show that the disease was not always progressive.

Clinical Manifestations of the Early Stage of Cirrhosis of the Liver.—Dr. Frank Billings of Chicago reported in this paper a group of cases presenting anatomical evidence of recent hepatitis. The author attributed the various clinical manifestations to toxic effects resulting from the condition of the liver, and pointed out, as a confirmation of the truth of this theory, that the disappearance of the clinical manifestations was coincident in the anatomical state of the liver.

Experimental Glycosuria from Adrenalin Chloride, and Its Relation to Other Forms of Glycosuria Dependent upon the Action of Reducing Substances on the Cells of the Pancreas.—Dr. C. A. Herter of New York presented this communication. In it he detailed some experiments that he had been making with applications of adrenalin chloride to the cells of the pancreas. He presented evidence that pointed strongly to the theory that many, and probably most, forms of glycosuria are due to the action of substances which interfere with the normal oxidations in the cells of the pancreas. The glycosuria following the use of adrenalin appeared to be intimately connected with its reducing action upon the cells of the pancreas. Other substances, possessing strong reducing power, were found to be capable of inducing glycosuria when applied directly to the pancreas.

Officers Elected.—*President*, Dr. James Stewart; *Vice-President*, Dr. W. T. Councilman of Boston; *Secretary*, Dr. Henry Hun of Albany; *Treasurer*, Dr. J. P. Crozer Griffith of Philadelphia; *Recorder*, Dr. S. Solis Cohen of Philadelphia; *Councillors*, Drs. Charles G. Stockton and Walter Reed.

Book Reviews.

Traité de Médecine. Deuxiéme Édition. Publié sons la Direction de M. M. Bouchard, Professor à la Faculté de Médecine de Paris, Membre de l'Institut, et Brissand, Professor à la Faculté de Médicine de Paris, Médecin de l'Hôpital Saint-Antoine. Tome V., par M. M. Chauffard, Brault, et Roger, Paris: Masson et Cie, 1902.

With this volume seven of the ten volumes of the work are completed, volumes VI and VII having appeared previously. In this part are contained treatises on "Diseases of the Liver and Biliary passages" by Dr. A. Chauffard, "Diseases of the Kidneys and Suprarenal Capsules by Dr. A. Brault, and "Pathology of the Hæmatopoietic Organs and Blood Vascular Glands, Bone Marrow, Spleen, and the Thyroid and Thymus Glands" by Dr. G. H. Roger. These treatises are most valuable contributions to medical literature, dealing, as they do, on subjects of the greatest importance and present interest, and written by men who are known, in France at least, as authorities in their own lines. At the risk of making an invidious distinction between articles all of great merit, we would commend especially the treatise on diseases of the kidneys as one in which the last word has been said that can be said in the present state of our knowledge. But the entire volume is good, and compares very favorably with its predecessors in this excellent series.

A Manual of Ophthalmoscopy for Students and General Practitioners. By J. E. Jennings, M.D. (University of Pennsylvania), author of "Color-vision and Color-blindness," "A Practical Manual for Railroad Surgeons;" formerly Clinical Assistant Royal London Opthit thalmic Hospital, London; Fellow of the British Laryngological and Rhinological Association; Member of the American Medical Association, Member of the St. Louis Medical Society, etc. With ninety-five illustrations and one colored plate. Philadelphia: P. Blakiston's Son & Co., 1902.

This is a small volume of 180 pages, which sets forth the essentials of ophthalmoscopy in an elementary way, and is designed for the use of students and practitioners. One colored plate and ninty-five black and white figures, many of which are original, serve to fully illustrate the text. In the first chapter a short history of the ophthalmoscope, a discription of the instrument and a brief discussion of the use of mydriatics are found. Chapter II. is devoted to a discription of the technique of the methods of ophthalmoscopy. Chapters on "Examination of the Media of the Eye," "The Appearance of the Normal Fundus," "Congenital Anomalies," "Diseases of the Choroid, of the Retina, Retinal vessels and of the Optic Nerve" follow. Illustrations of all of the usual changes in the fundus accompany the text. The work is well suited to fulfil the purpose for which it is designed.

Hygiene for Students. By Edward F. Willoughby, M.D., London, Diploma in State Medicine of the London University, and in Public Health of Cambridge University. 563 pages. London: Macmillan & Co., Limited. New York: The Macmillan Company, 1901.

The present volume is really a fourth edition of a work published under the title of "Principles of Hygiene," but differs from the original in many particulars, such as the subject of Sanitary Law, which has been omitted in the present issue, the chemical disposal of sewage, which is dismissed with an unconditional disapproval and a general revision of what was considered necessary to retain from the earlier publications, together with many additions, which the change in title and advance of knowledge has rendered needful.

The author has rewritten the entire sections on the analysis of milk, butter and water, and in so doing has incorporated what recent experience has taught us to be the most satisfactory and practical methods. The same improvement is shown in the subjects of Demography and Dietetics, both of which are strictly up to date, although concise. At the end of each chapter a synopsis appears with a list of questions, thus making the work more attractive to students, and especially those who are anticipating examinations.

The Healing of Nerves. By Charles A. Ballance and Purves Stewart. 110 pages, illustrated by 16 plates and one figure in the text. London and New York: The Macmillan Co.

The exact process whereby peripheral nerves, after they have been divided, become reunited, has been a subject of considerable controversy. The present research was undertaken with the object of solving some of the problems so raised. In a measure it has succeeded in doing so. Some of the more important conclusions reached by the authors are as follows: In the regeneration of peripheral nerves after the nerve has been divided, new fibers (axis-cylinders, medullary sheaths and neurilemmata) are formed in the distal segment from preexisting cells. The young axis-cylinders and medullary sheaths are laid down in the first instance in the distal segment, and they become attached later to those of the central segment, thereby restoring the conductivity of the nerve trunk. Such views have been advocated by a few investigators; the majority, however, teach that the new axis cylinders which appear in the regenerated distal segment are direct outgrowths from those in the central segment. The changes which characterize regeneration of a divided nerve differ according to whether or not the proximal and distal segments have been brought into apposition. Within twenty-four hours after a nerve is severed the proximal end of the nerve exhibits a primitive end-bulb, produced by the curling up of the loose ends of the divided fibers. This acts as a scaffold, on which the permanent end-bulb is deposited. The earliest signs of regeneration in the distal segment appears after three weeks; many longitudinal spider cells appear in the distal segment and in the intermediate scar tissue, which shoot out young beaded axis cylinders from their opposite poles. These are new axones, which overlap and coalesce with one another. New medullary sheaths appear in about four weeks and inclose the axones. Regeneration of a severed nerve is not brought about by the growth of the proximal extremities of the axis cylinders, but is accomplished by the development from longitudinal chains of cells of axones, which fuse together and become enclosed in medullary sheaths. Practically, the author's conclusions are adverse to the Neuron theory and in favor of the views of Apathy Bethe, *et al.* The authors, and especially Dr. Stewart, are to be congratulated. The book will be widely studied.

On Disorders of Assimilation, Digestion, etc. By Sir Lauder Brunton, M.D. London: Macmillan & Co., 1901.

Brunton's present work is composed in the form of lectures, which have been delivered by the author at different times. The book deals with the most varied subjects relative to digestive diseases and constitutional disturbances.

In the section on diabetes mellitus Brunton lays stress upon muscular weakness as one of the earliest symptoms of diabetes. In the treatment of the malady Brunton recommends the use of raw meat, believing that the muscles contain a ferment converting glucose into lactic acid. He is also a great advocate of exercise in this malady. If the patients are unable to exercise he recommends massage. Salicylate of soda and opium he considers as the most important remedies in diabetes.

In discussing the subject of alcohol, whether it is a food or not, Brunton is of the opinion that alcohol is a food, although for healthy persons it is not a convenient food.

Alcohol undergoes combustion in the body, but at the same time it tends to lessen the combustion of other things. In healthy people this is, of course, a disadvantage, because it is by the combustion of our food that our strength is maintained. Alcohol, therefore, is for healthy people, a very inconvenient form of food. In fevers the case is different, because then the body is burning away too rapidly, and alcohol has the double advantage of retarding this process, as well as acting itself as a food. In wines, beer and spirits, alcohol is contained, but in each of them it is mixed with other things, which modify its action as a food. On comparing these substances, we see at once that the action of alcohol as a food and as a stimulant are not connected. If we take, for example, a quantity of beer and brandy containing the same amount of alcohol, we will find that the beer is more nourishing, but the brandy is more stimulating.

Brunton appears to be a great adherent of temperance. In the treatment of alcoholism the question arises whether it is advisable to cut off alcoholic liquors entirely from persons who have been accustomed to taking them freely, and who are at length beginning to suffer from the degeneration caused by them. The opinion which Brunton's observations have led him to form on this point is, that if the degenerative processes have not gone far, and there seems reason to believe that the organs, though beginning to suffer, are still fairly healthy, it may be advisable to cut off stimulants altogether. But this is not the case when the degeneration has gone far. When symptoms of dropsy appear, or when the heart is becoming feeble, or the nervous system markedly degenerated, in persons who have been accustomed to take alcohol for a long series of years, the sudden and complete withdrawal of what is to them, not only a stimulus, but is from long habit, to a great extent, a food, is likely to be injurious. If they have indulged in it to a great excess, let it be diminished, but not entirely withdrawn.

As a whole, Brunton's book is very instructive and fluently written. It can be warmly recommended to the profession.

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

Handbuch der Krankenversorgung und Krankenpflege. By Dr. George Liebe, Paul Jacobsohn and Prof. George Meyer. 8vo, 1078 pages, illustrated. Zweiter Band, Erste Abtheilung. August Hirschwold, Berlin, Germany.

Diagnosis by Means of the Blood. By Robt. L Watkins. 8vo, 388 pages, illustrated. The Physicians' Book Publishing Co., New York. Price, cloth, $5.00.

Atlas and Epitome of Operative Surgery. By Otto Zuckerkandl. 2d edition, 12mo, 410 pages, illustrated. W. B. Saunders & Co., Philadelphia, Pa. Price, cloth $3.50 net.

Atlas and Epitome of Otology. By Gustave Bruhl M.D. 12mo, 292 pages, illustrated. W. B. Saunders & Co., Philadelphia Pa. Price, cloth, $3.00 net

Le Mal de Mere, Guide Hygienique Complet du Voyageur a bord des Navies. By Dr. Madeuf, 82 Bd Port Royal, Paris. 16mo, 102 pages. Price, Fr. 3.

A Manual of Toxicology. By Albert H. Brundage, M.D. 16mo, 354 pages. Price, $2.00 net.

The Medical Treatment of Gallstones. By J. H. Keay, M.D. 126 pages. P. Blackiston's Son & Co., Philadelphia, Pa. Price, $1.25 net.

Transactions of the American Climatological Association, 1901. Vol. XVII. 414 pages.

Hæmolytic Power of Serous Fluids.—H. Strauss and W. Wolff have studied this subject in an extensive manner. In general, there is a relation between the hæmolytic power and the quantity of albumin in serous fluids, but it has not been as yet determined how constant such a relation is and its significance when applied to transudates and exudates. It, nevertheless, appears that the hæmolytic property is closely connected, if not dependent upon the atonic complexity of the albumin molecule. This confirms the views of Ehrlich and Morgenroth.—*Fortschritte der Medicin.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending May 3, 1902:

	Cases.	Deaths.
Measles	612	22
Diphtheria and croup	313	47
Scarlet fever	420	25
Smallpox	54	14
Varicella	66	..
Tuberculosis	310	133
Typhoid fever	29	10
Cerebro-spinal meningitis	..	4

Surgical Treatment of Hemorrhage from Gastric Ulcer.—Walther Kaupe reviews the literature appertaining to this subject. Gastric ulcers which give rise to serious hemorrhage are usually situated on the lesser curvature in the region of the pylorus. In the operative treatment of this condition various methods have been employed. These are resection of the pylorus, gastroenterostomy, cauterization, excision of the ulcer, tamponade, ligation of the bleeding artery *in situ*, and Witzel's operation. Resection of the pylorus is generally contra-indicated on account of the poor general condition of the patient. Gastroenterostomy has been especially recommended by Küster, Rosenheim, and Doyen when the ulcer is situated on the posterior wall of the stomach. Ulcers situated on the anterior wall are particularly suitable for excision. Here elliptical excision is to be preferred. Cauterization, as a rule, produces only temporary cessation of the hemorrage. Tamponade, as used by Heidenhain has been unsuccessful. Ligation of the bleeding artery *in situ* is very difficult and rarely successful, since the ulcerating tissues are not suitable for ligation and the points of hemorrhage may be multiple and not easily discovered. Recently Witzel has proposed ligation of the superior gastric artery —either the right or left in accordance with the location of the ulcerated and bleeding surface. This method has the great advantage that the operative measures involved are slight and easily borne by debilitated patients. The possibility, however, of secondary gangrene of the stomach, due to restricted blood supply, should be considered. Hofmann, by experimental ligation of this artery in animals, has shown that such a complication is possible. Nevertheless, Witzel's case shows that this method is reliable and practical. A review of the sixteen cases of gastric ulcer which have been operated on by one or another of these methods shows that recovery took place in ten. It is thus apparent that the surgical treatment of hemorrhage from gastric ulcer is a feasible procedure and should be resorted to in all cases which do not respond to internal medication.—*Deutsche Zeitschrift für Chirurgie.*

Exceedingly Rapid, Alternating with Very Slow Respiration, with Pauses Varying from Twenty Seconds to Two Minutes, in a Case of Tuberculous Meningitis, Syphilitic Periarteritis of the Pons and Medulla, and Hysteria.—J. T. Eskridge reports the case of a woman of twenty-nine years, suffering from the above complication of diseases. The variations in respiration were marked, at one period being from ten to fifty per minute, at another two to eleven, with, at times, complete intermissions, lasting from forty seconds to two minutes. Extreme rapidity, 100 to 142 per minute, or extreme slowness, from two to four per minute, occurred only during periods of profound unconsciousness, and never during normal sleep, and variation from the normal respiration occurred more frequently during sleep than when the patient was awake. The hysteria in the case came on only after severe injury to the head. The author concludes that hysteria is often a veil which obscures, or a cloak that hides the symptoms of organic disease or gravely disordered functions of some important organ; also that respiration, which is more rapid while the patient is asleep, is strong, if not positive, evidence of organic disease of the brain in the region of the respiratory centers.—*The Journal of Nervous and Mental Disease.*

Excessive Fever Produced by Lesions of the Central Nervous System.—Julius Flesch reports a case of tertiary syphilis in which there was sudden attack, marked by a severe chill, followed by a high rise in body temperature (42.3° C.—108° F.) and general muscular convulsions. The height of the fever lasted about one hour and then quite rapidly fell, so that on the morning of the following day the temperature reached normal. The intensity of the muscular convulsions gradually subsided with the fall in temperature, so that by the time this had reached normal, they had entirely ceased, except in two muscles—the right gluteal and the left gastrocnemius. The convulsions in these two muscles persisted until the following day. They were, however, observed only when the patient was in the horizontal position, and immediately ceased upon his sitting up in bed. The patient, during the attack was entirely unaware of the convulsions, and the only inconvenience complined of was a severe headache. Careful examination failed to reveal any appreciable cause for the attack, and the author regards it as arising from a syphilitic lesion of the central nervous system.—*Medicinische Blätter.*

Etiology of Carcinoma and Auto-implantation of Carcinoma Cells into the Walls of the Stomach and into the Lung.—Gustav Fütterer reports a case in which a primary carcinoma, consisting of cylindrical epithelial cells developed from the posterior portions of a goiter, which were subject to friction and pressure, caused by food passing through the esophagus during deglutition. The carcinoma developed anteriorly, destroyed cartilages, invaded the larynx and trachea in various places; from here tumor particles fell into the air passages and produced colloid, which saturated the lung tissues and filled the alveoli. Then an invasion of the inter- and intra-lobular tissues took place, and a distinct glandular arrangement developed. The primary growth showed no visible production of colloid, but the metastases in the lung represented structures which sometimes showed almost a complete picture of the normal thyroid gland, with large masses of colloid. It is certainly interesting to note that the carcinoma cells in their primary growth, where they were found in dense nests, had, to all appearance, lost their physiologic functions, which they resumed to a high degree when transplanted into the lung tissue.—*Medicine.*

Neurasthenia: Its Etiology, Symptomatology and Treatment.—In a general discussion of this topic, A. D. Rockwell says that, in his own experience, electricity has proven the best remedy. There is, however, a most marked variation in the susceptibility of patients to this therapeutic agent. There are cases in which anything over ten or fifteen milliamperes on any part of the body seems to provoke irritability, while one-half this strength applied to the head becomes decidedly disturbing. On the other hand, there are neurasthenics whose very disease seems to make them equal to the endurance of unusual strength of current, which it is found necessary to decrease as improvement progresses. Static electricity is especially valuable in conditions of disturbed circulation resulting in local congestions. Rockwell highly extols the action of static electricity in these conditions. The circulation is equalized, and especially as a tonic and sedative its good effects are not slow in manifesting themselves. In connection with prolonged applications of the high-tension induction current over the kidneys, he has observed in several instances the disappearance from the urine of both albumin and casts.—*International Medical Magazine.*

Some Respiratory Conditions Dependent upon Gout and Obesity.—J. M. Anders inclines to the opinion that the severe paroxysmal dyspnœa seen in obesity is, in many cases, not a true asthma; genuine asthma does occur in about 5 per cent. of the cases of obesity. It occurs only in extreme polysarcia, and there is in association a gouty state or history in most cases in which true asthma is secondary to obesity. About one-half the cases are curable by overcoming the causative condition. Gout and obesity are closely associated. Among 196 of the author's cases of over-fatness, gout was either in association or had occurred among the antecedents in ninety-seven cases, or 49.5 per cent. There was a history of rheumatism in 30 per cent. of the same group of cases. Gout occurring independently of obesity may also cause asthma. The dry, chronic bronchitis of Laennec is recognized by most writers as a distinct variety of bronchitis, due to the gouty state. It is easy of recognition and its treatment obvious.—*Pennsylvania Medical Journal.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended May 3, 1902:

		CASES.	DEATHS
SMALLPOX—UNITED STATES.			
California, Los Angeles	Apr. 12–19..	3	
San Francisco	Apr. 13–20..	3	
Colorado, Denver	Apr. 12–19..	7	
Illinois, Belleville	Apr. 19–26..	2	
Chicago	Apr. 19–26..	13	
Freeport	Apr. 19–26..	1	
Galesburg	Apr. 19–26..	1	
Indiana, Evansville	Apr. 19–26..	4	
Indianapolis	Apr. 19–26..	16	
Terra Haute	Apr. 19–26..	4	
Kansas, Wichita	Apr. 19–26..	5	
Kentucky, Covington	Apr. 20–27..	16	
Lexington	Apr. 19–26..	2	
Louisiana, New Orleans	Apr. 19–26..	1	
Maryland, Baltimore	Apr. 19–26..	1	2
Massachusetts, Boston	Apr. 19–26..	51	3
Brockton	Apr. 19–26..	1	
Brookline	Apr. 19–26..	2	
Cambridge	Apr. 19–26..	2	
Everett	Apr. 19–26..	3	
Fall River	Apr. 19–26..	2	
Fitchburg	Apr. 19–26..	1	
Malden	Apr. 19–26..	1	
Medford	Apr. 19–26..	1	
New Bedford	Apr. 19–26..	3	
Newton	Apr. 19–26..	4	
Somerville	Apr. 19–26..	5	
Michigan, Detroit	Apr. 19–26..	5	
Ludington	Apr. 19–26..	8	
Missouri, St. Louis	Apr. 13–27..	83	2
Montana, Butte	Apr. 20–27..	5	
Nebraska, Omaha	Apr. 19–26..	45	
New Jersey, Camden	Apr. 19–26..	3	
Hudson County, including Jersey City	Apr. 6–27..	107	13
Plainfield	Apr. 19–26..	1	
New York, Buffalo	Mar. 27–Apr. 30	21	
New York	Apr 19–26..	56	13
Yonkers	Apr. 18–25..	1	
Ohio, Cincinnati	Apr. 18–25..	12	
Cleveland	Apr. 19–26..	2	1
Dayton	Apr. 19–46..	2	
Pennsylvania, Columbia	Apr. 21–26..	4	
Erie	Apr. 19–26..	2	
Philadelphia	Apr. 19–26..	31	6
Scranton	Apr 19–26..	6	
Rhode Island, Providence	Apr. 19–26..	2	
Tennessee, Memphis	Apr. 19–26..	14	2
Utah, Salt Lake City	Apr. 19–26..	1	
Washington, Tacoma	Apr. 13–20..	3	
Wisconsin, Green Bay	Apr. 20–27..	6	
Janesville	Apr, 19–26..	1	
SMALLPOX—FOREIGN.			
Austria, Prague	Apr. 5–12..	8	
Barbadoes	Apr. 12....	5	
Belgium, Antwerp	Apr. 5–12..	9	
Canada, Quebec	Apr. 12–19..	9	2
Winnipeg	Mar. 29–Apr. 19..	18	
China, Hongkong	Mar. 8–22..	7	7
Colombia, Panama	Apr. 21—Present		
France, Rheims	Mar. 31–Apr. 6	5	3
Gibraltar	Apr 6–13..	1	
Great Britain, Dundee	Apr. 5–12..	1	
Edinburgh	Apr. 5–12..	1	
Glasgow	Apr. 11–18..	11	2
London	Apr. 5–12..	274	73
Greece, Athens	Apr. 5–12..	1	
India, Bombay	Mar. 25–Apr. 1		10
Karachi	Mar. 23–30..	5	2
Italy, Palermo	Apr. 5–12..	40	5
Mexico, Vera Cruz	Apr. 12–19..	5	2
Russia, Moscow	Mar. 29–Apr. 5..	14	3
Odessa	Apr. 5–12..	3	
Warsaw	Mar. 20–Apr. 5..		2
Spain, Corunna	Apr. 5–12..		1
Uruguay, Montevideo	Mar. 8–29..	141	8
YELLOW FEVER.			
Mexico, Vera Cruz	Apr. 12–19..	12	5
Venezuela, Puerto Cabello	Feb. 8–15..	1	1
CHOLERA.			
China, Canton	Mar. 19 Present—9 Deaths among Europeans		
Hongkong	Mar 8–22..	23	19
India, Bombay	Mar. 25–Apr. 1		3
PLAGUE—FOREIGN.			
China. Canton	Apr. 24—Malignant outbreak.		
Hongkong	Apr. 8–22	1	1
India. Bombay	Mar. 25–Apr. 1		909
Karachi	Mar. 23–Apr. 30	119	92
Zanzibar, Nairobi	Mar. 20..	20	5

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Original Articles.

SO-CALLED "JOINT DERANGEMENT" FROM MOVABLE BODIES IN JOINTS.*

BY JOSEPH D. BRYANT, M.D.,
NEW YORK.

THE expression "joint derangement" is a convenient but somewhat antique form of words illustrative of a deficient knowledge of the special causes giving rise to the manifestations begetting it. Formerly the expression was employed synonymously with the supposed presence in joints of movable bodies, defective cartilages, and other unexplainable phenomena not infrequently witnessed in articulations. Later, however, increased knowledge of these facts has taken from the list movable bodies, and to the remaining factors of disturbance one now but infrequently hears "joint derangement" applied.

I will ask your attention only to the "movable bodies" element of the topic.

It may not be amiss to state the fact that the existence in a joint of a movable body was first recognized by Ambrose Parè in 1558, who then described the removal from the knee-joint of such a body by himself. One hundred and thirty-three years later (1691) Pechlin duplicated Paré's experience. In 1726 Monro, and ten years later Simpson, each removed from the knee a movable body, only that of the latter being from the joint of a living subject. During the last one hundred and sixty-nine years extended consideration has been given to the topic by nearly all prominent surgical writers, notably Hunter, Nelaton, Velpeau, Brodie, and Rokitansky, not to omit König, whose modern contentions regarding his belief in their nature have done much, indeed, to foster investigations and hasten etiological conclusions regarding them.

It appears that all freely movable articulations are subject to this infliction; that the knee-joint suffers oftenest, the elbow next in frequency, and that the ankle, shoulder, tempero-maxillary and carpal joints may each comparatively rarely exhibit the infirmity. The number and size of these bodies are variable. Magendie found twenty-five in a knee joint, Haller twenty in a tempero-maxillary, Malgaigne sixty-three in the shoulder-joint. Dr. James Berry reports (1894) a case of a man twenty-two years of age from whose knee 1047 loose bodies were removed. The extremes in number, therefore, are quite as wide apart as can well be imagined. The comparative sizes, too, are quite as marked, varying from that of a mustard seed to dimensions equaling those of the patella and of the astragalus.

The etiology of these bodies is yet a subject of no little contention. Whether or not they are the direct or indirect products of traumatism, or are independent of it, their presence being disclosed as the result of the special attention directed to the injured joint, are matters yet open to differences of opinion. It appears that the structure of these bodies differs, and is variously described by different writers, suggesting at once a difference of origin, of development, and perhaps also of care of observation. Some bodies are characterized as fibrous, others tough and striated, of ligamentous texture, or hard like bone. In the majority of instances they are said to be fibrocartilaginous and, if ancient, possessed of a central bony structure. Their shapes are various, being oval, lenticular, round—in fact, of devious outline, apparently modified in part by their articular environments, as, for instance, in the knee-joint they are usually compressed and wedge-shaped, perhaps raised on one side and hollowed on the other, in some cases resembling in outline the patella, in others angular, with numerous facets.

The etiology of these bodies is, naturally enough, assigned to different causes. They differ not infrequently in all essential characteristics. Hunter regarded their origin as dependent on coagulated blood in the joint cavity, therefore of traumatic inception. Velpeau concurred in this idea. The relations which they occasionally bear to traumatism of the joint, together with the fact that their structure resembles that of formations known to result from the changes in free coagulated blood in other parts of the body, seem to justify this conclusion.

The museum of St. Thomas's Hospital contains several examples of movable bodies in joints, the character of which bodies sustains the preceding ideas of their causation. Movable bodies have been found in joints afflicted with rheumatoid arthritis. In this condition they are found outside the joints and not infrequently gain access to them by means of pressure from without, pushing them against the synovial membrane, causing the latter to finally surround the intruding body. Bony ridges at the cartilaginous margins, especially the knee-joint, may be broken and frequently gain access to the joint-cavity in the manner just described. Brodie said that in the majority of such instances no evidence of previous inflammation had been present, therefore he was inclined to believe that, in some instances at least, these bodies were developed by an independent process characteristic of tumor formation. Practically stated, therefore, the growth had its origin in the synovial structure or outside of this membrane, entering the joint by the pressure process, as already related. Laenunec, Béclard, and Cruveilier concurred in Brodie's belief, and Cruveilier illustrated cases demonstrating their presence in and external to the synovial membrane, attended with free and attached loose bodies in the joint, each covered with synovial membrane, the attached bodies being tethered by slim pedicles, composed of synovial membrane itself.

Bolton, in his excellent article on the topic (*New York Medical Journal*, June 27, 1896), reports seventy-two cases from various sources, which he examined with great care, classifying them according to structure as follows: Cartilage, twenty; Cartilage and bone, nine; articular cartilage, six; fibrocartilage, five; fibrous bodies, five; bone, two;

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* Read before the Practitioners' Society, April, 1902.

the remaining specified nine, comprised four of lipoma arborescens, two of which were associated with tuberculosis; one each of tuberculous tissue, hypertrophied fringe and sarcoma; two of blood clot in fringe. In sixteen the structure was not stated. Of the seventy-two twenty-three were pedunculated, and forty-nine non-pedunculated.

Barth (1898) reports fifty-five cases, all containing cartilage, same partly composed of spongy bone.

I am prompted at this time to describe the important features connected with a recent case of my own, the chief characteristics of which prompted the writing of this paper. Briefly related, the patient's history is as follows: M. W. A., a medical student, aged twenty-five years, family and personal histories have no bearing on the cause of his infliction. In August, 1901, while riding a bicycle, he was cornered between the wheels of two vehicles going in opposite directions, causing him to fall to the pavement, so as to bring the right limb, while in a flexed position, beneath the buttocks. For ten days thereafter the limb was out of use because of pain, tenderness, and swelling of the knee, followed by slow but apparently complete recovery from the effects of the injury. During the following September the patient received a second fall, this time from a street car, striking the pavement in substantially the same manner as in the first instance. This injury was severer than the preceding, but the after effects were less prolonged. Immediately following the disappearance of the primary effects of this accident, crepitation and frequent pain at the outer side of the knee were noticed on movement of the limb, especially during extension from the fixed position, as in going up stairs, causing the patient suddenly to stop, because of acute pain in and partial immobility of the joint, preventing further extension of the leg. The third and last fall happened November 1, 1901. On this ocasion the descent was of the height of two or three steps of an ordinary stairway, the outer side of the right knee striking forcibly against the iron frame of a lecture-room seat. The immediate effects of this injury were severer than those of either of the preceding injuries, but no new manifestations were exhibited. Ten days following the last mishap the patient came under my observation. At this time a movable body, of apparently half an inch in diameter, could be felt on a line with the articulation, at a point about an inch external to the right border of the patella. Some pain and tenderness attended the manipulation of the object, which latter, though quite freely movable, appeared to be tethered below. A few days later the growth was removed through a vertical incision, an inch in length, made into the joint directly down upon the body. The growth was easily caused to extrude through the opening, being limited only by a thin fibrous pedicle, attached apparently below to the semilunar fibrocartilage of that side of the articulation. The cavity of the joint was not examined to note the presence of any associated changes of structure. The incision through the synovial membrane was closed with continuous catgut suture, and that through the integument with interrupted silkworm gut. The saline solution and local anæsthesia were employed. The limb was dressed, immovably fixed, and the patient kept in bed for a week. Prompt union without reaction ensued, and was followed by apparently complete recovery. The specimen in question was given at once in charge of Professor E. K. Dunham, who made the following preliminary report:

"The specimen is a piece of spongy bone, covered with a thin layer of fibrous tissue. The outer shell of bone is thin and appears continuous, except for a few foraminal containing blood vessels, and a little adipose tissue. The fibrous covering is more highly cellular near the bone than at the free surface, and a layer of cells contiguous with the bone may be clearly seen in some places. This layer contains a few larger cells, which are multinuclear. and lie in small excavations in the bone. The interior of the specimen contains plates of bone, which divide into branches that join to form a spongy structure.

"The spaces between these bony plates contain fatty marrow, supplied with blood vessels in considerable numbers. The surfaces of the bone plates are covered with a layer of flattened cells. The bone is laminated, parallel to the surfaces, and contains bone corpuscles, regularly and typically arranged. Beneath the periosteal covering there are places where a few laminæ of bone appear to be younger than the rest, indicating bone production by the deeper cells of the periosteum. There are no indications of any recent or past inflammatory process in any part of the specimen, and the sections are entirely free from cartilage."

In other words, there is but little in the history of this case, and nothing in its intimate structure, to justify the belief that its existence depended alone on the injury that brought it to light. It seems to us quite probable that the injuries and the subsequent phenomena revealed the presence of a body of older beginning than either of the periods of traumatisms that divulged its presence. However, it is not altogether improbable that accelerated development followed the stimulus of the trauma.

It seems proper to say that the failure to expose the joint cavity, with the idea of exploring and noting the appearances in it of any corroborative evidence relating to cause and effect, bearing on the question of the genesis of the body, was rather the result, it is thought, of wise surgical discretion than of indifference or complacency.

The symptoms attendant on the presence in a joint of one or more of these bodies are chiefly dependent on the structure, and the use and function of the joint; likewise on whether or not the body be disconnected and freely movable, or be tethered by a long or short pedicle, also upon its size and shape. Those joints in which structural mechanism permit of the widest articular separation and of the most varied movements, and in which functional demands exact the support of burdens under varying degrees of movement, are the articulations that especially suffer from this form of infliction. The knee-joint presents the best theoretical illustration of the preceding varied causal requirements, and, practically, is the most frequently and seriously involved in this respect of any of the joints of the human economy. The shoulder-joint comes next in order, because of the same anatomical reasons, but suffers a lesser degree of infliction, because less frequently burdened in its movements, and, finally, is better protected from external violence.

At the risk of retailing well-known anatomical facts, I will remind you that when the leg is extended the articular surfaces of the knee-joint are firmly opposed and the ligaments uniting the surfaces are then taut, all for the purpose of establishing a firm support. In this position the possibility of lateral or rotary movements is entirely suspended in health. However, if the leg be slowly flexed, the fact is easily demonstrable that just in proportion to the degree of flexion the firmness and extent of the interarticular pressure are lessened, affording opportunity for correspondingly free rotation of the leg. These anatomical truths are of great practical importance in connection with the almost constant presence of backward displacement and external rotation of the head of the tibia in chronic knee-joint disease, when treated irrespective of a proper consideration of their clinical significance. Also, these changes in the relationship of the apposed articular surfaces aid in, and often are, the determining influences which lead to the escape of an offending movable body or defective cartilage from a position causing excruciating pain to the patient. It requires but a thought regarding the comparative relationship of freely movable detached bodies, and the immovable and tethered ones of a joint, to the ever-changing articular structure of one like the knee, to estimate their influences on the immediate use of the joint and the comfort of the patient, during functional activity. The symptoms of movable bodies in joints, especially the knee-joint, are readily recognized by those familiar with the language of this misfortune. An unusually abrupt, unexpected and often excruciating pain at a definite aspect of the joint (usually the inner), with sudden arrest of movement and fixation of the limb at the angle of attack, causing the patient (often suffering from nausea and faintness) to stand still or to lean against a convenient support until the acuteness of the pain lessens, or is entirely relieved by a studied or fortuitous movement of the limb, thus releasing the offending body from the environment causing the distress, is a familiar picture of this infliction.

Usually when the knee is thus attacked the leg is being extended from the flexed position characteristic of walking upon a level surface or ascending stairs. Rotation of the knee before the foot is firmly planted, sometimes causes the pain. This symptomatic picture is varied in the characteristic features in different cases and in repeated attacks, each usually severer than the preceding, followed by a correspondingly increasing traumatic reaction, until finally the joint itself becomes permanently incapacitated.

An extended consideration of the symptoms in their not infrequent and devious manifestations cannot be given now because of the limited time for the purpose. It is not always easy to determine the presence in a joint of a movable body, especially in the absence of the ability to feel with the fingers the object itself. And even when its presence is determined by palpation, the elusiveness of the freely movable ones often temporarily defeats rational efforts of removal. In these cases I am accustomed to advise patients to watch for evidence of its appearance, and when found to maintain quietude of the joint until competent assistance can be had to effect removal. In an instance of this kind, some years ago, I was hastily summoned to come prepared, the patient saying "I have cornered the little cuss at last, and wish it removed at once." Sure enough the patient was right, for I found him restraining, between the thumb and fingers a movable body, which he had again detected, and while maintaining the limb in the same position as when the offending body was noticed, called assistance for final relief. It was removed at once under local anæsthesia. The wound healed promptly and thereafter the patient was relieved from the infliction. In this instance the growth appeared to be fibrous and was attached to the synovial membrane by means of a pedicle, permitting quite free movement of the object. I am disposed to feel that it may not be unwise to pierce, under aseptic care, these bodies with a needle, thus assuring their site later when surgical aid appears. Such cases as these can be safely and satisfactorily removed under proper aseptic precautions. But when the object is free in a joint, and not within the grasp, then often detection and removal are matters requiring the exercise of wise surgical discretion. It is not easy, and sometimes is impossible, to detect in the knee-joint a freely movable body, unless of large size; in fact, large enough to prevent its hiding in not less than one of four marked synovial elongations of the knee-joint, to say nothing of the intercondyloid and interarticular fibrocartilage infoldings of this membrane. The making of a free incision into this joint for the purpose of removal of a supposed movable body should not be indifferently attempted, since the contingencies incident to the act may be of far greater import to the patient in such a case than is surgical inactivity. At all events, exploration should not be made until one is assured of the presence of an offending body by manipulative examination, or until after repeated attacks expose the patient to dangers equal in significance to those of the explorative operation itself.

The results of operative practice under the best regulated forms of aseptic procedure are practically devoid of danger to life and limb. However, the failure to employ a perfected technique invites the severest penalties of the omission which too often the patient alone is compelled to bear.

A FEW CASES OF PENETRATING STAB WOUNDS OF THE ABDOMEN.*

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This paper makes no pretension other than to relate a few cases which have come under the personal observation of the writer, and it is clinical only in its scope. No cases are quoted of wounds not penetrating the peritoneum. Although the abdominal cavity was entered in every patient, in only two were organs other than omentum or intestine exposed or injured. Once the liver was cut, and in another case the aorta was punctured. The patient with the wounded liver also had an extensive incision into the pericardium and probable laceration of the heart muscles and vessels, which was the primary cause of death:

The following cases are reported according to the date at which they were observed. They were all patients of St. Vincent's Hospital, except the last, who was seen by me at Bellevue Hospital only a few hours before she died:

Case I.—J. K., twenty-seven years old, longshoreman. September 20, 1896. Stabbed with an oyster knife; walked into St. Vincent's Hospital about six hours after the accident; condition markedly alcoholic; no symptoms of any injury. Examination showed an incised wound, one and one-half inches in extent, about three-quarters of an inch internal, to and above the right anterior superior spinous process. As the history was indefinite, the wound dry, and there were no indications of penetration into the abdomen or of injury of its contents, the wounded surface and surroundings were antisepticized, dressed with bichloride gauze, and bandaged. The patient was put to bed and treated for his alcoholism, although he had to be prevented by force from leaving the hospital, as he insisted there was nothing the matter with him. At 4.40 A.M., a piece of omentum having been discovered protruding through the wound, the patient was put under ether, the wound was enlarged to release the omentum, which was tightly caught, and the abdominal contents in that region were inspected. A piece of omentum, about the size of a silver quarter, was ligated and cut off. The peritoneal cut was closed with catgut sutures, and a small drain left at the lower end of the abdominal wound, which was closed above with catgut. The drain was removed in thirty-six hours. No reaction of any kind followed, and there was no pain, no vomiting, and no constipation. Discharged cured October 3, 1896. This patient was seen two years later, and there was no hernia.

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*Read before the Hospital Graduates' Club.

Case II.—E. M., forty-seven years old, barber; brought to hospital August 20, 1897, by ambulance; he had a feeble, rapid pulse, cold, clammy skin, and was in shock. He had been stabbed an hour before admission; a wound two inches long was in the right abdominal wall, and a small opening in the peritoneum; no hemorrhage externally or into the wound. The wound was irrigated with saline solution, the peritoneum sutured, and the external wound also closed with sutures. Discharged September 16.

Case III.—L. P., twenty-three years old, male, September 4, 1897. Brought in by ambulance; stabbed with a pocket-knife a short time before admission. There was a small wound in the right side of the abdomen entering the abdominal cavity. No symptoms except the clean cut wound one-half inch long. Antisepticized, sutured; discharged cured September 16, 1897.

Case IV.—B. O., male, thirty-two years old, longshoreman; July 26, 1898, in a desperate fight, was stabbed in several parts of his body. He had one wound in the left shoulder six inches long, another an inch long in the left fifth intercostal space, a two-inch long cut severing the left ninth costal cartilage from its rib, a similar wound on the right side, partially severing the ninth costal cartilage of that side, a wound three inches long over the sternum, a wound nine inches long on the outer side of the right thigh, and a punctured wound a little to the left and below the umbilicus, out of which protruded a piece of omentum less than three-quarters of an inch in length. When brought in by the ambulance, a short time after the injuries, he was in deep shock. Pulse 140 and feeble, respiration irregular and down to six per minute. Great pain in breathing, incontinence of urine and fæces, skin cold and wet. The omentum was cleansed and returned and the opening gently packed with gauze. The other wounds were closed with horse-hair sutures. His recovery was uneventful. He was kept on his back in bed for eight weeks. His temperature was never above 99.2°. He left the hospital cured.

Case V.—E. M., twenty-three years old, male, August 30, 1898. Brought in by ambulance for knife wound just penetrating the peritoneum. No other symptoms. The wound was antisepticized and gently packed with gauze. Patient discharged cured September 12, 1898.

Case VI.—F. A., male, twenty-seven years old, October 5, 1898, was stabbed with a pen-knife in the left inguinal region. Brought in by ambulance; slight pain and a little hemorrhage in the wound, which was controlled by gently packing with gauze; wound one-half inch long, nicking peritoneum; left open; ice-coil to the abdomen for forty-eight hours. Discharged cured October 15.

Case VII.—J. C., thirty-five years old, male. November 13, 1898. Stab wound in left iliac region midway along Poupart's ligament and a half inch above it; the wound was half an inch long. There were no symptoms. The usual treatment was followed, and a dressing was applied. Ice cap was kept on the abdomen for five days. Discharged cured.

Case VIII.—J. F., male, thirty years old. January 17, 1900. This patient was brought in by an ambulance in severe shock. He was stabbed in several places with a stiletto. There were three small punctured wounds in the epigastrium and a punctured wound in the sixth left intercostal space three and a half inches from the median line; the abdomen was tympanitic. The patient was conscious, suffering great thirst; with face pale and lips colorless; he was in shock, but the pulse and respiration were good. Exploratory laparotomy in the median line was performed two hours after admission. Three wounds of the liver were found bleeding freely; the cautery was used to arrest hemorrhage. An incision was made over the stab wound of the thorax. It was found to lead into the pericardium. A probe passed several inches to the bottom of the wound could be felt through the diaphragm. The probe moved with each cardiac pulsation. The abdominal incision was closed and sutured. The thorax wound was partially closed, a drain being left in at the lower end of the wound. The patient grew worse, the temperature slowly increasing, as well as the pulse and respiration. He died January 22, with temperature, 105°; Pulse, 166; Respiration, 42, just before death. Autopsy showed a few peritoneal adhesions. The pericardium was filled with clots, and the lungs were œdematous and much congested.

Case IX.—E. C., female, thirty-six years old, February 2, 1900. Was stabbed with a stiletto. She instantly became dizzy, but did not lose consciousness or fall. The hemorrhage was profuse, but had ceased when the ambulance arrived, although her garments and the bed on which she was lying were saturated with blood. On her admission temperature was 99.6°; pulse, 102; respiration, 24; she had considerable difficulty in breathing; the abdomen was tender and slightly tympanitic. There was a small punctured wound in the epigastrium one and a half inches to the left of the median line, a little below the ribs. A probe, passed under antiseptic precautions, went in easily over four inches, and was apparently free in the abdominal cavity. The abdomen was very thick and fat. Operation was advised but refused, the patient not permitting even the enlargment of the wound. This was antisepticized and dressed as usual and an ice coil was applied. On February 4 the wound had evidently united. Temperature, 101°; pulse, 96; respiration, 24; February 6, the temperature rose to 103°; pulse, 100; respiration, 26. No movement of bowels had occurred since admission; an enema resulted in the passage of a large formed stool. There was a marked point of tenderness in the abdominal wall to the right of the wound, which was increasing. The following day the wound opened and discharged considerable pus. The swelling and tenderness at once subsided. The wound was irrigated for several days until it closed up. The patient was discharged cured February 27, 1900.

Case X.—V. M., male, 24 years old, longshoreman. October 4, 1900. Brought in by ambulance in great shock; said to have been stabbed in the abdomen with a pair of scissors. Examination showed the patient in profound shock, but conscious. Respiration, 30; temperature, 97.6°; pulse, 100, feeble and weak, skin cold and clammy; pupils dilated. Five inches from the median line, a little below the right free border of the ribs, was a clean cut wound half an inch long with the omentum protruding. This was ligated and cut off. The patient's condition forbade further operation, and he died in a few hours. Autopsy showed profuse postperitoneal hemorrhage from a small punctured wound of the right side of the abdominal aorta about the level of the ninth dorsal vertebra.

CASE XI.—V. A., male, forty-one years old. Frenchman, laborer. Admitted October 22, 1900. The patient was stabbed in six different parts of the body in the evening of the day before admission to the hospital. He went to his room after the stabbing and remained there from 11 P.M. until three the next afternoon when he was brought to hospital by an ambulance. On admission he was very anæmic, but the pulse was fairly full and strong. Temperature, 99.4°. The following wounds were seen: One just below the ensiform cartilage, non-penetrating, in the median line; another just below the umbilicus; one in the left inguinal region, through which came a considerable mass of omental issue; one in the right inguinal region midway between Poupart's ligament and the umbilicus; through this protruded several inches of small intestine, covered with blood, mixed with fecal matter. The patient stated that this condition was present immediately after the injury fourteen or fifteen hours before. There were several irregular punctures in the intestinal wall, through which fecal matter was oozing. There were two other stab wounds in the left thigh. All the external wounds were about an inch long and quite deep. The exposed gut and omentum and the surrounding field were carefully antisepticized, the openings in the gut repaired with Lembert sutures and the omentum ligated and amputated. A median laparotomy was performed and the intestine drawn through the wound from within and carefully examined. No other wounds were found. It was necessary to enlarge the cut through which the intestine protruded, in order to release it. The patient's condition became very critical during the operation, the pulse becoming feeble and so rapid it could not be counted. Therefore the injured gut was brought into the bottom of the laparotomy wound and retained there by a piece of gauze. The wound was left open and dressed with gauze. The bleeding was constant from the right abdominal wound, but was controlled by a suture. This wound afterwards suppurated and made considerable local trouble, but as it was promptly and thoroughly drained it did not infect the peritoneal cavity. The other wounds were sutured, and healed by first intention. The operative wound healed by granulation. No fecal fistula resulted. The patient made an uneventful recovery, and was discharged cured on January 4, 1901. So far as I know, no hernia resulted.

CASE XII.—J. D., forty years old, female. December 28, 1901. The patient was brought into Bellevue Hospital by ambulance about midnight. She had been stabbed with a potato knife. Examination showed one wound over the left temporal region four inches long to the bone; one on the left forearm four inches long; one six or seven inches long on the outer side of the left thigh. All these cuts, except the temporal one, were an inch or more in depth at various points. The bleeding was controlled by pressure and the wounds were sutured. The abdominal wound was over five inches long, beginning a little to the right of and above the umbilicus and extending three or four inches below it, dividing the peritoneum to the full extent of the wound, so that when the patient was brought to the operating table several feet of intestines and omentum were outside of the abdominal wall. There was no wound of the intestine. This was brought out of the peritoneal cavity and its whole length carefully examined. The omentum was also intact. The contents were replaced and the abdominal wound was sewed up with the usual three rows of sutures. The patient was returned from the operating table at half past three in the morning, having been under ether about three hours. On admission her temperature was 99.6°; pulse 108; respiration, 36. At five o'clock the next morning, December 29, the temperature was 100.4°; pulse, 96; respiration, 30. The highest temperature that day was at 6 o'clock in the evening when it was 101.2°, the pulse at the same time remaining 96, and the respirations being 26. She vomited for the first twenty-four hours, apparently from the ether, but the vomiting was not frequent or severe. December 30 there was no vomiting, but the temperature gradually increased until, at 9 in the evening, it was 103.2°, the pulse remaining 120 all day, and the respiration varying from 36 to 42.

On December 31, in the morning, the temperature was 104.8°, the pulse 144, and the respiration 28. The patient had been given calomel in repeated doses, but without effect. A purgative enema was tried, but not retained. At eight o'clock that night the temperature was 104.8°, the pulse 150, and the respiration 42. She vomited twice during the day The vomited matter had no fecal odor. The abdomen was somewhat tympanitic, and not painful, but to the right of the umbilicus was a boggy feeling, which was slightly tender. There was no rigidity of the belly wall. A high enema was again given with no result. The abdominal wound had apparently united, except at the bottom where a small drain had been left in. The patient was still perfectly conscious, but in no pain, with the pulse getting very much worse at 10 o'clock in the evening. Respiration was rapid and not painful. In fact, the patient complained of no pain whatever in the last twenty-four hours; vomiting ceased, but from this time on the pulse grew rapidly worse, œdema of the the lungs began, and she died at 5.20 A.M., January 1, 1902.

Autopsy showed a slight adhesive peritonitis with a rather flat twist of the ascending colon. Beneath this twist was a hard piece of fecal matter, kept there by the muscular band of the cæcum leading to the appendix. The twisted gut was held in this malposition by the tension of the muscular band. The stomach, intestines, and the cæcum were all enormously distended. The transverse colon and the descending portion of the gut were completely collapsed.

In nine of the above cases recovery took place. Of the three patients who died two were, from the nature of their injuries, beyond operative help. The third, the last reported case, might possibly have had a better chance without the exploratory exposure, which seemed necessary at the time, because of the great extent of the external wound.

Two facts strike one at first in considering these cases. The absence of infective peritonitis and the immunity of the omentum and gut in such rather extensive wounds. It is fair to presume that the instruments inflicting the wounds were dirty. The garments which they penetrated were dirty, as well as the skin of the patients' abdomens, and these facts make the freedom from infection the more striking. Patient No. 12, who died, had few symptoms of peritonitis or of sepsis, but died apparently of volvulus and muscular paralysis of the bowel. The other two deaths can hardly be said in any way to have been due to infection. The immunity to infection in such cases is probably due to three causes: (1) The resisting and absorbing power of the serous sac of the peritoneum; (2) The possible cleansing of the instrument as it passed through the fibers of the garments, and (3) The fact that the instruments, as a rule, were polished instruments, and did not carry on their surfaces many or very virulent germs. The escape of the intestines from being wounded is explained by their great motility in the abdominal cavity, and the lubricating, slippery serous membrane which surrounds and protects them. Even in the patient in whom the stiletto had gone clear through the whole depth of the abdominal cavity, from the anterior wall to the aorta at the posterior wall, the intestines had not been wounded. In several of these cases the omentum or intestines or both had been exposed unprotected for hours outside of the cavity, yet these patients made a good recovery. Suppuration occurred only twice. In patient No. 9 a probe was used and, probably, pushed into and between the layers of the abdominal wall, a procedure (that of using a probe) which is not good surgery. The other case (No. 11) was one in which extensive bleeding was going on in the abdominal wound, and in which, owing to the desperate condition of the patient, I had no time, as in the other cases, to cleanse the wound thoroughly, nor to search for the bleeding vessels, but hurriedly passed sutures through both walls of the wound, thus securing the vessels and stopping the bleeding.

It will be noticed that in none of these cases of stab wounds were the kidneys, bladder, ureter, stomach, or any of the female genital organs involved, or if so they gave no symptoms, and with one exception, that of the aortic wound, there was no bleeding of any importance into the abdominal cavity. The hemorrhage was rather severe in three, but left no lasting effects.

A review of the above results shows that treatment depends much upon the knowledge of the instrument used in the injury, the condition of the patient, and the length of time since the injury took place, and not so much upon the extent of the abdominal wounds or extrusion of the contents; and requires judgment and common sense as well as expert surgical and anatomical knowledge and experience. From a study of these cases one might infer that in wounds made with a small instrument with a point or short cutting edge it is fairly safe to assume that no injury, or a slight one only, has been done to the abdominal contents, and if there are no symptoms pointing to such injury after the first six to eight hours I should be very much inclined to sew up the abdominal wound. It is well known that small injuries of the intestines will take care of themselves by reason of the prolapse of mucous membrane into the puncture or the collapse of the muscular and serous walls together over a wound, thus closing it, and furthermore the very rapid adhesions, which are thrown out in lacerations of the serous membrane, cover and protect the hole. I cannot but believe that if patient No. 12 had not been so theoretically well treated, by having the abdominal contents explored on the table for the period of time necessary for the purpose of examining them carefully, she would have had a better chance of recovery, although the indications were very carefully followed out according to the rules of routine surgical practice.

Regarding hernia as a result of delay in suturing the abdominal wall, I can say but little. In two of these cases I saw the patients several years afterwards, and neither of them had any hernia.

From careful consideration of the above cases, I should draw a few conclusions: A stab wound involving the peritoneal cavity is frequently followed by recovery without operation. In every case the wound, and the field near it, should be thoroughly antisepticized and kept so; an examination should be made with the cleansed fingers, if at all, and only to determine whether the wound penetrates the abdomen, and to ascertain if any injury has been done to the contents. If doubt exists about involvement of the organs it is better to bring the divided edge of the peritoneum into the wound, fasten it there, drain and wait. If the abdominal visceræ have certainly escaped damage, the wound should be closed by suturing the peritoneum, the muscles, and the skin and fascia in three different layers, catgut being used; or if the wound be long and gaps, a catgut running suture may be used for the peritoneum and silkworm in one layer for the skin and muscles. If there be grave doubt and the symptoms point to damage in the peritoneal cavity, the wound must be enlarged and a complete exploration made carefully; or, better still, a median laparotomy may be done exactly as in an examination of tumors of the abdominal cavity. The contents of this cavity should be examined, repaired, if necessary, and returned, and the opening then sutured, as before advised; or, if the damage be too severe, the injured gut or omentum should be brought to the wound and a drain inserted, in order that an exit may be given for a fecal fistula, if that misfortune happen. This last technique is similar to an operation for appendicular abscess or suppurative appendicitis.

If the gut is cut across, it must be united in any one of the usual ways. If the omentum is cut off from its intestine, so much of the intestine as is deprived of its blood supply must be resected. If symptoms of internal hemorrhage are present and increasing the indication is imperative to open the abdomen, find the origin of the bleeding, and control it.

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PROPHYLAXIS IN PNEUMONIA.

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The onset of acute lobar pneumonia is generally so sudden and without warning that but little time and opportunity is given to contend with and offset the forces at work. The pronounced chill at the inception of the disease, together with the rapid rise in temperature, accompanied by morning and evening variations, indicates a severe septic invasion not alone of the pulmonary structures, which present the chief physical signs of the disease and are primarily the avenue of infection, but of the whole constitution. It is just as illogical to call pneumonia a local disease, for the reason that the chief structural changes take place within the lungs, as it would be to designate diphtheria as such because the principal lesion is found in the throat. The poisonous products thrown off by the pneumococci are absorbed and circulate in the blood throughout the system, thus producing a general toxæmia, which shows its effect upon the entire organism.

The lungs, however, being the primary seat of infection, have to stand the brunt of the attack as the characteristic phenomena indicate. The respiratory and circulatory disturbance points to a toxic influence at work on the nerve centers governing those functions. It has been found that there is generally present a leucocytosis in pneumonia, and observers have stated that the greater the number of leucocytes the better are the chances of recovery; whereas in fatal cases a comparatively small number of leucocytes was the rule. The leucocytes are found in large quantities in the blood and also in the alveoli, together with red blood cells, epithelial cells, and fibrin. As the leucocytes are said to be capable of transporting foreign substances, poisons, etc., in the blood, it might be reasonable to suppose that the organism attempts to throw off the toxins by means of the leucocytes, which take up the poisonous material and find their way, by emigration, from the pulmonary capillaries into the alveoli, where they may be gotten rid of with the exudation by expectoration. The exudation into the alveoli seems to be nature's attempt at elimination. The spleen is usually enlarged in pneumonia, and, as this organ is thought to be the chief source of origin of the leucocytes, it is not unreasonable to conclude that its temporary hypertrophy is due to increased activity in the production of these corpuscles, which seem at this time to be in great demand by the economy.

The phenomena presented by acute lobar pneumonia give one the impression of two great forces engaged in battle with one another. With the occurrence of the crisis it appears as though one force had succeeded in subduing and overthrowing the power of the other, such as one might imagine would occur on an ordinary battle-field. If the antitoxic influence can be mustered by the economy in sufficient strength to counteract or destroy the power of the bacilli and their toxins, rendering them inert, it can well be seen how the toxæmic symptoms would suddenly subside. How otherwise can it be explained that cases of pneumonia, with practically no medication, go through all the toxæmic symptoms and then suddenly end by crisis and recover.

In fatal cases it is most probable that the respiratory and circulatory centers have become paralyzed by the action of the poisons in the blood. The dilirium and other mental and nervous phenomena, commonly present in pneumonia, all indicate a severe toxic influence at work on the brain and nerve centers. That the embarrassed respiration and labored pulse is not caused by obstruction in the lung tissue is well known from the fact that when the temperature has dropped to normal by crisis the respiratory and circulatory disturbance subsides, although the alveoli are still filled with the exudative products.

In view of the fact that fibrin is found in such large quantity in the blood, and the alveoli in pneumonia, and the belief that the leucocytes are an important factor in its production one might be led to suppose that the latter play a chief rôle in the attempt to repel bacterial invasion. Moreover, they rapidly diminish in number after the crisis. The condition after death, when the air spaces are found filled with pus and degenerated epithelial cells, shows what purulent influences have been at work. Then it appears to be a battle royal between the resources of the patient on the one hand and the poison-producing power of the bacilli on the other. When lobar pneumonia has gone on to the second stage and exudation has become well established, there is probably nothing that will prevent it from continuing on through its course. Before consolidation has begun or become firmly established, however, there is much that can be at least attempted. Some writers claim that it is possible to abort pneumonia, while others state that no drug or method of treatment known at the present time is successful. Probably there is no method which would prove to be infallible. The symptoms set in usually so abruptly and with so short an interval between the congestive stage and exudative stage that but little time is allowed in which to accomplish anything. In those cases, however, where the congestive stage lasts for some hours or days more opportunity is given to act.

It is difficult to understand what benefit such drugs as aconite and veratrum viridi can exert in the first stage of acute lobar pneumonia. They may succeed in diminishing the number of pulsations and the strength of the pulse by depressing the heart. They may also temporarily reduce the temperature. But the rise in temperature and the rapidity of the pulse are merely symptoms of infection. By weakening the force of the circulation the congestion in the lungs must be increased rather than diminished, for the blood passing more sluglishly through the capillaries would allow more or less stasis to occur, and, therefore, simply aggravate matters, while vigorous pulsations would send the blood more rapidly through the lungs and on to other parts of the body. Also by depressing the heart these drugs create a condition that occurs only too soon in pneumonia, and one which should be studiously avoided. What is the use of dallying with mere symptoms when we know that they are but signs of a deep-seated infection? The rapid and angry pulse and increased number of respirations simply indicate irritation of those respective nerve centers by bacterial poisons. The rise in temperature signifies increased chemical activity going on in the body, caused either by the action of the bacteria or the effort of the economy to destroy them. It hardly seems possible that aconite, veratrum viridi, or any other mere cardiac depressant ever shortened or benefited lobar pneumonia.

Knowing the microbic origin of the disease, the most rational mode of treatment undoubtedly consists in the administration of internal antiseptic agents, which, upon being brought in contact with the bacilli through the medium of the blood, may be enabled either to destroy them or at least to embarrass their growth and development and check the influence of their poisons. In this way we may be able to assist nature in her fight with the intruder. At any rate it is more satisfactory to feel that we are making some effort along rational lines rather than treating the patient entirely symptomatically or expectantly and leaving the whole affair to nature.

Several drugs have recently been advocated as prophylactic agents in pneumonia, by means of which the disease is said to have been either shortened, prevented, or favorably influenced, such as creasote, and the carbonate of creasote. The writer has had very good results with salol given in the first stage of pneumonia. In several instances it certainly cut short the disease and prevented consolidation. As solol is not broken up into its constituent parts before reaching the intestine there is no danger of its deranging the stomach, and it has no injurious effect upon the action of the heart unless given in poisonous doses.

Sternberg, in his "Manual of Bacteriology," says that in his experiments concerning the action of various agents on the pneumococcus he found that a 1 per cent. solution of carbolic acid destroyed the vitality of the germs in two hours, while a solution of 1 to 500 restrained development. A solution of salicylic acid, of the strength of 1 to 400, prevented development.

These facts show that the drugs named have a direct specific action when brought in contact with the bacillus, and while we may not be able to give them internally in such proportions or dilutions, it likewise does not seem to be necessary in order to obtain an inhibitory effect; for nature at the same time is undoubtedly making efforts in the same direction.

Salol was given at the earliest possible opportunity when the symptoms pointed to a commencing or threatening lobar pneumonia. Ten grains every two hours in adults seemed to work well, widening the intervals as the symptoms subsided. Among other cases were the following:

Mr. H., aged forty-five years, a conductor on the elevated railroad. He had a severe chill in the early part of the afternoon after having been exposed to falling snow and cold on the platform ot his car. When seen a few hours later his temperature was 103°; pulse, 120; respiration, 28. He complained of pain on the right side of his chest and of difficulty in breathing, and had a harassing cough, the expectoration being scanty and toward night slightly streaked with blood. A deep red flush showed on his cheeks and he was very nervous and excited. He had had pneumonia twice before and stood in perfect dread of it. On auscultation crepitant râles were heard over the middle portion of the right lung. He was ordered a saline purge, counter-irritation to the chest by means of a mustard plaster, and salol gr. 10 every two hours. At noon the next day his temperature was 100°; pulse, 90; respiration, 24. The day following his temperature was normal and continued so; pulse, 80; respiration, 20. He felt practically well, with the exception of a slight cough, which soon disappeared.

Amelia H., aged twelve years, had a severe chill followed by cough and fever. When seen there was copious expectoration of blood-streaked sputum. Her temperature was 102°; pulse, 110; respiration, 30. Crepitation over lower lobe of right lung. She took salol gr. 5 every two hours for the first few doses, then every three hours. She also took a saline purge and an expectorant cough mixture. The symptoms rapidly subsided, and in thirty-six hours the temperature and respiration were normal; pulse, 84. Blood still slightly discolored the sputum for two days and then ceased.

Mr. C. had a chill early in the morning, accompanied by nausea and vomiting. When seen, about 10.30 A.M., his temperature was 103.5°; respiration, 33; pulse, 100; pain on left side of chest; crepitant râles over apex of left lung; cough and expectoration. He was given salol gr. 10 every two hours. That evening his temperature was down to 101.4°; pulse, 90; respiration, 26. The following evening his temperature was 98.8° and the other symptoms had subsided.

A lady aged fifty-two years had a chill, followed by soreness in the chest, cough and expectoration of frothy mucus; also dull pain in back of head. Temperature 101.6°; respiration, 24; pulse, 90. Crepitation over left lung. She was given salol gr. 10 every two hours, and a saline purge. Temperature came down to normal in a few hours and other symptoms ceased. A slight cough lasted for about three days.

83 MONROE STREET.

Heart Disease in Children—The Syphilitic Factor.—William MacKenzie says that pericarditis and not endocarditis is the common lesion met with in the so-called pure rheumatic hearts. Indeed, in most of the cases that have died with heart failure, thickening and adhesions of the pericardium, and a healthy endocardium has been the rule. In the syphilitic patients the endocardium, and in no case the pericardium, was affected. In any child showing symptoms of early and rapid heart failure after the initial endocardial attack, a suspicion of lues must be entertained. Early dropsy is characteristic of the failure of the luetic cases with endocarditis, should the patients live long enough, and is, probably, largely dependent on syphilitic arteritis. Dropsy is not seen in the early failures of pure rheumatic cases. It is seen in the later failures as the result probably of a degenerative arteritis from malnutrition, is irresponsive to treatment, and too often ushers in the end.—*Intercolonial Medical Journal of Australasia.*

THE GENERAL COMPLICATIONS AND SEQUELLÆ OF MEASLES.

By ADOLPH RUPP, M.D.
NEW YORK.

UNCOMPLICATED measles only rarely and exceptionally kills the patient. Death ensues in consequence of the gravity of the complications from which the measles patients have suffered, and all the general complications and sequellæ are fortunately by no means grave and fatal all the time, and at all places. The experience of different individual observers, in different countries, at different times, differ and vary within wide limits. Measles epidemics have varied in their mortality rates from less than 1 per cent. to over 50 per cent. Taking all epidemics and all observers into account, we may say that not an organ nor a tissue of the body escapes the disease processes that complete the composite clinical picture of measles. But the tissue most eminently, frequently, and variously affected by measles, when complications are considered, are the mucous membranes and the organs into the composition of which they enter as integral parts.

Mouth Affections.—During the twenty years that I have been in private pactice in New York, stomatitis had been the only mouth complication that I have seen. It has not seemed to me an aphthous affection, but an exaggerated condition of what usually takes place. I have seen aphthæ and measles associated; and, when so, then the aphthæ were incidental and not essential or integral phenomena. Gangrene affecting the gums, cheeks, fauces tonsils, and tongue, is usually reported from hospitals, and occurs in cachectic children, who usually die. Diphtheria occurring in these parts is also reported. With the nasal and laryngeal complications severe congestion during the early stages of measles occur, but rarely nasal hemorrhages, and when this does occur it is very rarely of any serious significance. One of my cases, a girl three years old, had severe nasal hemorrhages during the end of the first week of measles, and died; but in her case there were besides bronchitis and bronchopneumonia. Diphtheria of the nose, as in the mouth, is rare; and diphtheria, says Jürgensen, does not show a great affinity for measles, although Hennoch, basing his assertion on what he saw at the Berlin Charite, says diphtheria shows a greater tendency to attack measles cases than the reverse. An observer's good or bad luck in these cases gives color to his opinions concerning the serious nature of these complications. Twenty years ago Hennoch was pessimistic regarding them. He saw eighteen cases of diphtheria affecting the upper respiratory tract among 204 cases of measles, and fourteen of the patients died, death being due to extension of the pseudomembrane into the larynx and bronchi. Embdem, on the other hand, in 461 cases of measles at Heidelburg, saw ten cases of pharyngeal diphtheria, and only one of the patients died, the diphtheria extending into the larynx. Embdem also reported six cases of laryngeal diphtheria, complicating measles, and all fatal. Rauchfuss in 1176 cases of measles saw diphtheria of the pharynx eleven times, pharynx and larynx combined nine times, and of the larynx alone thirteen times. The complicating diphtheria is usually painted in dark red colors; and it is said that when combined with measles its development and progress are more insidious than when diphtheria occurs alone. In private practice the combination is rare. I have on record two cases of combined nasopharyngeal and tonsillar diphtheria. One in a boy, the other in a girl, and both in the sixth year of life. Both recovered. The boy was given 1,000 units of antitoxin. The girl's case dates back to preantitoxin days. In the boy's case palatal paresis followed, but ultimate recovery was good. In both cases there had been croupal cough. When diphtheria can be excluded croupal symptoms, even when severe, need not dishearten us. Henoch's bad hospital experience taught him to be anxious, and he impressed his anxiety on others. Eustace Smith teaches, what many of us have often experienced, that during the early stages of measles the croupal cough and laryngismus may be out of all proportion to the catarrhal symptoms. This same complication may occur during the later or desquamative stage. Jürgensen tells us he has seen cases so severe as to keep the surgeons in readiness to perform tracheotomy, and yet the anxiety of bystanders, and the need of surgical interference was cleared away by means of a hot full bath.

Slight erosions of the mucous membrane of the posterior laryngeal wall have been reported by Gerhardt and Lovi, but, from a clinical point of view, they are of little pressing importance. Glottic and subglottic œdema are also reported, but this occurrence is rare. Ulcerations of the nasal and laryngeal cartilages are also rare occurrences, taking place during the later stages of the (measles) disease.

The Lungs.—The complications affecting the lungs are the most frequent, and are of most importance to the general practitioner, namely, the acute bronchitis of various grades of gravity, and catarrhal or bronchial pneumonia. In my experience suffocative attacks simulating asthma affect only few children during the early stage of measles. These attacks are said to be due to severe congestion of the mucous membrane of the bronchials. They occur in rickety children of a neurotic temperament or constitution.

More than half a century ago Gregory opined that over 90 per cent. of measles fatalities were due to pneumonia, and Jürgensen judiciously remarked that, on a basis of calculation not too extensive nor beyond dispute, the pneumonias complicating measles may be placed at about 33⅓ per cent.

At Keil (Jürgensen), in 1860, during an epidemic of measles, the chief cause of death was a peculiar state of the lungs; in parts collapse and specked with foci of purulent infiltration. Besides an intense croupal catarrh extended into the minute bronchial tubes. Taken all in all, the bronchopneumonias complicating measles do not vary from those occurring under other considerations. They may occur during any of the different stages of measles. Croupous pneumonia also complicates measles, but is rather an accidental than an integral or essential or sequential complication. Fibrous pneumonia is one of the rarer sequellæ, and so is tuberculosis. None of my measles patients, so far as I know, have developed tuberculosis as a result of measles.

Jürgensen, speaking from the view-point of a large and varied experience, says he has not often seen tuberculosis develop after measles, and he deemed it rather an accidental than an essential or integral complication of measles. Other observers, however, have believed or imagined measles to be a potent promoter of conditions which favor the development of all kinds of tuberculous diseases, military tuberculosis, joint tuberculosis, and pulmonary tuberculosis.

The complications affecting the digestive tract vary in severity and importance, and are not constant phenomena in all cases. Some have reported slight jaundice. A catarrhal condition of the mucous membrane of the alimentary canal may be present. Thomas reports a swollen condition of Peyer's patches which never develop into ulceration, and which seem to disappear as cutaneous desquamation advances. Colitis of all grades are reported, associated with diarrhœa, even ulcerative hemorrhages. When diarrhœa lasts for any considerable length of time after convalescence should have been established, Jürgensen is of the opinion that in such cases other special disease germs are at work. The kidneys rarely suffer. And little importance need be attached to small quantities of albumin found in the urine. Atkins, quoting Parkes, writes that during an epidemic of measles at Leith, in 1854, recoveries from measles were most speedy when the albuminuria was greatest.

The vulvæ are on very rare occasions attacked with gangrene, and also very rarely by diphtheria. Dawson Williams teaches, from hospital experience, that "inflammation of the vulva with mucopurulent discharge is a frequent complication of measles in strumous children." This complication in private practice is rare in the city.

The serous membranes are rarely affected during measles, or in consequence thereof. Pleurisy is a very rare complication, and, as a rule, secondary to, and located usually over the seat of bronchopneumonia. Endocarditis is rare, and pericarditis rarer still. The heart muscle itself is not affected by the measles virus, says Jürgensen, but, during an epidemic at Wurzburg, it was believed that this did occur—that is, hypertrophous dilatation."

In Pepper's "System of Medicine" Hardaway reports that Chadbourne found heart-clot, and subsequent pulmonary œdema, the cause of a number of deaths, where pneumonia processes had not existed in the course of measles. Chadbourne found these heart-clots of a gelatinous character, extending into the pulmonary arteries, and Keating also found heart-clots in measles cases, the formation of which he attributed to the work of Micrococci which were seen in the blood, and white blood-corpuscles.

Some observers teach that measles have a causative influence in giving rise to synovial and rheumatic joint diseases. Dawson Williams again tells us, what very few of us here in New York have observed, that a subacute peritonitis occasionally occurs as a late complication of measles, and is found chiefly in girls. The amount of fluid may be sufficient to considerably distend the abdomen; but, fortunately, this fluid is absorbed in the course of a few weeks.

Toward the end of an attack of measles the lymph glands in different parts of the body may become inflamed and enlarged, and the bronchial glands may become caseous or tuberculous. The late John T. Metcalfe long ago reported an interesting case, in which the deep lymphatics of the neck became so enlarged as to compress the deep jugular vein, and this caused death. But serious glandular diseases directly due to measles are extremely rare occurrences, even when the adjacent mucous membrane has been made the seat of more or less severe disorder. According to Biermer and Williams, severe and obstinate attacks of bronchial asthma, after measles, may be due to enlarged bronchial glands pressing on the vagus nerve.

Other glands, like the spleen and liver, may become temporarily enlarged, but they give rise to no symptoms. Rotch, however, tells us that the thyroid glands may become acutely affected in the course of measles, and to the extent of making breathing difficult; but the difficulty passes away in a few days. He also says that the cases sometimes advance to suppurative and partial destruction of the glands.

The nervous system, during and after measles, becomes variously affected, but the more serious complications and sequellæ are extremely rare. Convulsions at the onset of measles, even when they seem serious and repeat, as a rule end favorably.

I saw convulsions of a serious character usher in an attack of measles in a strong, temperate, and otherwise healthy man, twenty-eight years of age. This man was quite sick during the course of measles. During later stages of measles convulsions may precede the development of other complications, such as bronchopneumonia.

Herbeden mentions a case of functional nervous disturbance which is unique, but interesting. "The patient was seized with a spitting on the day of the eruption which continued to tease him for forty-eight hours, without suffering him to rest at all during the day, or sleep at night; the cough in the meantime almost ceased, and all the other symptoms were as mild as in a favorable sort of measles."

Tremors and great nervous depressions, developing in the course of measles, accompany and are due to other organic complications of some kind, as pneumonia, and its secondary manifestations. This depression may end in coma. Such a case is recorded by Heberden; this child became comatose on the third day of the eruption and died the next day. We are sometimes taught that complications coming on during the eruptive stage of measles are not usually significant or dangerous. Whatever may be said, each case, along with its complications, is a problem in itself. When pneumonia and bronchitis are complications, oxygenation becomes deficient, and carbonic acid toxæmia depresses nerve centers of various kinds, so that œdema of the brain ventricles may develop. (Jürgensen) An attack of measles may end in mental torpor, and even in a state of mind simulating dementia. Chorea and tetany, hemiplegia (Osler, Gowers), muscular atrophy, ascending myelitis and disseminated myelitis have, from time to time, been attributed to an attack of measles, not by the general practitioner, but by specialists, who seem satisfied with the etiological factor, but which to some others seem rather far-fetched.

Concerning the blood changes and its complications, which measles engender, very little seems to be positively and definitely known.

Cabot teaches that in mild cases no changes occur at all. Comparatively few red blood cells are lost. During the eruptive stages there is usually no leucocytosis—in this respect differing from scarlet fever, diphtheria and roseola. In toxic attacks of measles the blood is wanting in coagulability, and the walls of the blood vessels are diminished during the fever. In complicated cases it is said that the fibrin becomes slightly increased, but this assertion does not tally with what other writers found, a lack of coagulating power of the blood, which caused George B. Wood about fifty or more years ago to surmise in a cursory way that measles is a febrile rather than an inflammatory disease. In the first edition of his book on children's diseases, Hennoch mentions the case of a child that felt well and was uncomplaining, although its measles was associated with purpura and bloody stools. Cocci have been found in the blood of complicated measles, but patient investigation has not yet discovered an indisputed specific microbe.

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EYE COMPLICATIONS OF MEASLES AND THEIR TREATMENT.

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In common with other mucous membrane linings and investments, that of the conjunctiva is prone to inflammation during the course of measles.

The following may be mentioned: Conjunctivitis, simple or mucopurulent; further and additional complications; blepharitis; blepharospasm; hordeolum, and keratitis.

Simple conjunctivitis is a constant concomitant of measles, and shows itself before the eruption; there is a redness of the conjunctiva, due to congestion; a rather copious lachrymal flow, and some photophobia; accompanying this there is sneezing, more or less violent. With ordinary care and cleanliness this usually gets well in a week or two; warm water cleansing, bathing the conjunctivæ with boric acid solution and using a bland oil or vaseline between the lids to keep them from gluing together; not infrequently parents have the notion on account of this conjunctivitis that a dark room is necessary, and so exclude the light by closing the shutters and pulling down the shades; there is no need of this; while a subdued light may be grateful to the little patient, it is never necessary to altogether exclude light and air, so needful to both ill and well. In this mild and so common form of conjunctivitis simple remedies are all that is needed.

There may, however, be a more active inflammatory process, a mucopurulent conjunctivitis; here the reaction is more pronounced; more redness and injection of the conjunctiva, the blood vessels of the palpebra and ocular conjunctiva more injected; a more copious discharge, at first watery, changing to a mucous or mucopurulent character; there may also be some redness and swelling of the lids and pain, with photophobia; here more active treatment will be required; frequent cleansing with warm water, bathing with boric acid or borax solutions, and where there is swelling of the lids, ice cloths for a half hour three or four times a day; also a bland oil or white vaseline between the lids; this serves a double purpose, that of a grateful lubricant, also to keep the lids from sticking together; in these acute cases it is very rarely necessary to use an astringent; most acute diseases have a tendency of their own to get well. To use an astringent would be adding fuel to the flame. Silver, copper, zinc, or even the mild alum solution or stick are not indicated during the acute activity of this conjunctivitis, nor is atropine necessary unless the cornea is endangered, or has become the seat of inflammation. A picture at times presented is the following: as the result of a rather severe discharge, of a mucopurulent nature, and from lack of cleanliness and ordinary care, crusts of dried secretion form on the lids and cilia, the lids are glued together, the child being unable to open the lids; so it is not uncommon to hear it reported that the child was blind for so and so many days; here, by soaking the dried secretion with warm water and cleansing and vaseline, one may get the credit of restoring sight to a blind patient.

Blepharitis is only to be mentioned in passing. While not an immediate complication, it is at times a persistent sequelæ of measles; there remains a redness of the edge of the lids, which if continued will result in thickening; there is also a dry, scaly exudate; all this gives the eye a peculiar characteristic appearance. Treatment, hot water applications to reduce the congestion; a mildly stimulating ointment, preferably the yellow oxide of mercury, 2 grs. to 1 oz., applied once or twice a day. These cases are generally benefited by internal tonic treatment; cod liver oil, the hypophosphites, etc. Particular attention should also be given to the hygiene of the patient; personal cleanliness, proper feeding, and proper sleeping accommodations.

Blepharospasm is also to be mentioned in this connection, either accompanying or resulting from the acute conjunctivitis or that form of keratitis observed with measles. This blepharospasm, a spasmodic contraction of the orbicularis, may be more or less severe and persistent, and is usually a rather troublesome condition. The relief for this condition consists in treating the cause, whether in the conjunctiva or in the cornea; also the forcible separation of the lids, divulgence similar to other sphincters; either with the fingers, or the lid retractors, being careful in either instance to have no pressure made on the globe; internal treatment in these cases is also of great importance.

Hordeolum-Sty.—Just a word of this. As the result of the inflamed conjunctiva, one or several of the glands of the lids also take on an inflamed state; this is characterized by a local swelling, gradually extending, followed by a pointing of the resulting abscess; here, when pus has formed, hot water applications will usually open the abscess and allow the discharge of the pus; where this does not happen, the evacuaton of the pus may be hastened by wrapping some cotton about the two blades of an ordinary dressing forceps; catching the sty between these, forcibly squeezing it, will empty the inflamed sac, and so bring about recovery; this, though somewhat painful, is a speedy method of relieving the condition.

We now come to the more serious and dangerous complication to be considered in this paper, keratitis, either of its own initiative, or as a result of extension of the conjunctivitis, or of its long-continued course, cornea involvement results; here we have a more serious disease to handle, one that may lead to a permanent crippling or disfigurement of the cornea. Though, fortunately, rare, it is met with in a certain number of cases: in children of a constitution weak by nature or run down from some previous disease; in children with poor hygienic surroundings, improperly or under fed; in children of parents of the very poor, and in those ignorant of the laws of health and hygiene. Keratitis may be slight and the patient get well quickly; or the recovery protracted, the deeper layers of the cornea attacked, destruction of cornea tissue resulting in a corneal ulcer.

The before-mentioned symptoms of conjunctivitis being present, it will be noticed that the photophobia and pain continue; the child avoids the light and will bury its face in the pillow; there is lachrymation perhaps; some mucopurulent discharge; the photophobia is at times an aggravated and aggravating symptom; the child will resist the separation of the lids to allow an inspection of the cornea. Right here a word of caution is, perhaps, admissible. In attempting an inspection of the cornea, be sure to make no pressure on the globe of the eye; it may be that a corneal ulcer is on the point of breaking through; a thin layer of cornea tissue, perhaps Descimet's membrane, the most posterior layer, may only just keep the aqueous humor from evacuating; it will be no pleasure, on a successful separation of the lids, to have the aqueous fluid bursting through the cornea, spurting up, fountain-like, perhaps into the face of the observer; so making no pressure on the globe, previously drying the skin of the patient with cotton, and putting the thumb of one hand over the lower eye-lid, with the ball of the thumb resting on the bony part of the orbit below, we make the pressure on the bone pull the lower lid down; and at the same time place two fingers of the other hand on the upper lid, resting the fingers on the rim of the orbit above, and pull the lid up; at times it will be necessary to catch the margin of the upper lid with the points of the fingers. This manœuvre is best accomplished with the child's head resting on a towel between the knees of the observer. This procedure will usually expose the cornea for examination. The lid retractor is not to be recommended, except in the hands of those accustomed to its use.

But to return to our subject. The cornea being involved, the photophobia and blepharospasm continue; photophobia, fear of light, being a rather constant symptom of keratitis. On separating the lids, a spot of infiltration of the cornea will be seen; this will appear of an opaque character, more or less extensive, and may show itself at any part of the cornea, there being no one point of the cornea more liable to involvement than another; under treatment this may resolve and the patient get well; or the infiltration continue, the cornea break down and cornea ulcer result; the pupil will be contracted, pain complained of, lachrymation is present. When the ulcerative process is severe in turn, the several layers of the cornea become involved and destroyed, and, finally, only the posterior lining membrane exist; this from the intraocular pressure may be pushed through the necrosed cornea, and present as a shining watery vesicle; may burst and the anterior chamber be evacuated; the iris is now well forward on the cornea and danger of adhesion is great (anterior synechia); often this synechia is permanent.

As an ulcerative condition anywhere always involves destruction of tissue, so here; in the healing process that part of the cornea destroyed by the ulcer is replaced by cicatricial tissue, which is always of a white, opaque color and is permanent, thus causing a disfigurement as well as a crippling of the organ. In the treatment of cornea inflammations ice is not admissible, because of the danger of cutting off the circulation; but rather hot water should be used; taking a small towel or napkin, or pledget of cotton, dip it in very hot water, as hot as the hand will stand, apply it to the closed eye lids for a period of ten or fifteen minutes every two or three hours.

Atropine is indicated here. The writer's rule is to instill a two-grain solution into the eye frequently (every hour) until the iris is well dilated, care, of course, being taken to avoid poisoning; after that use the atropine often enough to keep the pupil dilated, say two or three times a day; the reason for this being to get the iris away from the anterior capsule of the lens, to avoid synechia posterior; also; if perforation of the cornea should result, the iris is in the most favorable position; also atropine in these cases has a local soothing effect. Boric acid cleansing for the discharge and white vaseline between the lids can be used as needed.

It will not be necessary to put the little patient into a dark room; air and light are excellent tonics; if the photophobia is a prominent symptom the light may be subdued. Much depends on constitutional treatment in the management of these cases; proper feeding of the patient comes first; tea and coffee and sweets are to be absolutely interdicted. Plain, simple, nutritious diet, mostly milk, to be ordered; baths, both sponge and tub; attention to cleanliness and personal hygiene; bowels to be kept open.

Tonics Internally.—In the writer's experience cod liver oil is one of the best for children, and most children take it kindly. The syrup of the iodide of iron may also be given to good advantage; special attention must, however, be given to the feeding of the patient, as on this may often depend the recovery of an eye, the seat of ulcerative keratitis, a complication or sequelæ of measles. To recapitulate those considered in this paper: (1) Conjunctivitis, simple or mucopurulent, blennorrhœa; (2) blepharospasm; (3) blepharitis; (4) hordeolum; and (5) keratitis, superficial, diffuse and ulcerative.

162 East Forty-sixth Street.

CEREBRAL ABSCESS.*

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Case I.—In January, 1889, I was called to see M. E. C., aged twenty-four years, Muscatine, Ia., who, for six years, had had suppurative inflammation of the right middle ear. Seven days previously the discharge from the ear had suddenly ceased, and cerebral symptoms rapidly developed and grew serious; pulse 40, respirations 12 per minute, temperature normal. I diagnosed cerebral abscess, and advised immediate operation. I first saw the patient at 11 P.M. It was decided to await the arrival of Dr. Morgridge, the family physician, on the 7 A.M. train. The operation was then postponed, as slight indications for improvement were noted. The case showed slight variation in its course, with a practically normal temperature all the time, for seven days, when death occurred. No post mortem was obtained. That death was due to cerebral abscess, I have not the slightest doubt.

Case II.—January 20, 1901, I was first called, by Dr. R. L. Cashburn, to see Miss Mary C. of Carthage, Ill., aged twenty-five years. For five years she had had suppurative inflammation of the left middle ear. During this time she has had slight occasional attacks of headache and earache, relieved by purulent discharge. January 8, 1900, she consulted Dr. C. for earache and pain in left side of head. January 14, pain was worse, and Dr. C. was called to the house. She was seen by him daily thereafter. Temperature and pulse practically normal. Some slight mental hebetude at times. When first seen by me, January 20, 1900, pulse was 72, temperature 99°. No pain, mind clear, pupils equal and readily responded to light. No motor disturbance. Refused operation for lack of evidence of grave lesion, though Dr. C. insisted that she had, a few hours previously, presented symptoms of cerebral compression, which he believed due to cerebral abscess. Fetid pus, in small quantities, exuded from the middle ear through perforation in the drum membrane. The meatus was so badly swollen as to interfere with free drainage. At 7 P.M., January 22, the pulse was 66, temperature 99¾°. There was spasm of the muscles of expression, and the patient had been comatose for fourteen hours. Operation was immediately performed. I trephined one inch above and one-half inch behind the meatus auditorius extermus. The dura was found bulging, without pulsation. The abscess was opened at a depth of one-fourth inch, and discharged about three ounces of fetid pus. I inserted three-inch drainage tubes, which became choked with cerebral débris, and were removed in a couple of days. Cerebral hernia was marked, and much cerebral tissue was lost. Consciousness was soon regained, and retained until February 17, 1900, when the patient suddenly became unconscious, with twitching of the muscles of expression. She was comatose for sixteen hours, and evidently moribund. I immediately opened up and cleared out all the mastoid cells opening into the attic, and to the tip of the mastoid process, then evacuated an abscess containing two ounces of pus from below and in front of the old abscess cavity, and drained as before. Improvement was now steady; the wound gradually closed, and the patient seemed well, save for a discharge from the ear, and irritation in the auditory canal. The cicatrix was firm, without any tendency whatever to bulging. During May, 1900, while I was away from home, Dr. Maxwell did some minor operation for relief of irritation in the auditory canal. July 27, 1900, I removed two sequestra of necrosed petrous bone from the auditory canal. One was the size of a grain of wheat, the other one-fourth by one-half inch, and very irregular. This large mass was removed without anæsthesia. The patient made rapid and complete recovery, and she remains well at this writing, December 4, 1901. She has all her faculties unimpaired, save hearing, which is entirely lost on left side. Motion, coordination, sensation, as well as memory, as good as before, according to report of Dr. C. and relatives of the patient.

Case III.—O. P., aged twenty-six years, of Elvaston, Ill., seen August 30, 1901, with Dr. C. A. Runyon. Had middle-ear disease on the right side for one and one-half years. For four months had indisposition for exertion and tendency to melancholia; for six weeks had been considered seriously sick with typhoid fever. For four weeks he had shown evidence of serious cerebral disturbance, and absence of the old discharge from the ear. Was at times maniacal, and intolerant of all restraint. Emaciation was pronounced; paralysis almost complete on left side for four days; temperature 98⅗°, pulse 72 for four weeks. Had been taking nourishment well for several days, and operation was postponed for relief from the cerebral abscess, which was diagnosed, in the hope of making some gains in his physical condition, which was precocious in the extreme for any heavy surgical procedure. Mind clear, but sluggish in action. September 7, 1901, had convulsion, and died in a few moments.

The report of the post-mortem examination by my first assistant, Dr. W. G. Doern, and Dr. C. A. Runyon, September 7, 1901, is as follows:

"O. P., Elvaston, Ill. Body greatly emaciated. Rigor mortis marked. Scalp peeled away from incisions made from one mastoid process to the other. Cap of skull removed with saw. Upon removal of skull cap, dura mater was found engorged with venous blood. Area, about two inches in diameter, over temporosphenoidal lobe, bulged about one-fourth inch beyond general contour of brain. With rougeur, gnawed away bone down to right mastoid process, and proceeded to remove brain from before backward. Upon separating attachment of dura to right petrous portion, pus was evacuated from abscess. Upon removal of brain, found opening one-fourth inch in diameter in the roof of tympanum. Walls of tympanic cavity covered with soft granulation tissue; tympanic membrane almost entirely destroyed. Tympanic cavity had been filled with cotton by undertaker. Mastoid cells not involved. Opening was through dura mater directly over tympanic cavity, on right side, the margins of which were firmly attached to the petrous bone. The first abscess cavity was filled with about four ounces of yellowish white pus; had no distinct fibrous wall ruptured in removing brain. The second abscess presented, in the margin of the cavity of first abscess, as a fibrous sac about one inch in diameter, also contained about one ounce of yellowish white pus. Abscess was surrounded by an extensive area of degeneration. The degenerated brain tissue appeared as a white semi-solid mass, which gradually shaded off to normal brain tissue. The left side was apparently normal. The right temporosphenoidal lobe practically entirely destroyed. The ventricles were not examined."

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* Read at a meeting of the Iowa Union Medical Society, December 10 and 11, 1901.

Two of these cases make me feel that all was not done for their relief that should have been done. In the first case I was free of blame, for I urged operation, which was declined. In Case III. I was culpable for not urging immediate operation, but erred in judgment. I wish to urge that, in every case of middle-ear disease in which cerebral symptoms develop, accompanied or not by suppression of the discharge from the ear, the skull should be opened and search made for an abscess. If the search be properly made, no harm will result. A small director or good-sized hypodermic needle, with a point well rounded, so it will displace rather than cut, can be passed into the brain, straight, almost any number of times, without serious harm. In every case of suspicion of involvement of the mastoid, it should be opened thoroughly, starting with the attic, and, if need be, continuing backward and downward to its extremest limitations, to evacuate all infected areas. In such cases severe cerebral symptoms will, at times, be permanently relieved, and trephine operations above entirely obviated.

Case IV.—Guy F., aged ten years, of Leighton, Ia., referred by Dr. Payne, August 29, 1901, four years ago had scarlet fever with middle-ear disease as a sequel. Discharge was continuous, until, fifteen days previously, it abruptly ceased. Temperature ran up to 105° F. Large swelling occurred about the ear, extending down, on to the neck, over the mastoid, and far up over the temporal region. This was opened and drained by Dr. P. There was great tenderness on pressure. The parotid and cervical glands were enlarged. The facial nerve was paralyzed. On August 29, 1901, the mastoid was freely opened by me, and large mass of granulation tissue and necrosed bone removed, the granulation tissue being cleared out also from the tympanum. The sigmoid sinus was exposed for at least an inch, but not lacerated. Severe cerebral symptoms developed, ten days later, and continued for four days, which led to preparations for trephining; but free spontaneous discharge of pus through the wound gave immediate relief, and recovery was thereafter uninterrupted. The facial paralysis has entirely disappeared.

Serious consequences could be avoided in many, if not all, of these cases of middle-ear disease, if the membrana tympani was removed sufficiently to provide free drainage. The dangerous complications arise from granulation material filling the tympanum, and plugging the drainage point through the perforation of the tympanic membrane and auditory canal, leading to meningitis, thrombosis of sinuses, abscess in the cerebrum or cerebellum. For the above reasons the tympanum must always be kept clear of obstructive granulation tissue.

"Spotted Fever" in Montana.—A disease is prevailing in Bitter Root Valley, Mont., the nature of which is not known, but which has caused considerable alarm because of its great mortality, nearly every case having terminated fatally. The State Board of Health is now making an investigation to determine the nature and cause of the malady.

A REPORT ON EXPERIMENTS MADE WITH CARGILE MEMBRANE, FOR THE PURPOSE OF DETERMINING ITS VALUE IN PREVENTING THE FORMATION OF PERITONEAL ADHESIONS.*

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On March 8, 1900, I received from Dr. Charles H. Cargile of Bentonville, Ark., a package of what he called "sterilized animal membrane," and with it a letter requesting me to give the material a trial in the field in which Senn's omental grafting would be of service. Dr. Cargile wrote that his experimental tests had not been conducted among sufficiently favorable surroundings to bring out the practical value of the idea. The form of animal membrane that he had chosen was a particularly thin gold-beater's skin, made from the peritoneum of the ox. It had been subjected to heat-cumol sterilization by Mr. Kilmer of the firm of Johnson & Johnson, and was prepared in the form of a folded sheet in a sealed paper package. Shortly after receiving the material I applied it in a case of pyosalpinx, for the purpose of keeping separated peritoneal adhesion surfaces apart. The patient was of the sort that disappears from view after leaving the hospital, and the matter dropped out of mind until December, 1901, when I had a particularly troublesome case of extensive recurrent adhesions, following a peritonitis from appendicitis.

An operation for the purpose of separating adhesions had been done previously, and at that operation the whole of the adherent and disorganized omentum had been removed. The long stump of omentum again became adherent, in spite of the application of the aristol film method of treatment, and the patient was becoming a morphine habitué, though a woman of strong will and definitely opposed to the use of drugs for the purpose of relieving her discomfort. After separating the adherent stump of omentum, strips of the Cargile membrane were applied over all surfaces that had lost their covering of endothelium. It was observed that the membrane became intimately adherent at once, and that it appeared much like a normal peritoneal covering. The abdominal incision healed by primary union, and the subsequent relief from adhesion complications was so well defined that I planned a series of experiments in order to settle several questions that naturally came to mind. It was important to know how long the Cargile membrane resisted absorption, what became of it eventually, and to know if the membrane itself added any element of danger in the application. In order to make the experiments cover a wider range, I asked to have some chromicized membrane, and also some sheets of thicker vellum prepared. It was assumed that a material for preventing the formation of peritoneal adhesions should be unirritating, that it should be sufficiently durable to resist absorption until enough time had elapsed to allow new endothelial cells to cover denuded surfaces, and yet not so durable as to stimulate the peritoneum to encapsulate the mass. Further, it should not furnish an introduced culture medium for saprophytes.

The experiments were made upon rabbits at the Physiological Laboratory of the College of Physicians and Surgeons, where the facilities for research work planned by Dr. John G. Curtis furnished opportunity for proper detail work.

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*A paper read at the meeting of the Surgical Section of the New York Academy of Medicine on April 14, 1902.

The assistants were my associate, Dr. L. A. di Zerega and Mr. John T. Hoyt. The same general course of procedure was adopted with all of the rabbits. An animal having been anæsthetized, the fur was removed cleanly from the abdomen by means of an antiseptic depilatory. Normal saline solution was employed for cleansing purposes in the course of operative work. Hands and instruments received the customary aseptic preparation.

The abdominal incision was closed with catgut or with silk, as specified in the notes, and the wound line sealed with collodion. Typical specimens removed at various times later were given to Dr. A. J. Lartigau, who prepared them for examination to determine the ultimate fate of the Cargile membrane in the tissues. A separate report will be made upon this part of the investigation.

Ten of the twelve rabbits were apparently little disturbed by the operative work. One rabbit died while under the influence of the anæsthetic. One rabbit suffered from the effects of bichloride of mercury poisoning, as stated in a subsequent note.

The following experiments and observations were made:

January 15, 1902.—Rabbit No. 1. Adult, white male. Colon scarified with a needle over an area about one and one-half inches square. Cargile membrane applied over the scarified area and sutured in place with a suture of fine silk at each angle. Abdominal wound closed with No. 1 silk.

Rabbit No. 1, killed three days later. Observation: Primary union of the abdominal wound. Membrane and surroundings lightly adherent to all near-by peritoneal surfaces with loose, transparent coagula of lymph. Membrane area of colon apparently contracted to perhaps four-fifths of its normal dimensions. The membrane seemed to be incorporated in the bowel wall, excepting at one point, where a bleb, about as large as a pea, containing lymph, was elevated above the common level. Question: Are the abundant lymph coagula finally absorbed, or will they remain to cause permanent adhesions?

January 15.—Rabbit No. 2. Adult, gray male. Question: Will Cargile membrane seal in an infected area, or will it become itself infected, and add an element of danger? Experiment: Incision about one-quarter inch long, made through colon wall. Fecal matter allowed to escape. Opening closed with a Lembert suture. Fecal matter wiped away, but no special cleansing done. An area of colon round about the incision scarified for an area of about one and one-half square inches. Cargile membrane applied, and held in place with four silk sutures. Abdominal incision closed with silk.

Rabbit No. 2, killed one week later. Observation: Primary union of the abdominal incision. Membrane area contracted to apparently three-fifths of its normal dimensions. No peritonitis. No adhesions round about the site of the membrane, excepting one unimportant thread. Membrane intimately incorporated in bowel wall, excepting at a point directly over the colon incision, where a small bulla raised above the surface contained a clear lymph coagulum. Conclusion: Membrane can wall in an infected area without itself becoming an added culture medium.

January 15.—Rabbit No. 3. Adult, white male. Question: Can the membrane seal in a necrotic area of bowel? Experiment: An area of colon wall about one and one-half inches square was rubbed with a tablet of bichloride of mercury. Membrane was applied evenly over the injured area, excepting at a small space left purposely exposed for comparison. Silk closure of abdominal wound.

Rabbit No. 3, killed three days later. (It was intended to keep him for a week, but the animal was evidently suffering from bichloride of mercury poisoning, and was very ill. An incidental note may be of interest in the fact that this ill rabbit seemed to be almost chloroform proof, and several minutes' exposure to chloroform vapor, with practically no admixed air, was required.) Observation: Intense general peritonitis. Large, firm, opaque lymph coagula about the margins of the membrane held it in place, and there were loose adhesions at various points in the peritoneal cavity, together with much free serum. The membrane was not adherent to or incorporated in any part of the colon wall. Superficial necrosis of all of the bowel wall that had been exposed to the action of bichloride of mercury. Conclusion: An inflammatory process may be sufficiently marked to prevent the adherence of the membrane, and in that case the membrane would remain for some time as a loose foreign body in the peritoneal cavity.

January 15.—Rabbit No. 4. Adult gray and white male. Question: What becomes of membrane allowed to remain loosely in the peritoneal cavity, without the lymph adherence furnished through scarification of peritoneum? Experiment: A strip of membrane three by one and one-half inches, fastened to colon by two silk sutures at one end, allowing the remainder of the strip to hang free. No scarification of peritoneum. Abdominal incision closed with silk.

Rabbit No. 4, killed five days later. Observation: Primary union of abdominal incision; membrane lightly adherent to various loops of bowel by a few loose transparent lymph coagula. No evidence of other disturbance of peritoneum. Conclusion: Membrane undergoes practically no change during five days of exposure, and its presence is not a source of much irritation to the peritoneum. In so small an animal as a rabbit a foreign body of the size of this strip of membrane used in the test would naturally appear to be rather formidable, and the absence of more extensive evidences of irritation caused by its presence seems to be significant.

January 22.—Rabbit No. 5. Large white pregnant female. Question: Will the membrane prevent the formation of the common and troublesome adhesions which form along the line of suture after some of our simplest abdominal operations? Experiment: Incision in middle abdominal line, three inches long. To the right of the line of incision the peritoneum of the abdominal wall was scarified for a width of one-half inch and a length of three inches. A strip of membrane three inches long and two inches wide was laid upon the subjacent loops of bowel, and the abdominal incision closed with large silk sutures (No. 3), which were allowed to extend so far over the peritoneal surface that local adhesions would have been assured under ordinary circumstances. In addition to using coarse silk, the silk was allowed to trail over the fur of the rabbit, in order to introduce a moderate degree of sepsis.

Rabbit No. 5, killed forty-five days later. Observation: Abdominal incision firmly closed, but carrying several foci of infection with nodules of encapsulated cheesy pus. No adhesions anywhere within the peritoneal cavity. The silk sutures plainly visible beneath what appeared to be new and normal peritoneal covering. Where nodules of suppurating foci had projected within the abdominal cavity, their surfaces were covered benignly with normal-appearing peritoneum. No sign of the membrane remaining, excepting opaque blotches upon the bowel wall, at which points the membrane had evidently adhered during the progress of its absorption. Conclusion: The membrane can serve to prevent adhesions between bowel and abdominal wall, under a most severe test.

January 22.—Rabbit No. 6. Small brown female. Question: If loose adhesions form, as in experiment with rabbit No. 1, are these adhesions soon absorbed? Experiment: Scarification of an area of colon wall about one inch square. Segment of membrane two inches long by one and one-half inches broad, applied without sutures. Abdominal incision closed with small catgut.

Rabbit No. 6, killed forty-five days later. Observation: No adhesions and no trace of membrane remaining. A single short string of lymph dangled from the abdominal wall. Conclusion: The membrane can protect against such adhesions as would certainly form after scarification of the bowel wall under ordinary conditions, and no evidence of the presence of the membrane was left at the end of forty-five days in this case.

January 22.—Rabbit No. 7 took the anæsthetic badly and suddenly expired under its influence.

January 22.—Rabbit No. 8. Medium-sized white male. Experiment: Repetition of experiment with rabbit No. 6, but observation made at the end of ten days instead of at the end of forty-five days.

Observation: Primary union of abdominal incision. Loose, transparent adhesions about the site of the membrane, including parietal peritoneum and that of bowel near by. Membrane intimately adherent to the scarified area of bowel wall, and succulent looking, but apparently not as yet becoming absorbed. Conclusion: The membrane resists absorption for considerably more than ten days.

February 1.—Rabbit No. 9. Large brown male. Question: How does chromicized membrane behave in the peritoneal cavity? Experiment: Scarification of area of colon wall one inch by one and one-half inches. Chromicized membrane applied to scarified area without sutures. Abdominal incision closed with catgut.

Rabbit No. 9, killed thirty-six days later. Observation: Primary union of abdominal incision. One trifling string of adhesion near membrane site. Membrane area barely distinguishable, the material apparently smoothly incorporated in bowel wall or absorbed completely. (Pathologist's report will describe this specimen.) Conclusion: Chromicized membrane probably possesses no advantages or disadvantages as compared with simply prepared membrane.

February 5.—Rabbit No. 10. Large brown male. Repetition of experiment with rabbit No. 9.

Rabbit No. 10, killed thirty-six days later. Observation: Primary union of abdominal incision. No peritoneal adhesions anywhere. Membrane area elevated above the surrounding peritoneal level, but the membrane apparently benignly incorporated in bowel wall. Conclusion same as with rabbit No. 9.

Rabbit No. 11. Adult white male. Repetition of experiment with rabbit No. 1, with longer time observation.

Rabbit No. 11, killed thirty-one days later. Observation: One unimportant adhesion thread remaining near the scarified area, but the membrane evidently absorbed, excepting for a loose tag hanging from the bowel. This latter was succulent-looking, and was probably a part of the membrane that had not become engaged in the scarification lymph, and was probably undergoing absorption more slowly on that account.

February 5.—Rabbit No. 12. Large brown male. Experiment: First, a repetition of experiment with rabbit No. 11. In addition, an intussusception of ileum was made by touching the bowel with carbonate of sodium, and when the intussusception had formed the area was surrounded with a strip of membrane.

Rabbit No. 12, killed thirty-one days later. Observation: Primary union of the abdominal incision. No peritoneal adhesions. Scarified area of colon barely distinguishable. Intussusception area of ileum much thickened, and the peritoneum grayish in appearance at that point, but the intussusception had not progressed, and the Cargile membrane had left no sign of its presence unless in the gray coloring of peritoneum.

Remarks: The fact that suppuration occurred in the one case only in which it was intended that it should occur, is evidence of the care given to aseptic details by my assistants. Cargile membrane seems to resist absorption in the peritoneal cavity for more than ten days and less than thirty days. Its presence apparently causes the formation of temporary loose adhesions, which are harmless, and which become absorbed for the most part in less than thirty days. The membrane seems to cause very little disturbance to the peritoneum, it does not furnish a good culture medium for bacteria, and it protects areas of peritoneal surface that have suffered injury to their endothelial covering, until new endothelial cells have repaired the injury without involving neighboring peritoneum.* It is not necessary to suture the membrane in place, as it becomes instantly adherent to moist surfaces, and is not readily dislodged afterward. In this connection it may be well to give warning against handling the material with wet hands or instruments.

In addition to the experiments in the peritoneal cavity, I have applied the membrane for a variety of purposes in wound treatment. As an animal membrane it seems to be particularly agreeable to the tissues of open wounds. It serves as an excellent conductor of epithelium when placed next the wound beneath absorbent dressings. It is not impervious to moisture, and in that regard possesses advantages over gutta-percha tissue or silver foil. In brain surgery the membrane adheres closely to exposed brain tissue, and it makes a very good *dura mater* for temporary purposes. It can be used to keep severed and sutured tendons from uniting *en masse*. I have had no opportunity to employ the Cargile membrane in plastic eye surgery, as few of these cases get to my clinics, but from our knowledge of the value of this material as a conductor of epithelium and of endothelium it would seem to offer advantages in this special field.

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* The pathologist's report will show whether new endothelial cells or new connective tissue cells conduct repair.

Case of Saddle-Nose Treated by Subcutaneous Injection of Paraffine.—Scanes Spicer reports the case of a woman with a well-marked tip-tilted saddle-nose with stunting of the nasal framework. Sterilized paraffine was injected, with the result of a very palpable bolstering up of the skin over the bony bridge of the nose, and the formation of a very decent-sized organ. The operation was done ten months ago, and the nose remains in the same state as when first injected. The paraffine used was a mixture of hard and soft paraffine, made to melt at 105° F. Ten or twelve syringefuls were injected under the skin, some downward over the nasal bones, some upward from the sides of the nose into the depressed gap, and the injected paraffine was moulded by an assistant's fingers, so as to shape the part before setting.—*The Clinical Journal*, April 9, 1902.

Black-water Fever and Quinine.—P. Reinhard takes exception to the treatment employed by de Celio in the case recently reported by him. In such cases it is certain that the continued administration of quinine is absolutely contraindicated, since it has been amply demonstated that black-water fever is due to the poisonous effects of quinine. The cardinal principles of treatment in this condition are, first, heart stimulation, and, secondly, the production of an abundant diuresis by the administration of large quantities of fluids. Black-water fever is not so fatal a disease as is generally supposed, when it is properly handled as above indicated. The author, while stationed in Africa, observed seven severe cases of this disease, only one of which terminated fatally, and this one was complicated by a severe form of tropical dysentery. After returning from Africa, Reinhard, himself, was seized with black-water fever as the result of the ingestion of quinine, but entirely recovered therefrom when treated in the manner here described. Especial emphasis should be laid upon the immediate discontinuance of quinine as soon as hæmoglobinuria appears. It is best that the patient should never again take this drug, although it may be resumed after months, if absolutely necessary, and if its administration is conducted with great care.—*Wiener klinische Rundschau.*

The Clinical Significance of Leucocytosis in Pleurisy.—John T. Hewetson finds that suppurative pleurisy produces a very definite leucocytosis of the polynuclear finely granular variety. Pent-up suppuration, of the usual pyogenic character, is almost constantly associated with a leucocytosis. Not only is there a great increase of the white blood-corpuscles at the seat of the inflammation, which act as the first line of defence, but there is also a pronounced increase of the circulating leucocytes which act as the reserve force, upon which further demand may be made. This general leucocytic increase can be accurately measured without the least difficulty, and it follows so closely the precise progress of the local suppuration that its regular estimation furnishes an important clinical guide in the study of this common surgical malady. In many deep suppurations, especially those associated with abdominal organs, the labor entailed by examination of the blood would be amply repaid. More than one of the cases reported by the author had vague and obscure symptoms, and were regarded as tuberculous and beyond the pale of surgical resource until this aid to diagnosis was employed. There should be a more frequent use of the Thoma Zeiss hemocytometer in surgical practice.—*The Birmingham Medical Review*, April, 1902.

"Solar Cautery" in the Treatment of Cancer, Lupus and Other Malignant Growths.—O. V. Thayer says that during a practice of more than forty years he has not known or used any remedy to be compared with solar heat in its curative power. In the treatment of morbid and malignant diseases these tisues must be most fully destroyed or carbonized. Upon this depends the success of the operation. The tissue must be thoroughly desiccated by applying the solar heat for only five or ten minutes at one time—this dries out the fat, blood and serum. After waiting a short time for the part to cool, the application is renewed and continued from time to time until the object is accomplished. In the treatment of cancer and allied diseases by the use of concentrated sun's rays, we possess a remedy at once safe and curative, attended with little pain and inconvenience. Not more than twenty or thirty treatments are required. The wound soon heals with little trouble, and the skin is, in great measure, restored to its normal condition. The author reports several cases of malignant growths successfully treated with concentrated sun's rays.—*Pacific Medical Journal*, April, 1902.

The Neuropathological Aspects and Neurotherapy of Marasmus Infantilis.—Charles H. Hughes offers the following therapeutic precepts: (1) A clean prima viæ, as aseptic as may be practicable without harm to the patient; (2) Assimilable nutrition by mouth and skin; (3) Normal blood pressure restored with normal salt solution per rectum and subdermally; (4) Judiciously regulated hyperthermia slightly above the normal for ordinary infants, and adapted to the vitality of each case. Regulated light. (5) Cautious, general, cerebrospinal and enteric electrotherapy, to stimulate cell activity, central and epithelial. Special sanitary environment, with a slightly ozonized air, and certain aromatized inhalants and condiments; (6) Such attention to the skin as will best promote its vitality as an absorber of oxygen and as an exhalant and eliminant. Vicarious and otherwise transmitted and awakened nerve-center energy. By inference, powdering of the skin and rough rubbing would be excluded, while moderate and gentle warm cutaneous friction would be indicated.—*St. Louis Medical Review*, April 12, 1902.

The Etiology of Typhoid Fever.—Thomas Cherry concludes (1) That many mild cases of fever, often classed as febricula, are slight attacks of typhoid, and may serve to distribute the contagion; (2) Typhoid fever itself may be a composite disease, or series of diseases, caused by closely allied organisms; (3) While, from the bacteriological evidence, the *de novo* origin of the disease is not disproved, still, a general survey of all the known facts enables us to explain most cases without having recourse to this hypothesis; (4) Typhoid fever at once disappears from a community with the introduction of a proper system of disposal of excrement and household refuse. In towns this can best be done by a properly constructed water-carriage system of sewerage; (5) The disease is spread chiefly by the contamination of water, milk and other articles of food. In hot countries at least, flies and dust have a share in bringing about this contamination; (6) The length of time during which the bacilli can exist outside the body is unknown. There is evidence to show that the contagion hangs about old cesspits and contaminated soil for several years.—*Intercolonial Medical Journal of Australasia*, March 20, 1902.

Electric-Light Conjunctivitis.—Harold B. Grimsdale describes the case of a laborer who, while engaged in repairing an arc lamp which was giving light all the time, noticed during the process that the after image of the lamp was very troublesome. When he reached home he was attacked by great photophobia and lachrymation, but there was no blepharospasm. Visual acuity was found to be 6–18. The cornea was clear and bright; around its margins, however, were a few small papules, such as often indicate the first stage of phlyctenulæ. Cocaine and cold compresses overcame the photophobia in about twenty-four hours, and the lachrymation and injection yielded to boric acid within a few days. The author also reports several other cases. The conjunctivitis is probably due to a disturbance of the nervous system, and especially the vascular centers, by direct stimulation of the afferent nerves, or else the rays must cause some chemical change in the conjunctiva, whose products act as strong irritants, producing the local inflammation. The former is the more probable.—*Medical Times and Hospital Gazette*, April 12, 1902.

Acquired Deaf-mutism Probably Due to Impacted Cerumen in the Ear.—Mayo Collier reports the case of a child that, at the age of three, had appeared to be deaf and to lose the power of uttering intelligible sounds. Nothing in the history pointed to any antecedent inflammation in the ears. Examination showed only impacted cerumen, which was syringed out. The ear was then politzerized. The drum membranes were found to be contracted and opaque, but otherwise healthy. Almost immediately the child began to show an appreciation of sounds and very shortly to resume its speech. Recovery was soon complete.—*Journal of Laryngology.*

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TEMPERANCE AND TOTAL ABSTINENCE.

THE MEDICAL RECORD has always been an earnest advocate of temperance and has oftentimes drawn attention to the hurtful influence of intemperance regarded from the standpoint of the surgeon and the physician. The fact is too generally recognized to need emphasis, that an individual who has been accustomed to consume alcohol in excessive quantities is a bad subject to be visited by either sickness or injury, and that by such habits he has very considerably prejudiced his chance of a quick and favorable recovery.

The case against inebriety or even against the habitual and constant use of stimulants is clear and conclusive, and few, if any, scientific men of the present day would venture to defend the habit when indulged in freely. Nevertheless, there is a wide distinction between temperance and abstinence. Many extreme advocates of total abstinence hold that under no circumstances is alcohol of value, and that a person at all times, in sickness or in health, is better without it.

This question within the past few years has given rise to arguments and discussions of almost interminable length, not untinged with a certain degree of acerbity. The propagandists of total abstinence have been, like most reformers, dogmatic in their assertions and characteristically impatient and contemptuous of the opinions of those who hold opposing views.

However, a final decision has not as yet been reached and, probably, at the present time, the greater number of physicians believe rather in a moderate indulgence in alcoholic beverages at certain times than in entirely abstaining from stimulants of this nature on what is termed abstract principle.

The late Sir James Paget, who was a man endowed with an eminently sane and well-balanced mind, has given among his essays, recently published by his son, a well thought-out presentation of the subject. Since the time the paper was first issued—more than twenty years ago—opinions on the use of alcohol have undoubtedly undergone a change, but upon the whole a large proportion of medical men will find that the English surgeon's views do not widely differ from their own.

Sir James Paget in part said: "As for the opinions of the medical profession, they are, by a vast majority, in favor of moderation. It may be admitted that, of late years, the number of cases has increased in which habitual abstinence from alcoholic drinks has been deemed even better than habitual moderation, but, excluding those of children and young persons, the number of these cases is still very small, and few of them have been observed through a long course of years, so as to test the probable influence of a life-long habitual abstinence. Whatever weight, then, may be assigned to the balance of opinions among medical men, it certainly must be given in favor of moderation, not of abstinence."

The advocates of total abstinence have always made a great point of the assumption that the taste for alcohol is not natural but artificial or acquired, but have never been able to exactly state the strict definition of the word natural in this respect.

Sir James Paget claims that our natural state is that in which we now live; the present state is to each race of men, if not to every one man, the natural state—the state attained in the natural course of development. In this state men are disposed to drink alcoholic liquids, and the presumption must be that these drinks are beneficially adjusted to some of the conditions of our life, which have been obtained in our development from some less civilized or completely savage state. Considering how largely our nature has been changed from that state by the gradual developments of society and by the various habits, dispositions and capacities therewith associated, it is in the highest degree probable that, with these changes, we should have beneficial adjustments of different foods or other means of sustaining us in our work. Among these may be reckoned the greater part of the comforts, and what may now seem to be the necessities, of our civilized—that is, our natural—state, such as wheaten bread, potatoes, cultivated fruits and nutritious meats; and, similarly, among them may be considered,—unless there be clear reason to the contrary—such things as tea, coffee and alcoholic drinks, and even tobacco, though, probably, only for much smaller groups of men. Doubtless all these things are used by some persons in a mischievous excess, but so may be bread and cheese. With the advance of civilization and the consequent development of the human race, our manner of living, eating and drinking has adapted itself to our new environment.

The vegetable kindgom provided sustenance to the primitive man, and water was his sole drink, and he, probably, thrived well, but this does not prove that the same diet would be better for an individual of our generation under entirely different conditions.

Again, if drinking produced in a race the fearful evils which its opponents claim, and knowing to how great an extent the descendants of the intemperate suffer through inheritance, would not the bad results of moderate drinking have become strikingly evident. But such does not seem to be the case. At the present time the heirs of the moderate drinkers are, in bodily and mental vigor, superior to the heirs of the abstainers. Further even than this, the heirs of the races said to have been hard drinkers in times gone by are still in the van of progress and civilization. Abstinence enthusiasts argue that if a large amount of alcohol does great harm a smaller quantity must necessarily do harm to a lesser extent. Sir James Paget points out that the facts are the other way. Large quantities of quinine will make a man, at least for a time, deaf and blind; smaller quantities may do nothing of the kind, but may cure his ague; and yet smaller doses may leave him with his ague and all his senses unaffected but may improve his appetite. One quantity of arsenic may kill any man; another much smaller may strengthen him or cure his neuralgia or some disease of his skin.

The conclusion arrived at by the distinguished English surgeon was that there was not sufficient evidence to make it probable that a moderate habitual use of alcoholic drinks was generally, or even to many persons, injurious; and that there were sufficient reasons for believing that such an habitual use was, under certain conditions, beneficial.

Attwater in this country, Reid in Great Britain, and many scientists of Europe, have, during recent years, gone deeply into the question of the value or otherwise of alcohol to man, and have gathered from laboratory investigations and tests much more accurate information on the subject than was available at the time when Sir James Paget wrote. Nevertheless, there is by no means, even now, unanimity of opinion as to its physiological action, or its effects through heredity, and, perhaps, the calm, judicial and common-sense manner of regarding the use of alcohol manifested by Sir James Paget may not by many physicians be, as yet, regarded as out of date.

BERIBERI AND THE QUESTION OF DIET.

A REPORT received at the War Department from Captain Harry A. Littlefield, assistant-surgeon, on duty at the military prison of Lingayen, Pangasinan, Philippine Islands, treats of the apparent effect of diet upon the occurrence of beriberi among the native prisoners. The report says:

"Since the establishment of this prison until February 1 of this year the native prisoners have been supplied with Chinese white rice. During this time beriberi has been markedly endemic in the prison. The records of this office show that the number of deaths have averaged about five monthly, while the number of new cases was about twelve. When prisoners reported sick with beriberi they were removed from the prison to a building about one-half mile distant. The upper story of the building was used as a hospital, the difference in conditions existing at the beriberi hospital and the prison being only the higher elevation of the former. The diet supplied was the same at both places. Many of the patients at the beriberi hospital continued to grow worse and died. The majority of those who recovered did so after long illness and many of them suffered from numerous relapses. During the month of January there were thirty-five patients in the beriberi hospital and as many more in the prison were slightly affected. The sanitary conditions were excellent. In the civil prison, not more than one-fourth of a mile distant, there was confined a large number of natives and the sanitary conditions were not so satisfactory as those in the military prison. They were more crowded, in poorer buildings, and were not in the open air more than the natives confined in the military prison. In this prison there were no beriberi cases, the only difference existing in favor of the civil prison being in the ration, which was purchased in open market. In the beginning of February of this year, upon the recommendation of the prison surgeon, the use of the Chinese white rice, which is supplied by the commissary, was discontinued, and native rice from the open market purchased in its place. Since this change no new cases of beriberi have developed among the military prisoners and no deaths have occurred. The mild cases which were in the prison have all recovered. This marked change occurred in the period of one month, and the only apparent difference existing during this period and previous times was that of the rice supply. From these facts it would seem that the cause of beriberi in this prison has been brought about by the use of the Chinese rice, white variety."

There is much strong clinical evidence in confirmation of Assistant-Surgeon Littlefield's belief that the character of the ration, particularly in relation to its rice constituent, has much to do with the occurrence of beriberi, even though many good minds hold to the idea that the disease is communicable under certain conditions not as yet fully understood.

In the Japanese Navy beriberi was for many years the most potent cause of sickness, disability and death among the sailors. About a decade ago the Japanese naval ration was changed, the quantity of rice cut down one-half and barley substituted therefor. Since the time of the change in this ration beriberi has practically been absent from the Japanese Navy, only a fraction of 1 per cent. of the cases occurring which formerly were present with the full-rice ration. In Java the Dutch have found that beriberi is less liable to occur with a diet of red rice than of white rice; and in French Cochine China, outbreaks of the disease in prisons and among gangs of railroad laborers have been abruptly checked by cutting down the rice constituent of the diet and increasing the nitrogen and fat intake by substituting beans and fat meat therefor. If the infectious nature of beriberi be assumed, it may be that invasion by a specific organism can only occur in the presence of a certain dyscrasia and lowered vital resistance, depending upon an improperly balanced diet.

Investigation into the chemical composition of the food materials used by natives in the tropics, with careful study of their dietaries, would very possibly give valuable information in connection with the occurrence of beriberi, plague, and the other tropical diseases, which select their victims largely from the natives, and pass over the whites living at a higher nutritive level, but otherwise under similar conditions.

A Yale Professor Sued for a Mistaken Identification.—A swindler was working New Haven some weeks ago, leaving packages of worthless drugs at the houses of physicians while they were absent and collecting money for the same from the servants who received them. Among those victimized was Dr. O. T. Osborne, Professor of Materia Medica and Therapeutics at the Yale Medical School, and, seeing a man some time afterward at the railroad station whom he supposed to be the swindler, had him arrested. The man was locked up over night, but discharged the following morning for lack of evidence, and now sues Dr. Osborne for $10,000 damages for false imprisonment.

THE VOLCANIC ERUPTIONS AT MARTINIQUE AND ST. VINCENT.

THE awful calamity attending the volcanic eruption at Martinique and the death of over 30,000 victims within a few seconds, stands unparalleled in history. The incidents, as described by survivors, exceed in horror anything that can be reasonably imagined. The wholesale slaughter can, however, be accounted for by the complete death-dealing conditions that prevailed. With a storm of fire, seething mud blazing cinders, stifling gases, and overpowering smoke, an entire population was stricken with almost instant death.

The majority evidently met their fate by suffocation from sulphurous fumes, carbonated and sulphureted hydrogen, and the carbonic oxide gases. It was seemingly, and for the most part, asphyxia primarily and burning subsequently. Many of the corpses found were face downward, with hands to mouth, as if the last act was to guard against the inhalation of mephitic vapors. Death under such circumstances is almost instantaneous, and virtually painless. The contemplation of this fact offsets, in some slight degree, the dire and awful results of the tragedy. Very many were, doubtless, burned to death by the overwhelming flood of lava, and the torrents of blazing cinders, but even under such circumstances it is a relief to believe that the agony was short.

It is not surprising to learn that the decomposition of the bodies has been rapid, as such is the rule when there is mere charring of the surface, and when incineration is not complete. The serious problem, from a sanitary standpoint, is the rapid disposal of this frightfully large accumulation of decaying animal matter. It can, with truth, be said that the town is virtually uninhabitable until the débris is properly disposed of. Cremation is obviously the most expeditious means to such an end, as was proven in the recent Galveston flood. Another plan, almost equally expeditious, would be that of wholesale burial at sea. The most difficult task of all, however, will be the necessary separation of the bodies from the molten piles of cinder débris, so that they can be properly destroyed by fire, instead of being, otherwise, only partially consumed under protecting heaps of ashes.

The St. Vincent disaster, occurring simultaneously with that of Martinique, and evidently due to the same subterranean disturbances, was attended with much less loss of life, but in most of the victims, so far as can now be learned, death was due to burns from the lava.

THE TREATMENT OF CONSUMPTION IN HIGH ALTITUDES.

The Sanatorium treatment of pulmonary tuberculosis has now gained so firm a hold in the estimation of medical men that it seems rather curious to consider that but a few years ago the method was almost unknown.

Davos Platz in the Switzerland Alps was, perhaps, the first place in Europe to win a reputation as a health resort for those afflicted with respiratory complaints, and it was not until 1870 that its fame came into prominence.

At the present time Davos is visited in the winter season by a larger number of weak-lunged persons than any locality in the world, and there are also a goodly quantity of invalid visitors in the summer.

According to the New York *Evening Post*, Davos was visited last year by 7,000 Swiss, an equal number of Germans, 3,000 English, and only 300 Americans.

The late Robert Louis Stevenson had something to do with rendering Davos popular, for during two winters he resided there, deriving much benefit from his sojourn.

Davos not only stands at an altitude of 5,000 feet above sea level, but is exceptionally well sheltered by natural barriers, besides which, in the winter, the air is still.

There are a number of sanatoriums and hotels, all constructed on the most approved plans. The treatment is such as is followed in the German sanatoriums—air, rest and food—and the benefit to health obtained from strictly proceeding upon these lines is said to have been remarkable in the case of a very large number of phthisical persons.

To a certain class of consumptive patients the effects of residing in high altitudes is beneficial in a marked degree, and no country in the world presents better opportunities for pursuing this mode of treatment under the most favorable conditions than does the United States. The mountainous districts of Colorado and other parts of this continent provide ideal situations for treating tuberculous subjects by these means, and it is strange that more advantage has not been taken of the natural gifts of America. Considering everything, the sanatorium system has not been pushed as it has deserved to be, and especially is this true with regard to the mountain regions.

This view of the case may be commended to the attention of millionaire philanthropists as well as to those who might wish to embark in the project from commercial motives.

COMMITTEE OF THE AMERICAN PUBLIC HEALTH ASSOCIATION TO INVESTIGATE THE ARMY CANTEEN SYSTEM.

The Executive Committee of the American Public Health Association recently passed a resolution recommending the appointment of a special committee to prepare and publish, at an early date, a pamphlet for public circulation, containing the resolution of the Public Health Association in favor of the army canteen, together with a concise statement of the data upon which this action was based, and definite references to the original sources from which such information is obtainable; such pamphlet to be issued in the name of the association.

This recommendation was made in view of the fact: (1) That an important function of the American Public Health Association is to educate the public in matters of hygiene; (2) That the action above referred to is in disagreement with the ideas of a very large number of good citizens; (3) That this is a possible opportunity of securing their understanding of the action of the association, and, it is to be hoped, their intelligent coöperation in taking successive steps toward the betterment of existing conditions.

In compliance with the above resolution, the following representative committee has been appointed:

Chairman, Dr. C. A. Lindsley, ex-President of the American Public Health Association; Secretary, Connecticut State Board of Health, New Haven, Conn.

Members: Dr. Geo. M. Kober, Professor of

Hygiene, Georgetown University, Washington, D. C.; Dr. S. H. Durgin, ex-President of the American Public Health Association, Health Officer of Boston, Mass.; Dr. Helen C. Putnam, Providence, R. I.; Dr. Jefferson D. Griffiths, late Chief Surgeon, U. S. Volunteers, Kansas City, Mo.; Mr. Henry Lomb, Rochester, N. Y.; Dr. J. H. Huddleston, Surgeon, National Guard, State of New York, New York City.

It is understood that this committee will go fully into the causes which led up to the establishment of the canteen system in the army, the results of this system as observed during the decade of its existence, and the effect of its late abolition upon temperance and morals in the military service.

The Case of Hospital Nurses.

Hospital nurses during the past two or three years have been severely criticized from various quarters, and as a class have been subjected to scathing indictments. In the United States the conduct of the nurses in certain hospitals constituted a public scandal, and it was loudly proclaimed by some reformers that the only way to place affairs upon a satisfactory footing was to dispense with the services of male nurses and to permit women alone to have the care of the sick.

This plan, however—judging from accounts from Great Britain—would by no means necessarily ensure the best results. Grave dissatisfaction with the manner in which nurses on the other side fulfill their duties has of late been widely expressed in the English public press.

Miss M. F. Johnston in the *Nineteenth Century* discusses the matter from the English standpoint. The writer freely allows that most of the charges brought against nurses are justified by the facts of the case. The English nurses, as a body, are callous and indifferent in their behavior towards patients and do their work in a perfunctory way, and with a marked lack of human interest. They are far too apt to regard patients in the light of cases, interesting as medical or surgical studies, but otherwise of no particular concern.

Miss Johnston's diatribes are more especially directed against nurses sent to do duty in private houses, where, she declares, they are often more of a nuisance than a benefit, and are wholly inconsiderate in their demands and offensive in their general behavior, while their callousness to suffering and the indifference they display, even in the hour of death, amount almost to brutality. The nurse recognizes that she is mistress of the situation, and frequently abuses her position to the utmost limits.

There is, nevertheless, another side to the question, and although the shortcomings of the nurses are undeniable, yet it is after all more the fault of the system than the individual. Hospital nurses in Great Britain are systematically overworked, and it may also be added underpaid. They work seven days in the week and are seldom given a rest, and as probationers are compelled to do menial labor, more or less degrading to a moderately cultured or refined woman.

But the greatest of all the drawbacks to a British hospital nurse is the lack of thorough training and of efficient supervision. No one is actually responsible for her capability as a nurse when her apprenticeship is over, and consequently it is somewhat of a lottery as to whether she is well-trained in her duties or not.

The remedy for this condition of things would be obviously the establishment of training schools for nurses, a certificate from which would be a guarantee of efficiency.

News of the Week.

The Southern Medical Association of Manitoba.—At the annual meeting of this society, held at Brandon on February 26, the following officers were elected: *President*, Dr. L. M. More of Brandon; *Secretary*, Dr. Little of Alexander; *Executive Council*, Drs. Poole of Neepawa, Goodwin of Elkhorn, Thompson of Douglas, and Macdonald and McDiarmid of Brandon.

Suit Against a Physician for Revealing a Professional Secret.—A man in Rochester, N. Y., who was sued for $25, the balance of an unpaid bill, by his physician, has brought a counter suit for $5,000 for alleged breach of professional secrecy. In the complaint of the physician was a paragraph asserting that the services were rendered during the treatment of the patient for morphinomania. It is claimed that this statement was made in the course of a judicial proceeding and was consequently privileged.

Mississippi Valley Medical Association.—The next meeting of this society will be held in Kansas City on October 15, 16, and 17, under the presidency of Dr. S. P. Collings of Hot Springs, Ark. Dr. C. B. Parker of Cleveland, Ohio, will deliver the address on surgery, and Dr. Hugh T. Patrick of Chicago that on medicine. Those intending to read papers should send the titles of the same to the secretary, Dr. Henry Enos Tuley, 111 W. Kentucky street, Louisville, Ky., at as early a date as possible to obtain a favorable place on the program.

The Tri-State Medical Society of Alabama, Georgia, and Tennessee will hold its fourteenth annual meeting at Birmingham, Ala., on October 7, 8, and 9, under the presidency of Dr. J. C. Le Grande of Birmingham. The secretary is Dr. Frank Trester Smith of Chattanooga, Tenn.

A Yellow Fever Commission.—Under special commission from the Surgeon-General of the United States Marine Hospital Service, Prof. George E. Beyer, Professor of Entomology at Tulane University, Dr. Oliver L. Pothier of the New Orleans Charity Hospital, and Dr. Parker of the United States Marine Hospital service sailed recently from New Orleans for Vera Cruz, where they will make an inquiry into the relation of the mosquito to yellow fever. The commission expects to continue its studies in Vera Cruz during the entire summer.

Cholera in the Philippines.—The following were the figures of the cholera statistics up to May 9: Manila, 867 cases and 706 deaths; the provinces, 2,452 cases and 1,805 deaths; giving a total of 3,319 cases and 2,511 deaths.

Mr. Hutchinson on Leprosy.—Mr. Jonathan Hutchinson of London recently returned from South Africa, where he went to investigate the cause and prevalence of leprosy. He has come back even more convinced than ever that the main cause of the disease is the use of imperfectly cured salt fish. Under exceptional circumstances, however, he says it may be contracted by the eating of food contaminated by a leper, but that it is otherwise neither contagious nor infectious. The measures suggested for the prevention of the disease are legislative control of the fish-curing establishments; the diffusion of information as to danger of communication; and the establishment of small isolation homes into which lepers should be induced to go during the stage involving risk.

Scarlet Fever Epidemic in Philadelphia.—Scarlet fever is prevalent in epidemic distribution in the southern part of Philadelphia, 103 cases being reported for the week ended May 3; thirty-seven of these occurred in one ward, while a large number were reported from neighboring wards. There has been a marked increase in the number of cases during the past few weeks. The type of the disease is mild and the rash is ill-defined. During the previous week eighty-seven cases were reported.

Philadelphia Hospital.—Dr. J. Arthur Standen has been appointed resident dental surgeon.

An Inveterate Opium Habitué.—The death of a man was reported recently in Philadelphia who, for forty years, was known to have taken "five cents' worth" of laudanum night and morning.

Pathological Society of Philadelphia.—At a stated meeting, held May 8, Dr. W. M. Coplin presented a communication entitled "Acute Dilatation of the Stomach, with Especial Reference to the Condition of the Elastica." He discussed the various explanations that have been suggested in connection with the etiology of this condition, and he demonstrated specimens showing distortion of the elastic fibers of the muscular layer of the stomach. Drs. W. E. Robertson and A. P. C. Ashhurst presented a specimen of "Multiple Gastric Ulcers and Peritonitis" obtained from a woman in whom the condition had not been suspected during life. Death resulted from rupture and the development of purulent peritonitis. Sections at the margin of one of the lesions disclosed appearances indicative of carcinoma. Dr. W. E. Robertson reported a case of "Malignant Adenoma of the Kidney with Albuminosuria." The growth was really believed to be an hypernephroma. In addition there was thrombosis of the ascending vena cava and of some of the tributary veins. Dr. W. T. Pickett presented a communication entitled "Subacute Combined Degeneration of the Spinal Cord with Pernicious Anæmia." He reported the case of a woman who presented the blood changes of pernicious anæmia, and in whom complete paraplegia occurred a week before death. Early in the history of the case the knee-jerks were exaggerated, but in its further progress symptoms of posterior sclerosis developed. On post-mortem examination and histologic study of the cord tracts of degeneration were found in the posterior and the lateral columns, and, to a small degree, also in the anterior columns. Dr. M. B. Hartzell read a paper entitled "Benign Cystic Epithelioma; Report of Two Cases." He suggested, on account of the diversity exhibited by the cases described under this designation, that probably several affections were included presenting a close clinical resemblance, but exhibiting distinct differences histologically.

Prize Essay on the Dangers from Self-Drugging with Proprietary Medicines.—The Colorado State Medical Society offers a prize of $25 for the best essay, for circulation among the laity, upon the dangers of self-drugging with proprietary medicines. The competition is open to all. Essays must be typewritten in the English language, must contain not more than 3,000 words, and must be submitted before June 15, 1902. Each essay must be designated by a motto, and accompanied by a sealed envelope, bearing the same motto, and enclosing the name and address of the author. The essay receiving the prize will become the property of the society for publication. Others will be returned to their authors. Essays should be sent to the Literature Committee, Dr. C. A. Graham, Secretary, Stedman Block, Denver, Colorado.

Reports on Scientific Subjects—The Daily Press.—Drs. Gottheil and Franklin, the authors of the interesting paper on "The Penetration of the Human Body by Ordinary Actinic Light," which appeared in the Medical Record of April 19, write disclaiming all responsibility for an article on the subject which appeared recently in the Sunday edition of one of the daily papers of this city. They say that they refused to talk with the reporter for publication, or to allow him to reproduce the pictures, or to use their machine to make others. He, however, obtained a machine elsewhere, and repeated the authors' experiments, and wrote an article which was published in the usual style of the Sunday press.

College of Physicians of Philadelphia.—At a stated meeting, held May 7, Drs. John H. Gibbon and S. Solis-Cohen presented a communication entitled "A Case of Long-standing Hepatic Abscess; Operation; Recovery." The patient was a man who gave a history of having been in South Africa and of having suffered from dysentery. He presented a large swelling in the right hypochondrium, with little elevation of temperature and slight leukocytosis. The intestinal evacuations were examined for amebæ, but none was found. The diagnosis lay between abscess and hydatid disease of the liver. Exploratory puncture disclosed the presence of pus, and on operation a large abscess of the liver was found, whose contents were evacuated and drainage provided for. Amebæ were looked for in the pus, but were not found. The patient recovered, but was lost to observation. Dr. Arthur V. Meigs read a paper entitled "Analysis of Human Milk the Basis of the Artificial Feeding of Infants," in the course of which he reiterated two propositions upon which he has insisted for many years, namely, that human milk contains 1 per cent. of casein—that is total proteids—and 7 per cent. of sugar, and that mother's milk undergoes no essential change during the first five or six months of lactation. Accordingly, in the preparation of artificial milk-mixtures, the proportions of the substances named should be taken as a guide, and these need not be changed during the period mentioned, although the amount administered is to be progressively increased in accordance with the needs of the individual child. Dr. Jos. E. Winters of New York, by invitation, opened the discussion, and while assenting to the propositions laid down pointed out the danger from the use of centrifugalized cream and from the process of sterilization, pasteurization, and the like as calculated to change the constitution of the milk disadvantageously. Other speakers, however, dwelt upon the value of scientific percentage modification of milk and the necessity for change in quality, as well as quantity, in accordance with the varying conditions in individual cases, and in the same case at different times. Drs. J. Dutton Steele and A. P. Francine read a paper entitled "An Analysis of Sixty-five Cases of Splancnoptosis." They dwelt upon the frequency of gastroytosis in varying degree, and in discussion the interference with the motor activity of the stomach, to which it gave use, its association with displacement of the colon, and the kidneys especially; the absence of distinctive change in the constitution of the gastric juice, the uncertainty of any relation to neurasthenia, and the occurrence of diastasis of the abdominal rectus muscles, were noted. Drs. Joseph Sailer and G. E. Pfahler read a paper entitled "Diagnosis of Aortic Aneurysm Illustrated by *X*-ray Photographs." In addition to the demonstration of actual aneurysms by means of skiagraphy, there was noticeable in many of the pictures a projection or enlargement at the left extremity of the arch of the aorta, in some instances associated with symptoms suggestive of aneurysm, such as episternal pulsation, tracheal tugging and reduction in the pulse. However, in one case, in which post-mortem examination was made an aneurysm was not found, but merely a condition of atheroma, and it is to this, in conjunction with the elongation of the vessel resulting from its want of elasticity, that the symptoms and physical signs are probably to be attributed.

A New Dental School at Harvard.—Plans are completed for a new Dental School for Harvard to cost $300,000, and to be located on the northwest side of the new Medical School in Brookline. The new building will be three stories high, and will cover an area of 150 by 50 feet for the main building, and 70 by 50 for the annex.

New Police Surgeons.—Police Commissioner Partridge recently appointed as police surgeons Drs. Frank R. Oastler and Charles A. Elsberg. Their names appeared in first and second place on the eligible list prepared by the Municipal Civil Service Commission. The salary of a police surgeon is $2,500 a year, and he is entitled to a pension after a certain term of service.

The Memphis Hospital Medical College.—A thoroughly-equipped modern building has just been erected for this institution, the amphitheater having a seating capacity of 1,000. The number of matriculants for the session just closing was 695.

Medical Women in Russia.—According to an official report just published by the Medical Society of Moscow, there are 624 women physicians in European Russia. Women dentists are not included in this number. During the ear 1900 there were studying at the St. Petersburg Medical Institute for Women 869 women, of whom the majority will pass the State examination next April. The Czar takes a great interest in the matter, and every year distributes prizes and medals among the best students.—*Woman's Medical Journal.*

The American Congress of Tuberculosis.—The sessions of this Congress have been postponed from May 12–14, the date originally set, to June 2–4. This change has been made to give to those taking part in the discussions an opportunity to attend the meeting of the American Medical Association at Saratoga, June 10–13.

Dr. Nathan G. Bozeman has returned to this city, after an enforced absence of nearly three years, on account of illness, and has resumed practice at 167 East Seventy-first street.

Medical Society of the State of West Virginia.—The thirty-fifth annual meeting of this society will be held at Parkersburg on May 21–23, under the presidency of Dr. G. A. Aschman of Wheeling. The secretary is Dr. Wm. W. Golden of Elkins.

The American Proctologic Society will meet in fourth annual session at Saratoga on June 10 and 11, in the parlor of the United States Hotel, under the presidency of Dr. Charles Martin, of Cleveland, Ohio. The secretary is Dr. William M. Beach of Pittsburg. The society has a membership of nineteen.

A Cancer Hospital and Laboratory.—Mr. J. K. Caird of Dundee, Scotland, has given £18,000 for the erection of a cancer hospital. He also has guaranteed £100 annually for five years for a laboratory for cancer research.

The American Academy of Medicine.—The twenty-seventh annual meeting of the Americon Academy of Medicine will convene at the Kensington, Saratoga, June 7, at 11.00 A. M., and continue during Monday, June 9, 1902. A series of interesting and valuable papers is promised, covering a variety of subjects, and not confined so closely to a symposium as has been the custom for the past few years. A feature of the meeting will be an address, by invitation of the committee, by Edward T. Devine, of the United Charities of New York, on "Co-operation of the Medical Profession in Charitable and Social Reform." It is expected to have a full discussion of this important subject immediately following the address. The President's address will be given on Saturday evening. The completed programme will not be ready until about the middle of May, when it will be sent to those who will advise the Secretary of the Academy of their wish to receive a copy. The officers of the Academy are: *President*, Dr. V. C. Vaughan, Ann Arbor, Mich.; *Secretary*, Dr. Charles McIntire, Easton, Pa.; *Chairman Commmittee on Programme*, Dr. G. Hudson-Makuen, Philadelphia; *Chairman Committee of Arrangements*, Dr. C. M. Culver, 36 Eagle St., Albany, N. Y.

The Plague at Brisbane.—This disease still lurks in many of the Australian seaports. Dr. Wray, the health officer of Brisbane, died of the affection on May 8.

The Late Professor Kaposi.—The New York Dermatological Society, at a meeting held April 22, 1902, adopted the following resolutions:

Whereas, Professor Dr. Moritz Kaposi, an honorary member of our society, has been removed from us by death; be it

Resolved, That on the death of Professor Kaposi the Society has lost one of its most eminent members; one whose high professional attainments, scientific achievements, and work as a leader have made his name famous through the whole medical world;

Resolved, That our deepest sympathy be extended to his family in their great sorrow, and that a copy of these resolutions be sent to the family, and medical journals for publication.

Canadian Medical Association.—The annual meeting of this association will be held in Montreal on September 16, 17 and 18, 1902. The President is Dr. Francis J. Shepherd of Montreal, and the Secretary Dr. George Elliott, 129 John street, Toronto. Dr. William Osler of Baltimore, Md., will deliver the Address in Medicine, and Dr. John Stewart of Halifax, Nova Scotia, the Address in Surgery.

Association of American Medical Colleges.—The next meeting of this association will be help in Saratoga, Monday, June 9, at 10 a. m. The programme will consist of two portions, one of which is educational and open to visitors. The several members of the association of Southern Medical Colleges are invited to be present and take part in the discussion. The second part of the programme relates to the business of the association and will be taken up at the second session at 3 p. m. the same day. The following are the officers of the association: *President*, Victor C. Vaughan, Ann Arbor, Mich.; *First Vice-President*, Wm. .L. Rodman, Philadelphia, Pa.; *Second Vice-President*, H. Burt Ellis, Los Angeles, Cal.; *Secretary*, Bayard Holmes, Chicago, Ill.; *Judicial Council*, Thos. Hawkins, Denver, Col.; E. C. Dudley, Chicago, Ill.; and W. J. Means, Columbus, Ohio.

Medical Society of the State of California.—At the annual meeting of this society, held April 15 to 17, the following officers were elected for the ensuing year: *President*, F. B. Carpenter, San Francisco; *First Vice-President*, C. C. Wadsworth, San Francisco; *Second Vice-President*, D. A. Hodghead, San Francisco; *Secretary*, George H. Evans, San Francisco; *Treasurer*, E. E. Kelly, San Francisco; *Board of Examiners*, Dudley Tait, David Powell, D. E. Osborne, W. S. Thorne, R. L. Wilbur.

The Fourteenth International Medical Congress will be opened in Madrid, Spain, on April 23, 1903, and close on the 30th of the same month. Dr. Abraham Jacobi, having been requested by the officers of the Congress to form the American committee, has arranged that the plan devised by Dr. William Osler, which worked so well in preparation for the Thirteenth Congress, shall be followed also for the Fourteenth. Invitations to accept places on the committee have, therefore, been sent to the President of the American Congress of Physicians and Surgeons, the President of the American Medical Association, the presidents of the fourteen constituent societies and associations of the American Congress, the Surgeons-General of the Army, Navy, and Marine-Hospital Service, the President of the Canadian Medical Association, and the President of the National Dental Association. Acceptances have been received from nearly all of those invited. Dr. Howard A. Kelly of Johns Hopkins University will deliver the address at one of the general meetings of the Congress, and has chosen for his subject "The Passing of a Specialty." Dr. Ramon Guitéras has been appointed delegate to the Congress by the New York Academy of Medicine. The committee to date consists of Drs. W. W. Keen of Philadelphia, President of the American Congress of Physicians and Surgeons; John C. Wyeth of New York, President of the American Medical Association; R. H. Chittenden of New Haven, President of the American Physiological Society; Walter S. Christopher of Chicago, President of the American Pediatric Society; Joseph Collins of New York, President of the American Neurological Association; John W. Farlow of Boston, President of the American Laryngological Association; Samuel A. Fisk of Denver, President of the American Climatological Association; S. C. Gordon of Portland, Me., President of the American Gynecological Society; Geo. T. Jackson of New York, President of the American Dermatological Association; Horace G. Miller of Providence, President of the American Otological Society; Presley M. Rixey of Washington, Surgeon-General of the Navy; F. J. Shepherd of Montreal, President of the Canadian Medical Association; George M. Sternberg of Washington, Surgeon-General of the Army; O. F. Wadsworth of Boston, President of the American Ophthalmological Society; DeForest Willard of Philadelphia, President of the American Surgical Association; H. August Wilson of Philadelphia, President of the American Orthopedic Association; James C. Wilson of Philadelphia, President of the Association of American Physicians; Walter Wyman of Washington, Surgeon-General of the Marine-Hospital Service; Abraham Jacobi of New York, *Chairman;* and John H. Huddleston, 126 West Eighty-fifth Street, New York City, *Secretary*.

Surgeon Porter, U. S. A., Wounded.—During the recent United States Army expedition against the Moros of Mindanao, Major R. S. Porter, surgeon of the command, was severely wounded in the thigh. Reports of the fighting state that the wounded Moros in several cases stabbed those of our troops who were endeavoring to give them succor.

The Army Appropriation Bill, just passed, carries an appropriation of $200,000 to reimburse officers and enlisted men for medical expenses while on sick leave from April, 1898, to April, 1899. The payment of accounts of this kind was not approved by the Treasury officials, and, as a result, many physicians gave their services gratuitously, from patriotic motives, to the sick soldiers needing their care. Much of the money appropriated as above will find its way to the physicians of the country. The introduction and passage of this amendment as part of the army appropriation bill was entirely due to the efforts of the Legislative Committee of the American Medical Association, supported by the army medical authorities.

Health of the Army in the Philippines.—A report of the health of the army in the Philippines for the month ending March 15 gives the rate of constant sickness at 6.45 per cent. A considerable increase of typhoid fever was noted, but there was a marked decrease in the case of malarial fevers. Dysentery was the chief cause of death. Bubonic plague has so far not attacked the command, and has occurred only among the natives in Manila. In speaking of cholera, the report says that this disease has only occurred twice in an epidemic form in the Philippines, both times in the '70's. During the worst year of these epidemics nearly 30,000 persons lost their lives from cholera.

Obituary Notes.—Dr. CHAS. MCDONOUGH died on May 5 at Reading, Pa., at the age of seventy-five years. He was a graduate of the medical department of the University of Pennsylvania.

Dr. JOHN S. MILLER of Philadelphia died of pulmonary tuberculosis, on April 29, in Denver, Col., at the age of forty-six years. He was graduated from Jefferson Medical College in 1881, and became a resident physician in the German Hospital. Subsequently he was elected assistant demonstrator of anatomy in Jefferson Medical College and one of the surgeons to St. Joseph's Hospital. He was also a surgeon to the Baltimore & Ohio Railroad, and was one of the surgeons that went to the relief of the sufferers in the epidemic of typhoid fever at Plymouth, Pa., in 1882, and also of the sufferers from the Johnstown flood. Two years ago he went to Denver on account of failing health, and became demonstrator of anatomy in Gross Medical College.

Dr. THOMAS F. RIEGEL died at Philadelphia of typhoid fever on May 6. He was graduated from Jefferson Medical College, and was one of the resident physicians in St. Joseph's Hospital.

Dr. LANSDOWN PENNOCK died suddenly at Ridley Park, Pa., on May 7 of apoplexy at the age of sixty years.

Notes on the Diagnostic Value of Blood Examinations.—C. F. Martin considers the examination of the blood of great value as an aid to diagnosis, but not sufficient for a diagnosis without regard for the other clinical signs. The counting of the blood cells and the estimation of the hæmoglobin are sufficient for all practical purposes, and the author considers that in the majority of cases one can obtain sufficient information from the microscopical examination with ordinary slide and coverglass of a freshly removed specimen of blood. In appendicitis a leucocytosis of over 20,000 has not been found in non-suppurative inflammations, either of the appendix or of the pelvic organs, but the reverse rule does not hold good, and one may readily get an absence of leucocytosis with extensive suppuration. The same is true in typhoid perforation. In treating cases of hemorrhage with shock, it would seem that surgeons are more justified in relying on their observations from the patient's general condition than on the percentage of hæmoglobin.—*The Montreal Medical Journal*, March, 1902.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

ASYLUMS BOARD'S HOSPITAL EXPENDITURE—THORACIC PHTHISIS—RESEARCH ON DEAFNESS IN THE YOUNG—WHAT IS RHEUMATISM?—HOSPITAL FUNDS—CLASSIFICATION OF CAUSES OF DEATH.

London, April 25, 1902.

The discontent with the cost of the Asylums Board increases, and well it may when from the inside a charge of extravagance has been formulated. The chairman of the finance committee says the board has wasted some £300,000. This and other charges were repudiated at the meeting last Saturday, in a memorandum signed by the chairman of the board and the chairman of the committees most concerned. These gentlemen are mostly nominees of the Local Government Board, and the representative members are not satisfied with their opinions, but think that full investigation is called for. The discussion was adjourned. Meantime outsiders, who have to find the funds, want to know a number of things, such as why the cost of the staff at the chief office should have risen 44 per cent. in two years, and other equally awkward questions. The weekly cost of patients in four of the board's hospitals has varied from 29.8 to 51s. 6d. Surely this shows carelessness and extravagance too. In 1901 there was an extra 456 patients per day and an addition was made to the staff of 420 persons. In 1896, with a daily average of 10,496 patients, the total expenditure was £625,128. Last year the patients numbered 10,595, but the cost went up to £867,607. Now could ninety-nine additional patients increase the cost by nearly a quarter of a million or over £2,400 a year for every patient?

The lectures at our colleges are usually rather dull and formal affairs, and the audiences very small. But very important communications are sometimes made. The Lumleian lecturer is supposed to treat his subject from a clinical point of view, and ripe experience is a valuable qualification for the post in the Fellow to whom it is entrusted. This year Dr. F. T. Roberts was the lecturer and took for his subject "The Comprehensive Study of Thoracic Phthisis." He used the phrase to indicate the importance of the facts that the morbid changes in consumption are seldom limited to the lungs, but that other tissues are constantly affected, and sometimes from an early stage. Consequently it is our duty to study each case in all its aspects. The diagnosis of tubercle in the lungs should forthwith lead to a careful search for other thoracic lesions. So I presume we should recognize any other departure from health—study the patient as well as his malady. The most interesting part of the lectures related to the clinical investigation, and if Dr. Roberts rather extolled this he by no means undervalued scientific investigations, though he deprecated the reluctance often displayed to credit any observation that did not originate in the laboratory. So, while he admitted that in some cases the diagnosis of phthisis can be made from the detection of bacilli when the physical signs are uncertain, he emphasized the fact that in other well-marked cases the organisms were not found after repeated examinations, and he strongly objected to the practice of getting the patients to force something from the throat when there was little or no expectoration. The matter of the lectures was carefully arranged under various headings (A. B. C., etc.; 1, 2, 3, 4, and so on) strongly reminiscent of the author's textbook, suggesting that it was more adapted to be read in the library than listened to.

It nearly seemed somewhat superfluous to lay before his audience a digest of the symptomatology of phthisis, the ordinary methods of physical examination and so forth—an audience composed of the president and officers of the College of Physicians. with a few Fellows, and here and there a member or licentiate who had strayed in.

A friend came to me the other evening straight from the meeting of the Otological Society, at which a most serious report had been received, showing a frightful amount of deafness among poor children. This report was by Mr. Arthur Cheatle, who had examined the ears of one thousand children in the Hanwell District school. More than half these children had defective hearing, and in a great number of these the defect had not been observed by the teachers. The middle ear was affected in 518, the internal ear in one, and the external ear in forty-nine. Foreign bodies were found in the ears of eighteen (six boys and twelve girls), but all the children were unconscious of their presence. No less than 335 of these children had had a discharge from one or both ears, and eighty-eight of them were said to be, as it were, walking near a precipice and six half over. Adenoids were present in 434. But the special lesions are of minor importance; the grave matter is the great amount of unsuspected disease of the ears among the rising generation. It must be remembered, however, that this school receives children of the very poorest class of the London population. It would be interesting to compare statistics of the other classes if the figures could be ascertained. At the same time it is to be observed that Mr. Cheatle's statements were supported by other members of the society, who had made similar investigations elsewhere, *i. e.* Dr. Permewan at Liverpool, and Dr. Murray at Greenwich, on 200 and 400 children respectively. It seems time some steps should be taken to prevent the loss of health and capacity entailed by deafness and ear disease. In some countries doctors are appointed to the schools and the examination of the eyes and ears of the scholars is an important part of their duties. Our school boards have wasted a good deal of money on pianos—it would appear more sensible to preserve the pupils' hearing.

What do we mean by the term rheumatism or rheumatic? This is an old question with one, renewed by a case shown at the clinical evening of the Medical Society, as one of infantile articular rheumatism with chronic enlargement of the spleen, liver and lymphatic glands," resembling those commonly considered as forms of rheumatoid arthritis in children, such as those recorded by Dr. Still. The patient was a boy of four and three-quarter years, with some enlargement of the knees and elbows, as well as symmetrical swellings about the hands and feet, apparently due to infiltration into the periarticular tissues. Considerable limitation of movement in the cervical spine, which was thought to account for extreme movements of the eyeballs, giving the face at times a most remarkable appearance. Up to November, 1900, the boy was well. He then had what was diagnosed as acute rheumatism. Slight febrile attacks had been noticed subsequently, and in November, 1901, an attack of endocarditis with mitral injury occurred. It was this which made Dr. P. Weber who showed the case, think it more allied to articular rheumatism than to rheumatoid arthritis in adults, and as, perhaps, due to the microbe detected by Drs. Poynton and Paine—the clinical differences resulting from age as tuberculosis in the young differs clinically from that disease in adults.

The case drew rather divergent opinions from those present. Dr. Sansom thought it was either rheumatism plus something or else not rheumatic at all. The cardiac lesion he pronounced very slight, if present. He did not consider the cases recorded by Dr. Still as connected with rheumatism. Dr. Cantley agreed on this point, and regarded the case as osteoarthritis, associated with rickets. Dr. Rolleston regarded the case as rickets—the joint mischief being probably septic. He thought the heart clearly affected. Dr. Morison found no organic heart discase, and held the case to be arthritic in a rachitic child. Dr. Poynton, who had investigated the case bacteriologically, had not found the microbe of acute rheumatism. He mentioned that cases suggesting rheumatism might occur in two forms, malignant and non-malignant. Dr. Paine spoke of two forms and mentioned points suggesting an infective origin. Dr. Allchin deprecated the term rheumatic being applied to such cases, and could not think age could modify the disease so much. Dr. P. Weber admitted his patient was rachitic, but maintained the rheumatic origin of the joint affection. He said recent research tended to show that there was only one rheumatic poison, though the cases might differ clinically.

Now, after this I hope your idea of rheumatism is more definite; I cannot boast that my own is.

A great effort is being made to raise a large sum for the Prince of Wales' Hospital Fund in order to be a gift to the King on his coronation.

The council of the Hospital Sunday Fund met on the 17th. Sir E. Hay Currie has been appointed secretary and Mr. Gilliatt honorary secretary. The Lord Mayor hoped for a larger collection this coronation year.

The Saturday Fund has issued its report for 1901. It raised £21,547, an increase of £1,266 over the previous year.

The revised classification of causes of death adopted by the Registrar-General is being issued. It is based on the Nomenclature of the College of Physicians and, of course, contains many important changes—the former classification has been in use for many years.

NURSING IN PRIVATE ASYLUMS.

To the Editor of the Medical Record:

Sir: In the last number of the Medical Record appeared a letter from Dr. Starr calling attention to the need of trained nurses in private asylums and pointing out the lack of intelligent care that this defect entails.

I desire to supplement Dr. Starr's mention of the training school for nurses at Bloomingdale (established in 1896) by pointing out that each of the fourteen large State hospitals for the insane in New York has a training school for nurses, the first of which was established at

Buffalo about twenty years ago. The yearly output of graduates from these fifteen (including Bloomingdale) training schools must be at least two hundred, so that there should be no difficulty on the part of any private asylum in securing an abundance of competent nurses, thoroughly trained in the care of the insane as well as skilled in general nursing, for, in the large asylums especially, these nurses obtain a wide general experience in the hospital, infirmary and surgical wards.

Lists of all the graduates of the State Hospital training schools are being prepared and filed at the office of the Lunacy Commission in Albany, so that anyone desiring their names and addresses can obtain them on application.

FREDERICK PETERSON, M.D.,
President of the State Commission in Lunacy.

Progress of Medical Science.

The Boston Medical and Surgical Journal, May 1, 1902.

Thrombosis of the Cavernous Sinus, with Report of Four Cases, Including One Cranial Operation.—Edwin Welles Dwight and Harry H. Germain conclude that, even if we allow for error in the cases reported, we must recognize thrombosis of the cavernous sinus as an extremely fatal condition. Death is due to septicæmia or to pyæmia, and in well-established cases, operation in one form or another offers the only hope of recovery. The author's case shows that an incision into one sinus instantly and completely relieved the interference with circulation in both. It also demonstrates the fact that such an operation is not especially difficult, that it can be done under almost primary anæsthesia, not associated with any degree of shock, finished within a few minutes (eight) and that the hemorrhage is easily controlled.

Problems Relating to Surgery of the Stomach.—William J. Mayo has found gastroenterostomy to be the most satisfactory operation. He has performed it eighty times with eight deaths. For cancer, with few exceptions, the palliation has been of such short duration as hardly to justify the operation. The hope of the future for cancer of the stomach is early exploration and extirpation. For benign conditions gastroenterostomy has the great advantage that it drains the stomach from the lowest point relieving the retention of obstruction equally with the painful contact which the food causes in gastric ulcer. The main thing, in either the anterior or the posterior operation, is that the opening should be low down, near the greater curvature. The author has had little trouble with primary pernicious vomiting for more than four years since he began this practice.

Journal of the American Medical Association, May 12, 1902.

A Voluntary Board of National Examiners.—Owing to the great diversity now governing the various State examining boards, W. W. Rodman advocates the formation of a national board, whose members shall serve voluntarily. Upon their recommendation any State shall issue a license to practise. Examinations should be theoretical and practical, the fee should be twenty-five dollars for each examination and the meetings of the Board should preferably be held in Washington, D. C. The necessary expenses of the examiners could be met from the fees and from a contribution from the American Medical Association. The government medical services would also be willing to detail some men to act in this capacity without expense.

The Neurologist's Art.—Joseph Collins offers the following conclusions: The neurologist's art lies (1) In recognizing that the vast majority of diseases that he encounters can be influenced by treatment; (2) In having in his mind, when face to face with disease whose course he desires to influence favorably, a clear picture of the pathological process constituting the basis of the disease; (3) In appreciating that the successful treatment of nervous diseases requires the most scrupulous attention to detail in the application of measures that experience has shown to be of value; (4) In utilizing judgment and skill in the selection and application of measures that have been found useful, empirically and experimentally; (5) And finally, in realizing from the outset that a disease or disturbance of function which is either the expression of a prenatal defect, or of many years' duration, cannot be overcome in a few weeks, or even a few months of treatment, even though the hand that administers it be both masterful and magical.

New Method of Anchoring the Kidney; a Preliminary Report.—The method of B. B. Davis is thus described: The kidney is well exposed and an incision made through the proper capsule from two cm. below the upper pole to a point two cm. above the lower pole. This incision is placed vertically on the posterior surface near the convex border. The capsule is stripped loose from the kidney substance for a distance of three-fourths of an inch anteriorly and posteriorly to the incision in the capsule. From the upper and lower extremities of the vertical incision a perpendicular incision three-fourths of an inch long is made through the capsule, this giving two flaps of capsule three-fourths of an inch wide by about two and one-half inches long. Next a strip—the thickness of a little finger—of the other border of the quadratus lumborum muscle is split from the remainder of the muscle, the fibers being separated by the handle of the scalpel. This separation extends from the muscular attachment to the twelfth rib downward for two and one-half inches, or the slip in the muscle is made as long as the length of the capsular flaps before described. An artery forceps is passed through the slit in the muscle, made to grasp the free border of the posterior flap of the kidney capsule and then withdrawn, bringing the flap of the kidney capsule through the slit in the muscle. The two capsular flaps are next brought together over the bundle of muscular fibers thus isolated from the border of the quadratus lumborum, and stitched together with a running suture of fine chromicized catgut, the needle being allowed to penetrate the muscular bundle at two or three places. The lumbar wound is next closed by tier sutures of catgut, the skin wound being closed with horse-hair.

An Analysis of Fifty-two Cases of Tetanus Following Vaccinia.—R. N. Wilson discusses this question with special reference to the source of infection. His statistics cover the period from 1839 to 1902. An elaborate table is given with details of each case. He finds that infection has taken place in most if not all cases at the site of the vaccination. The exact time of infection and the exact means are impossible of absolute and scientific proof; and that the grouping of a large number of cases in a certain locality, and following the use of a certain production of vaccine virus, would tend at first sight to speak for a primary infection, carried in with or by means of the vaccine virus into the system. On the other hand a secondary infection, and one occurring, as a rule, about the time of the acme of the vaccinia, is indicated by the otherwise discordant chronic incubation period and acute symptoms, by the almost uniformly fatal termination, by the severity of the course of the disease, by the millions of normal vaccinations with the same virus, by the simultaneous deaths from tetanus known to be due to other causes, by the diminution in the number of such cases now that continued aseptic care is more generally exercised, by the fact that in every case in which particulars are known over-abundant opportunity was offered for such secondary infection, and, finally, and most important, by the absolute failure of all bacteriologic and inoculation experiments on the lower animals and man to indicate the presence of the tetanus microorganisms or their toxin in the virus. As to the results of treatment he finds that out of thirteen patients treated with antitoxin ten died and three recovered (mortality 76.9 per cent.). In all of these cases the usual treatment was employed in conjunction with the serum. Seven patients recovered under the customary routine of chloral, bromide, opium, cocaine, and more rarely physostigma; and thirty-two died (mortality without antitoxin 82 per cent.). Of the entire number of cases eleven recovered and forty-one died (mortality 78.8 per cent).

New York Medical Journal, May 12, 1902.

A New Study of Mitral Obstruction with Illustrative Cases.—T. E. Satterthwaite finds that mitral obstruction is more common in females than in males, and is generally fatal before the fortieth year. There is apt to be a marked contrast between a strong cardiac impulse and a feeble radial pulse. A true presystolic murmur appeared in 15 per cent. of his cases, generally of a loud rasping or sawing quality, sometimes "gushing" or whining. Adiastolic murmur occurred in 40 per cent. of the cases. He finds that these latter murmurs are best heard over a rather limited area, somewhat oval in form, having for its center an area between the fourth left space, inside the nipple and the apex, and extending an inch or so to the right or the left. Occasionally this murmur is heard best as low as the fifth, sixth, or even seventh left space; more rarely it is heard as high as the second left rib. In 10 to 35 per cent. there was a thrill over this area. The first sound at the apex is short and abrupt, while the second pulmonary sound at the base is usually intensified. Occasionally a murmur is heard with the second sound over the left appendix auricular. At first there is hypertrophy of the left ventricle; then atrophy thereof with hypertrophy of the left auricle; then follow dilatation and hypertrophy of the right heart. Mitral insufficiency must, to some extent, accompany mitral obstruction. In distinguishing the presystotic murmur of mitral obstruction from the Flint murmur of aortic insufficiency, we should rely on the "long heart" and the strong impulse, or the "Corrigan" of insufficiency, rather than auscultatory signs. In case there is both aortic insufficiency and mitral obstruction, a differential diagnosis is impossible, with the means we have now at our command.

Medical News, May 10, 1902.

Empyema of the Gall-Bladder.—Lucius W. Hotchkiss says that in all cases of acute suppurative cholecystitis, as well as in the chronic empyemas, surgical treatment is clearly indicated, and is often imperative. There is great danger in repeated attacks, and medical treatment, except in so far as it is palliative, is futile. In cases of acute cholecystitis in a relatively healthy gall-bladder, cholecystotomy, with more or less prolonged drainage, generally proves effectual and is clearly indicated. Early operation should be done to prevent the spread of inflammation to the adjacent peritoneum. Acute cholecystitis in an already contracted gall-bladder, which has been the seat of frequent inflammatory attacks, offers some difficulty in early diagnosis in the absence of a tender and palpable tumor. In these cases cholecystostomy is to be employed, as a rule, although cystectomy is proper in carefully selected ones. Cases of empyema of the gall-bladder, stone in the cystic duct, and pus in the bladder cavity, with adhesions, demand incision and drainage. In some cases a cystectomy may be necessary, as when the stone is too firmly wedged in the cystic duct to allow its removal by expression into the gall-bladder. Early cholecystostomy, when the disease is limited mainly to the gall-bladder, is the safe and effective procedure. Delay is often dangerous and should not be considered.

Sudden Death in Aortic Stenosis.—James M. Anders warns against making the diagnosis of aortic stenosis without due caution and reserve. The number of proved cases of this affection is small because of the rarity of the concurrence of all of the characteristic signs. These signs are: A small, slow and somewhat tense pulse; a systolic basic thrill; an enlargement of the left chamber; a harsh and musical systolic murmur over the aortic area, and a feeble aortic second sound. A case reported was that of a woman of forty-four years, who exhibited all of the classic signs. The intensity of the aortic second sound was greatly increased; this was probably due to the dilatation of the aorta above the valves. The fact of the accentuation of the aortic second sound and an abnormal area of dulness about five cm. in its greatest diameter and extending upward and to the right from the base of the heart led to the opinion that dilatation of the aorta existed, with probable involvement of the sinuses of Valsalva. The patient died suddenly during sleep. Autopsy showed the aortic ring and the aortic segments to be the seat of marked atheromatous change; the segments were united, puckered, and contracted, and of calcareous consistence. These changes caused decided narrowing of the orifice, and prevented the cusps from falling back into the sinuses of Valsalva during the systole, and offered obstruction to the blood-stream. Above the aortic segments, and including the sinuses of Valsalva, the aorta was dilated, and the orifices of the branches of the aorta were distinctly atheromatous. The dilated part involved about six cm. of the aorta and showed an aneurysm-like pouching. For some distance above the dilatation the caliber of the aorta was considerably diminished. The mitral leaflets and those on the right heart were normal. The diminished caliber may have been due partly to the slowing of the circulation and lessened volume of the blood entering the aorta, owing to the existence of the constricted aortic orifice.

The Philadelphia Medical Journal, May 10, 1902.

The Justus Test for Syphilis, with Report of Cases.—William E. Huger, Jr., concludes that although the number of cases which he reports is very few, there are enough negative results in the group of chancres to show that the test is wholly unreliable, and, moreover, the one positive result among the chancroids detracts even more, because the failure to put a syphilitic on mercurial treatment will soon be proven a mistake, but to condemn a nonsyphilitic to years of unpleasant treatment, and to the belief that he has had the disease, is inexcusable.

Value of the Justus Test, with Report of Cases.—Henry Tucker states that this test is based upon the fact that mercury given either by subcutaneous or intravenous injection, or by inunction, will cause a diminution in the hæmoglobin of the blood. The hæmoglobin is said to be rapidly restored to the normal in the healthy, but more slowly in the syphilitic. In the cases studied by the writer, after the first examination for hæmoglobin, all the patients were given an inunction of one drachm of mercurial ointment, and were re-examined within from twenty-two to thirty hours after the drug had been given. The hæmometer of Fleischl was used in the first few cases and afterward Dare's hæmoglobinometer. The writer is convinced, from his experience, that Justus' test has no practical value in the differential diagnosis of venereal ulcers, since the reaction occurs with an almost equal degree of frequency in the nonsyphilitic conditions with which syphilis may occasionally be confused.

The Kidney Complications of Typhoid Fever.—James Ely Talley has noted the following renal complications of typhoid fever: Albuminuria, acute nephritis, hemorrhagic nephritis, suppurative nephritis, pre-existing chronic nephritis, hæmaturia. Albumin occurs in a large percentage of typhoid patients. Early, it is merely febrile; later, or if large in quantity, it is both febrile and toxæmic. It may appear during the first few days, but usually during the second week. It usually disappears early. The sooner it appears, the longer it lasts. The greater the quantity, the more serious it is. Acute nephritis occurs with varying frequency. It is usually acute parenchymatous and may be hemorrhagic. It may occur at any time during the course of the disease. Œdema is very rare. Its appearance is generally of bad prognostic significance, as it means either intense intoxication or impaired resistance. There appears to be no sharp line defining ordinary acute nephritis from the hemorrhagic, except the larger quantity of blood. As to suppurative nephritis, cases with necrotic areas and actual abscess formation are recorded a number of times. The typhoid bacilli are found in the pus areas. In the urine are large numbers of multinuclear leucocytes. In cases of typhoid fever with previous chronic nephritis the prognosis is very bad. Hæmaturia has been reported in a case in which post-mortem examination showed the kidneys to be only congested.

American Medicine, May 10, 1902.

Palmar Reflex.—John H. W. Rhein, while studying a case of hemiplegia recently, observed what seemed to be a hitherto undescribed reflex. Slight irritation of the palmar surface of the hand with the point of an æsthesiometer was followed by an extension of the hands and fingers. Sometimes only the hand was extended, sometimes only one or more of the fingers. The arm was not drawn away in a manner analogous to the withdrawal of the foot when the plantar surface is irritated. The writer has observed this reflex in one other case of disseminated sclerosis.

Gastrotomy for Removal of a Watch.—This case came under the care of Herman Mynter. The patient was a young man of twenty years. A week before seeking medical asistance he had accidentally swallowed a cheap watch. It measured 1¾ inches in diameter, 2 inches through the stem, and 1½ inches in thickness. He had suffered no inconvenience from the accident. An *x*-ray examination showed the watch plainly in the fundus of the stomach. As the watch did not pass from the stomach, although he was fed on dry diet and directed to lie on the right side, gastrotomy was performed and the watch removed. It was completely covered with verdigris and flakes of fibrin. The patient was nourished by rectum for six days, and on the thirteenth day he left the hospital, with the wound healed, and able to eat solid food.

A Case of Tuberculous Salpingitis.—Howard S. Dittrick reports this case. The patient, a married woman of twenty-one years, complained of dull pain in the lower abdomen, extending down into the thighs, backache, a leucorrheal discharge, and constipation. The right tube and ovary were somewhat enlarged and adherent. The left tube and ovary were small, irregular and adherent. There were a few moist râles over both apices of the lungs. Tubercle bacilli were found in small number in the sputum. Abdominal section was performed, and both tubes and ovaries and the appendix were removed. The patient was discharged much improved. The presence of tubercle bacilli was demonstrated in the tissue of the Fallopian tube and cultures were made from the pus there contained. The disease was also reproduced in a guinea-pig which had been inoculated from the primary lesion.

Deutsche medicinische Wochenschrift, April 17, 1902.

Sugar-Coated Heart.—Hermann Eichhorst reports a case of this rare condition, which may be regarded as analogous to the sugar-coated liver of Curschmann. The patient, a woman forty years of age, had had attacks of marked cardiac insufficiency for six months previous to her death. These attacks increased in severity and duration, so that upon admission to the hospital the radial pulse was continuously over 140 per minute, and œdema, dyspnœa, and cyanosis were permanent. The administration of digitalis improved somewhat the action of the heart, but the other symptoms became progressively worse and death soon took place. Upon autopsy a clear yellowish fluid was found in the pericardial sac. The pericardium was practically normal, but the epicardium was changed into thick, firm, marble-white tissue, which gave the heart the appearance of being sugar-coated. The heart itself was nearly double the normal size, but no pathological alterations were found in the myocardium. There is no doubt that the symptoms of cardiac insufficiency were due to a direct mechanical interference with the heart's action by the thickened and firm epicardium. The patient was an alcoholic, and it is possible that the etiology of the condition may be thus explained.

Potassium Nitrate and Nitrite in Chronic Increased Arterial Tension.—Lauder Brunton emphasizes the value of nitrates and nitrites in the treatment of chronic increased arterial tension. The chemically pure nitrates as at present sold in the shops when prescribed alone do not give nearly as good results as the unpurified product, since the latter contains nitrites in addition to the nitrates. This fact was first made apparent to the author in the treatment of a case of chronic increased arterial tension, in which he prescribed potassium bicarbonate and nitrate. At first the nitrate was procured from a powdermaker in the form of ordinary saltpeter and a satisfactory result was obtained. Later the nitrate was procured from a druggist, who charged nearly three times as much therefor as did the powdermaker, yet when so compounded the prescription immediately lost its efficiency. This reason of this was not at first apparent. Subsequently it was suspected that it was due to the absence of nitrites in the chemically pure nitrate obtained from the druggist. Sodium nitrite in small doses (.03) was then added to the latter prescription and the original beneficial effect was immediately produced. Thus the especial value of the nitrites in this condition is amply demonstrated, and it is certain that they should always be combined with the nitrates when the latter are given in chemically pure form.

The Multiplicity of the Toxins Produced by One and the Same Bacterium.—A. Charrin draws attention to the fact that in explaining the symptom-complex of the various infectious diseases it is necessary to consider the various toxins produced by the causative microorganism. It is certain that we can no longer explain such a symptom-complex on the supposition that it is produced by only a single toxin. Advances in bacteriology have shown that any given pathogenic microorganism produces a variety of toxic products, and as our knowledge along this line widens these products increase markedly in number. The author's researches with the bacillus pyocyaneus have shown that this microorganism produces a variety of products, such a various pigments and different ammonia and amide combinations, all of which possess pathological properties. Furthermore, the effects of the latter, volatile products appear sooner after infection than do the effects of the toxin proper and it seems certain that the action of the former increases the susceptibility of the body to the toxin proper. The development and number of these pigments and volatile products depend not so much upon the particular variety of bacillus pyocyaneus used as upon the media employed for its growth. The immunity produced, however, is always due to the action of the toxin proper. The accessory products, so to speak, appear to be due to special properties of the microorganisms, which are developed as the result of growth upon different media and under various external conditions. In this manner the diversified symptom-complex produced by infections with one and the same bacterium may be easily understood.

Berliner klinische Wochenschrift, April 21, 1902.

Diabetic Leucomains.—R. Lepine, in confirming the observations of Leo, has been able to extract from non-diabetic urines (especially pneumonic) substances which, upon inoculation, possess a diabetic power. Following the methods of A. Gautier, the author has obtained from blood leucomains which, when dissolved in water and inoculated, in small amount, subcutaneously into guinea-pigs, give rise to a more or less permanent glycosuria. Recent experiments have shown that the subcutaneous inoculation of an alcoholic extract of five grains of normal dog's blood produces only a very transient glycosuria, while the inoculation of a similar extract made from the blood of a depancreated dog causes a glycosuria of several days' duration. This result favors the idea that under normal conditions the pancreas, at least to a certain degree, destroys diabetic toxins and that, when the action of the pancreas is inhibited, such toxins, accumulate in the system.

Coincident Acute Polyarticular Rheumatism and Typhoid Fever.—P. K. Pel reports a case in which these two diseases were simultaneously existent. In October, 1901, the patient suffered from a pronounced attack of polyarticular rheumatism, which, however, promptly yielded to salicylate of sodium. The latter part of November he developed a typical clinical typhoid fever, which showed the characteristic typhoid roseola. Two weeks after the beginning of this disease a polyarticular rheumatism appeared, which, however, quickly subsided, as before, under the administration of the salicylate. The course of the typhoid was not influenced by the rheumatic attack. A positive Widal reaction was never obtained, although repeatedly looked for throughout the disease. The diazo-reaction was likewise negative. Notwithstanding these facts, the author regards the diagnosis of typhoid fever as certain. Cases are mentioned within his experience of undoubted typhoid in which the Widal and diazo-reactions were permanently negative.

The Clinical Importance of the Personal Factor in Disease.—Dyce Duckworth thinks that in these latter days too little consideration is given to the personal factor in disease. This is shown by the fact that the old doctrines of the several diatheses are now either totally ignored or regarded as misleading. The laboratory has come into undue prominence and many false theories are emanating therefrom. Thus we are told, from the laboratory, that scrofulosis is always a tuberculous process, while it is certain, from clinical observations, that many persons are scrofulous all their lives and yet never become tuberculized. The existence of a rheumatic and gouty diathesis is certain and should be given due consideration in the treatment of disease. Of course, laboratory aids are not to be entirely ignored, but the rising generation of practitioners should be impressed with the fact that the knowledge to be gained from an accurate conception of the specific tissue qualities of each individual is of prime importance in the correct diagnosis and treatment of disease.

Münchener medicinische Wochenschrift, April 22, 1902.

Action of Iodine in Arteriosclerosis.—Jodlbauer reviews the literature upon this subject and comes to the conclusion that the beneficial results of iodine in arteriosclerosis are primarily due to the vasodilating properties of this drug. In arteriosclerosis the increased arterial pressure gives rise to a damming back of the blood in the heart and venous system. The tissues are, therefore, supplied with a smaller quantity of arterial blood than under normal conditions. By dilating the arterioles iodine relieves this congestion and thus increases the nutrition of the tissues; the increased supply of blood also favors the action of the lymphatic system and thus accelerates absorption. Furthermore, the coronary arterioles are likewise dilated, and thus the nutrition of the heart is directly benefited.

Recurrent Radial Pulse.—Under this name Arthur Meyer describes a phenomenon which, he thinks, has not been previously mentioned. If the first, second and third fingers are placed upon the radial artery so that the pulsations of the same are perceptible to all three, and more pressure is exerted with the middle finger than with the others, the pulsations of the artery are less perceptible to the first and third than to the middle finger. If now slight pressure is exerted by the peripheral finger, the middle finger fails to perceive the arterial pulsations, notwithstanding that they can still be plainly felt by the peripheral finger; in many cases the pulsations of the artery are visible on the distal side of the peripheral finger, showing that the pulsations are conveyed from the periphery *toward* the heart. The explanation of this phenomenon is the backward flow of the blood from the ulnar artery to the radial through the arcus volaris. This phenomenon may be observed under normal as well as pathological conditions and hence is of no diagnostic value.

The Diagnostic Importance of Cutaneous Angioma.—Rosenbaum reports the results of a series of observations, which were instituted in order to ascertain the relations between carcinoma and cutaneous angioma in so far as the presence of the latter signifies the existence of the former. Four hundred persons were examined, of whom 308 showed cutaneous angiomas in greater or less number. Of these persons fifty-three were under and 255 over thirty years of age. Of the ninety-two who did not have cutaneous angiomas sixty-five were under and twenty-seven over thirty years of age. Among the 400 persons there were three in whom a diagnosis of carcinoma was certain and four in whom it was extremely probable. All of these seven possessed cutaneous angiomas, varying in each case from nine to forty-two in number. All of these seven were over forty-eight years of age. Further observation showed that frequently the number of cutaneous angiomas in the non-carcinomatous exceeded that in the carcinomatous. It is therefore apparent that the presence of multiple cutaneous angioma is without value in the diagnosis of carcinoma.

The Use of Quinine in the Local Treatment of Wounds.—Hugo Max calls attention to the antiseptic and styptic properties of quinine and the consequent value of this drug in the local treatment of wounds. In his experimental work the author employed a solution of the hydrochlorate of quinine in rectified spirit and distilled water. The growth of non-spore forming microorganisms is inhibited in such solutions containing 0.1 to 0.2 per cent. of quinine hydrochlorate. Such bacteria are killed in from thirty to sixty minutes by 1 to 1½ per cent. solutions of quinine. Similarly, 1½ to 2 per cent. solutions kill anthrax spores in twenty-four hours. Hence the antiseptic power of quinine is greater than that of carbolic acid or formaldehyde, but less than that of bichloride. Motile bacteria show marked agglutination when brought in contact with 0.3 to 0.6 per cent. quinine solutions. The styptic power of quinine is due to its marked agglutination of the red blood cells. Such an agglutination is produced by 0.08 per cent. quinine solutions. For practical use 1 per cent. solutions are the most suitable, and they are best used at the body temperature. "Quinine gauze," made similarly to iodoform gauze, is a valuable dressing for wounds. Such dressings, however, should not remain *in situ* longer than twenty-four hours, as they produce a coagulation of the albuminoids and, unless removed, might give rise to a coagulation necrosis. The local use of quinine is especially applicable to fresh wounds.

French Journals.

Phototherapy in Relation to Cutaneous Tuberculosis.—Leredde has treated and cured by phototherapy many patients afflicted with tuberculous lupus who were considered incurable as far as other methods were concerned. These patients had almost all been suffering from the disease for from six to fifteen years and had been treated in the most radical manner and for long periods of time. All possible methods had been tried. Aside from ablation, phototherapy is the shortest method of treating lupus vulgaris and lupus erythematosus. It gives a proportion of cures of which no other method is capable. Nevertheless, in a case of tuberculous lupus, when taken at the very beginning, ablation is always preferable. In the vegetative forms the employment of potassium permanganate is useful in facilitating the penetration of the chemical rays. Phototherapy is regularly used in lupus of the extremities and of the trunk.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, April 24, 1902.

Saturnine Gout.—Widal states that this affection is rare. He describes a patient, a man of fifty-seven years, who has been a painter since the age of eleven. This patient has multiple tophi in his fingers and ears. His health is excellent and, excepting the crises of gout from which he suffers, he is quite comfortable. There is no paralytic manifestation nor any anæmia. Besides, although he has had gouty crises for thirty-years, he shows no visceral alteration nor any sign of nephritis. The classical symptoms of lead gout are given as absence of tophi; anæmia, early visceral lesions, and nephritis. The father of this patient had suffered from lead poisoning. The theory that gout is caused by a renal lesion is not always borne out clinically, as many gouty patients have no nephritis, and many nephritics are not afflicted with gout. The hepatic theory seems the most plausible. There are disturbances of nutrition in the liver. The prognosis in this disease is excellent.—*Journal des Praticiens*, April 19, 1902.

Femoral Hernia of the Cæcum and of the Right Angle of the Colon; Strangulation for Fifteen Days; Cœliotomy; Death.—Bonnamour reports this case. The patient, a porter, forty-seven years old, had suffered from a large femoral hernia for years. It was difficult to hold with a truss. The hernia became irreducible and symptoms of subacute intestinal occlusion appeared. There was no movement of the bowels, but there was an escape of gas, and some vomiting. These symptoms persisted for eight days and then the hernia became more painful, at the same time the emission of gas ceased completely and the vomiting increased. Hernia of the cæcum was diagnosed, and operation was undertaken. The cæcal hernia was reduced after the femoral ring had been cut, as it had been partly responsible for the strangulation. The cæcum was supported in the hernial orifice with a view to an artificial anus, if that should prove necessary. Iodoform gauze was used as a drain. That evening 500 grams of artificial serum were given. The following afternoon the patient died. Autopsy disclosed the cæcum and ascending colon much distended. Following the course of the latter, it was found that the cæcum and the right angle of the colon were closely united by tough adhesions with the appendix between them.—*Lyon Médical*, April 20, 1902.

Treatment of Severe Puerperal Hemorrhages.—G. Keim says that the general phenomena which the invalid presents after a hemorrhage are related to circulatory troubles and to disturbances of the nervous system. The patient is pale and exsanguinated; the voice is faint; the breath and the extremities are cold. The blood examination shows a considerable decrease in the number of red blood-curpuscles. Nevertheless, even when this is excessive, restoration is possible, for in one case, Hayem showed that a patient was restored after the number of red corpuscles had been reduced to 500,000 (instead of 4,000,000). The temperature is lowered. The patient is depressed and suffers from "air-hunger." The pulse is rapid—indeed, it is a veritable fœtal pulse. It is small and thready, and in grave cases almost imperceptible. Bulbar and cerebral anæmia causes delirium and hallucinations. The patient believes herself about to die. The patient should be laid flat without pillows, and with the head on a level with the thorax and extremities. The Trendelenburg position is sometimes employed. The extremities may be bandaged, in order to send the blood to the brain. The peripheral nervous system is stimulated by flagellations of the body surface, frictions with alcohol, by the use of ammonia, by subcutaneous injections of ether, by the application of mustard plasters to the lower extremities, and by electricity. Heat is absolutely necessary in the treatment of hemorrhage. Inhalations of oxygen are given. If syncope still persists in spite of this treatment, artificial respiration must be resorted to. Subcutaneous injections of caffeine or of ergotin give tone to the heart muscle, and artificial serum may be injected to raise arterial pressure. If death is imminent, it may be given intravenously. It is exceptional to see a patient recover who presents delirium, incontinence of urine and fæces, and bulbar symptoms in general. After the syncope has been overcome the patient should have absolute repose. Heat must be applied and diluted alcohol may be given in small doses. Coffee and the tincture of digitalis are indicated. The feedings should be frequent and of small quantity. Iron and strychnine should be administered, and when the nervous system demands it, arsenic.—*La Presse Médicale*, April 5, 1902.

The Journal of Tropical Medicine, April 15, 1902.

Filariasis in St. Kitts, W. I.—George C. Low says that filarial diseases are very prevalent in the island, the chief type being filarial lymphangitis, locally known as "fever and ague" and "rose," very few of the white inhabitants having escaped attacks at some period or other of their lives. The spread of the disease by means of the culex fatigans mosquito has been proved beyond a doubt. The prevention of filariasis consists in the use of the mosquito net, the destruction of breeding grounds in tanks and other receptacles, and in the substitution of dry earth closets for the privy system now in use. St. Kitts has awakened to a sense of its danger and has taken up the subject in earnest. It will be an interesting study in the course of the next generation to watch the general reduction and stamping out in the island of this loathsome complaint.

New Growths in Tropical Countries.—A. B. Dalgetty considers new growths to be much less common among the less civilized races, and wonders whether the presence of malaria has anything to do with it. In tropical countries malaria is ubiquitous, and every one suffers from it more or less. He has never yet seen a case of malignant disease of the mamma in a native of India. The reason for this is a mystery, but he calls attention to one or two points in which the habits of the natives contrast sharply with those of the Western races. In the first place a woman's dress consists simply of a cotton cloth passed around the body and pulled up over head and shoulders, so that no pressure is exercised on the breasts. In the second place there is the custom of oiling the body, and in the third place mothers suckle their children eighteen months and longer, so that the lately formed cells of the gland undergo a gradual and complete devolution instead of their function being suddenly checked while they are still in full activity. The breast is literally sucked dry. Such a gland would appear less liable to undergo perverted action than a gland arrested while its function is still in full force.

In Pelvic Operations it is very necessary, if we are dealing with pus cases, which never stand anæsthesia and shock at all well, to seek first for the most rapid mode of incision and drainage. In the majority of cases the vaginal route will be the best for this purpose, even if a secondary operation may be required later.—*Southern Clinic.*

Society Reports.

THE AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Sixteenth Annual Meeting, Held at "Marlborough House," Atlantic City, N. J., April 29 and 30, 1902.

THE PRESIDENT, WILLIAM T. BEFFIELD, M.D., IN THE CHAIR.

The Technique of Prostatectomy.—Dr. JOHN P. BRYSON of St. Louis read this paper, reporting several cases and presenting to the Association a large number of specimens. After considering the etiology and pathology of the vesical conditions in prostatism, he stated that an adequate technique must include the removal not only of the urinary, but equally that of the circulatory obstruction and that an operation that dealt only with one of these was incomplete. With such modifications as seemed to be demanded by special conditions, the technique was as follows: The anæsthetized patient, whose perineum and abdomen had been prepared as for cæliotomy, is placed in a lithotomy position, a catheter introduced, the bladder irrigated with warm boric acid solution, and filled with warm salt solution to a point just below that which produces distension reflex. A broad grooved staff is introduced and a free perineal incision made in such a way as to open the urethra just in front of the apex of the prostate. Most frequently the bulb is split, in which case a vessel is clamped or the oozing is staunched by a catgut suture *en masse*. The knife, after entering the groove of the staff, is pushed backward far enough to incise the ring at the apex of the prostate, which is one of the least distensible parts of the duct. The forefinger follows well into the prostatic urethra, usually tearing it somewhat, and the staff is withdrawn. The finger quickly exposes the prostatic urethra, and ascertains whether the vesical outlet can be reached; after which the forefinger of the right hand in the rectum permits bimanual examination of the part of the prostate within reach. Guided by the finger, a blunt instrument is now passed into the urethra, and made to puncture from the urethral side the most prominent part of the mass. This puncture is always made in the power posterior quadrant, and the instrument is pushed well into the swelling. On its withdrawal the finger tears its way into the center of the mass which, even in fibrous prostates, is comparatively friable. The mass is now opened through to its capsule, the finger swept round its periphery without tearing the prostatic capsule or fibrous sheath of the gland. In the meantime the urethra is felt to tear longitudinally. After the lobe has been loosened all around, there remains the attachment to the urethra, in detaching which care must be had not to take away too much of the sides nor any of the roof of the urethra. The floor may be disregarded if necessary. The hypertrophied lateral lobe is then removed, to do which one has often to go well up behind and beside the neck of the bladder, yet it is possible to do this and keep within the capsule. Very little bleeding follows, but what there is appears to come from the torn mucous membrane, the lower part of which is often brought away. If there is any difficulty in delivering the detached mass, which is very smooth and slippery, an ordinary lithotomy forceps may be employed. If it is too large, it may be broken up with the finger or divided with scissors. This process is repeated on the opposite side, after which a median posterior segment remains to be dealt with. This can usually be done by sweeping the finger from side to side, its dorsal aspect towards the capsule, pushing it backwards in such a way as to detach it well up behind the bladder and roll it downward. One may be surprised to find that he may get behind and excochleate what he had just felt as a pedunculated, intravesicular projection, or a growth *en collerette*, bringing it well down by use of the forceps, apparently without disturbing the fibrous ring at the vesical outlet. Most frequently one finds the attachment of this mass to the urethra quite firm; and, no matter how much care is taken, some of this membrane is brought away. The more the detached mass is rolled downwards by pulling upon its upper surface the less mucous membrane is removed. In some cases the whole of the floor, including the colliculus and veru montanum, has been removed without harm; in fact, in most of these cases this has been necessary, the explanation of which may be found in the anatomical gland, passing from the lateral lobes, and, if there be any, from the median portion, as well as the ejaculatory ducts, unite here and empty into the sulci on either side of the veru montanum, while the colliculus often passes deeply into the tissue; this shows also how it is that those who practice excochleation from the capsular side, find it necessary to make a hole in the urethra at this point, or to cut the pedicle with knife or scissors. Usually now the finger may be passed through the ring into the bladder, which may be explored thoroughly. The cavity is now irrigated with a hot salt solution until the oozing ceases. If the finger be now introduced the floor and the sides of the urethra will be found intact, the latter often hanging loosely against the outer wall or sides of the cavity, from which the growths have been removed. A large cavity is made out, between the lower part of which and the rectum there is felt a thin wall. Into the lower part of this, hinged posteriorly about the ring at the vesical neck, is an irregular flap of mucous membrane, which can be pushed up and back and often made to occlude the vesical outlet. The walls of this cavity feel rough and irregular, and often shreddy; nevertheless, they do not seem to be a poor basis for "taking" of a graft; for it seems that, if properly managed, this tongue of mucous membrane readily becomes attached, behaving subsequently like an autoplastic flap. Care must be taken not to double backward and push this flap into the bladder when the large drainage tube is introduced, the sound edges retracted and the cavity packed with gauze loosely or tightly, as may seem necessary, to provide against subsequent hemorrhage. In packing one naturally takes into account any oozing point usually found about the edges of the mucous membrane.

The Surgical Relief of Prostatic Hypertrophy.—Dr. CHARLES H. CHETWOOD of New York read this paper, drawing the following conclusions, which were based upon his personal observations: Palliative measures should not be persisted in when they fail, after reasonable duration, to produce and maintain an abatement of symptoms. A first infection of the bladder is not alone sufficient excuse for operation, unless palliative measures fail to promptly subdue inflammatory conditions. Recurring infection of the bladder or ascending infection of the kidney is sufficient warrant for operative interference. There is a growing tendency toward earlier operation than was formerly practised. The greater number of cases of prostatic hypertrophy can be satisfactorily reached through a perineal incision. In the large majority of cases, the requirements of any operation upon the prostate consist in the removal of the obstructing area and depressing the bladder opening into the prostate, so that the *bas fond* may be properly drained. In many cases the obstructing area of the hypertrophied gland can be satisfactorily reached and effectually removed through a perineal opening by means of galvano-caustic incisions. Perineal-galvano-prostatotomy is preferable to the Bottini operation on account of its greater accuracy and lower mortality.

Bottini's Operation.—Dr. HENRY H. MORTON of Brooklyn, N. Y., presented a case occurring in a patient, aged seventy-eight years, who for one year prior to the operation had been complaining of tenesmus and frequent and painful urination, and at the time of his admission to the hospital there was complete retention of the urine. At this time the prostate was observed to be

1½ inches in diameter, and the cystoscope revealed an enlarged middle lobe and trabeculated bladder. The urine was acid, cloudy, with a specific gravity of 1016, and showed a slight sediment, which contained pus cells, but no casts. Bottini's operation was performed, three incisions being made, the anterior one being 2 cm., the posterior 3 cm. and the left lateral 2 cm. in length. Catheterization was necessary until the third day after the operation, when the patient began to urinate spontaneously. Eleven days after the operation micturition occurred every hour during the day and five times at night, catheterization being performed once daily with a withdrawal of three to four ounces of residual urine. One month after the operation the patient urinated six times daily and four times at night, and although the stream was slow in starting, it was ejected with good force. The cystoscope at this time showed the posterior lobe of the prostate with a cleft in the middle made by the Bottini incision, and the patient continued to be in good general condition, being up and about the ward. Subsequently his appetite and general vitality began to deteriorate, and fifty-four days after the operation he died.

A complete autopsy was not permitted, but the bladder was examined and found to be contracted. It contained a small quantity of thick and foul pus; many small necrotic areas were scattered about the surface, and a number of small sacculi, one containing little calculus, were observed. Traces of the posterior incision were very distinct. The interureteric fold of the mucous membrane had been divided, and the middle lobe of the prostate cleft in halves, necrotic areas being visible at the apex of each half. The left lateral incision had not split the prostate, but merely separated the mucous membrane from the superior surface of the prostate, and no trace of the anterior incision was visible. The kidneys were not examined, but as previous urinalyses had revealed the absence of casts, the cause of death was probably cystitis, which had been greatly aggravated by the operation. The middle lobe of the prostate was completely divided into two halves. The reduction in size of the prostate following Bottini's operation probably resulted from the sloughing subsequent to the burning. The difficulties of placing the instrument in a correct position are shown by the fact that the left lateral incision did not divide the left lobe of the prostate as intended, but only lifted up the mucous membrane covering it, while the anterior incision was found not to be made at all. The obtruction to urination was relieved by a single incision through the posterior median lobe of the prostate, and death did not occur until seven weeks after the operation, at which time the relief was complete. The only reasons he was kept in the hospital until his death was for bladder wasting and because he had no home, and had he left the hospital as soon as he was able to go after the operation, his case might have been reported as one of complete retention of urine in a man seventy-eight years of age entirely cured by Bottini's operation.

Prostatectomy.—The same author reported the case of a patient, aged sixty-two years, who entered the hospital suffering from retention of the urine, due to prostatic enlargement. Attempts had been made by his physicians to introduce a catheter and a false passage into the prostate had resulted. At this time no instrument could be passed into the bladder and external urethrotomy without a guide was performed. For three weeks subsequent to this the bladder was drained through a 30 catheter, at which time it was removed, but owing to the fact that the patient could not urinate, it was again introduced and allowed to remain two weeks longer, at which time prostatectomy was performed. The method employed was a suprapubic cystotomy to depress and hold prostate, and the perineal wound was used to shell prostate out from the capsule. No difficulty was experienced in enucleating three tumors one-half to one and one-half inches in diameter, and there was no hemorrhage following the operation. Drainage was obtained through perineal and suprapubic tubes. Patient did well for three days, during which time the drainage was perfect, but later he developed sepsis and died ten days after the operation. The autopsy showed suprapubic wound intensely infected; the cavity from which the prostatic tumors had been removed was healthy in appearance, and indicated that it would have healed entirely by granulation. The obstruction to urination had been entirely relieved by the enucleation of the prostatic tumors.

Removal in Toto of All Three Lobes of the Prostate by Suprapubic Cystotomy.—Dr. CHARLES L. GIBSON of New York presented this specimen, which was removed from a patient, sixty-two years old, who was admitted to the hospital in July, 1901. History of increasing obstruction of urine for past six years. Urine frequently dribbles away. Examination by rectum shows a considerable degree of enlargement of both lateral lobes. There were 15 ounces residual urine obtained on several occasions. Moderate cystitis. No evident kidney lesion. Prostatectomy by the Alexander operation was undertaken, but the first step, however, revealed the bulging of the prostate into the lumen of the bladder so distinctly that he determined to remove the enlarged portions by this direct approach. The vesical mucous membrane was incised over the urethral orifice, and he then found that his finger could be easily swept all around the prostate; so, in a few seconds, he brought out the whole prostate *en masse*. The urethral outlet must have been avulsed, but of this he was not aware, so the prostate was simply shelled out without any force and without any bleeding. The operation was completed by adding a perineal boutonnier for drainage. The result promised to be favorable, as there was no reaction. On the fourth day the dressings were changed, the bladder washed out, and the patient's condition appeared to be admirable, with a normal temperature and a free secretion of urine. Yet, six hours later the patient died without any particular manifestations. No autopsy.

The case was presented, not to recommend that the prostate should be removed *in toto* with the necessary drawback of destroying the urethral outlet, but for the purpose of emphasizing how easily the prostate, or portions of it, can be removed without destruction of tissue or hemorrhage, provided one clearly enters the essential line of cleavage.

Dr. EUGENE FULLER of New York said that during the last one and a half years he had performed twelve perineal prostatectomies with but one death, which occurred from delirium tremens. The oldest patient was eighty-one years and had atheromatous arteries and a mulberry calculus in his bladder, to remove which he was compelled to make a suprapubic opening. Another patient had tuberculosis of one lung, and so spinal anæsthesia was given with good results, although the patient died seven or eight months after the operation, from progressive tuberculosis.

Dr. FRANCIS S. WATSON of Boston said that in 1888 he made the statement that two-thirds of all cases of prostatic hyertrophies would be found within the reach of the finger after a perineal incision through the urethra; the same statement held good to-day. He did not believe that an elaborate armamentarium was necessary; he used a little instrument, made on the plan of the old gum-lancet, with which the mucous membrane was split, and then the forefinger was utilized in completing the work of removing the prostate.

Dr. GEORGE CHISMORE of San Francisco said that for thirty years he had seen many operations advocated for the relief of this condition, and they had all been disappointing in their results; but of late he thought he would have to change his views. He had had an opportunity of observing eight cases operated upon by Dr. Goodfellow of San Francisco. His method was very simple, and the only instruments used were the scalpel, staff, and volsella. He placed much importance upon the position of the patient, who should be in a strongly flexed attitude, the thighs being flexed upon the chest. He made a median incision, introduced the staff, opened the urethra, and with his finger, with the greatest ease, enucleated the prostate, all within twenty mintes. All eight cases were bad ones, occurring in old men, two being above eighty years. Among this number there were two deaths. In one case there was present an encysted stone, which he had endeavored to remove through a perineal incision, but failed; he, therefore, made a suprapubic incision and removed a stone not larger than the end of the thumb, which was encysted. This patient died from the effects of the abdominal wound. The post mortem showed the prostatic urethra practically well. The second case was a patient over eighty years. During the operation an opening was made into the rectum, causing the patient's death thirty days after.

The Operative Treatment of Hypertrophied Prostate.—Dr. Bransford Lewis of St. Louis said that, while claiming for prostatic surgery the merit of wonderful progress in the last fifteen years, he thought that the profession was not above criticism in certain respects, and that operators were much inclined to follow beaten tracks and routine procedures rather than base their operative treatment on the especial conditions found in each individual case. He mentioned some points in the histories of some of his cases, which had a bearing on the subject. The first was one in which he himself had failed to cure; it was a case of prostatic retention, treated by means of the Bottini electro-incision. He then had desired to open suprapubically, but the patient objected. Later the patient consulted another surgeon and consented to the suprapubic operation, at which time an intravesical projection was removed, with the result of giving complete relief to the patient. The second case was one in which perineal prostatectomy had been done a year before by another surgeon, and yet no benefit accrued; the patient was compelled to depend on the catheter for evacuating his bladder for six months thereafter. In January of the present year Dr. Lewis made a suprapubic incision and removed an intravesical collar that surrounded the urethral opening and which had been causing the complete retention, notwithstanding that prostatectomy had been performed. A cure followed the second operation. The third case was that of a man sixty-five years old, very infirm, whose urine was albuminuric, and who had twenty-eight ounces of residual urine, and who urinated thirty-five times in twenty-four hours. Upon this patient he made one posterior incision with the Bottini-Freudenberg incisor, affording, practically, a prompt and complete relief from his various symptoms, with reduction of the residual urine from twenty-eight down to two ounces, and of the frequency from thirty-five to seven or eight times in twenty-four hours, with removal of the albuminuria and a rapid improvement in his general health. Later, the patient had been operated upon for inguinal hernia by another surgeon, became infected, suffered from erysipelas and gangrene of the lungs, intestines and of the wound, from which he died, permitting of the exhibition of the post-mortem specimen, which he presented. It showed the groove made by the cauterizer, through which free urination had been accomplished. The form of obstruction had been a prostatic bar. The fourth case mentioned was one of a gentleman who, four years ago, had been advised by a genitourinary surgeon to undergo some operation for hypertrophied prostate, but, on consulting the reader of this paper, was advised by him not to accept of any operation—he did not need any. Only antiseptic and dietary regimen had been prescribed for this case, and yet, during the past four years, he had had no indication of any trouble with his prostate or bladder. There had been no residual urine in the first place, and no reason for an operation had ever existed. The practical lessons to be derived from these cases were: That the proper selection of the operative procedure is of the greatest importance in attaining successful results; this was satisfactorily explained by the dozen or more specimens and models of hypertrophied prostates exhibited by the reader. In these the various forms of prostatic enlargement and obstruction were clear, including intravesical tumors and projections, the prostatic bar, the bilateral hypertrophy, sessile and pedunculated tumors, the nodular valves and the median outgrowths, adenomata, etc. From all of these it was plainly evident that no one operative procedure could possibly fit all cases, and that the operation should be selected according to the cases at hand, rather than the personal inclination of the operator. The condition favorable for the several operations in vogue were summed up as follows:

Favorable for the Suprapubic Route. (1) General enlargement of the prostate, with extreme intravesical projection of the median or lateral lobes, diminishing their accessibility from the perineum; (2) Marked pedunculation of the intravesical tumors, with absence of obstruction from other sources.

Favorable for the Perineal Route. (1) General hypertrophy, involving the lateral lobes, without extreme intravesical projection; (2) Large or very thick bar formation; (3) Severe compression of the urethra between massive lateral lobes; (4) Excessive development of the prostate in the direction of the rectum; (5) In most cases, where the patient is in good general condition, is not too aged, and there is not a special indication favoring one of the other procedures.

Favorable for the Bottini. (1) Cases of extreme debility or of extreme age, unable to stand one of the severer operations; (2) Cases of bar or median sessile obstruction, if not too great dimensions; (3) Horwitz says it should be employed as a prophylactic against further obstructive tendency, at the beginning of catheter life; (4) In complete collar formation.

Dr. F. L. Sturgis of New York said that the removal of the prostate and ejaculatory ducts prevented the flow of the prostatic secretion, which was so essential to the vitality of the spermatozoa, and, therefore, tended to render the male sterile. Some partial operation, such as the Bottini, was preferable on this account.

Dr. Eugene Fuller of New York did not think we could group the different forms of hypertrophied prostates under such a small class as shown by Dr. Lewis. If one had to deal with one hundred cases of prostatectomy, there would certainly be seventy-five of them that would represent something new. In cases complicated with troublesome hernias, many surgeons operated without having in mind the cause of the hernia, the straining, etc., consequent upon the urethral obstruction. No matter how severe the hernia seemed to be, if the bladder be opened and drainage instituted, the tenesmus ceases, and the patient may not again be troubled with the hernia. This also applied to prolapse of the rectum incident to the straining and tenesmus.

Dr. F. Tilden Brown of New York said that Dr. Lewis had failed to show how we were to know in advance just what form of prostatic enlargement we were to deal with. The use of the cystoscope, for this purpose, was very unsatisfactory. Again, it was very necessary that one should know the condition of the kidneys, and what sort of urinary obstruction we had to deal with, and this was difficult to learn. It seemed to him that where there was the slightest excuse for making a suprapubic incision for drainage such an incision should be made use of for the introduction of th cystoscope, with which one could look directly down and learn the nature of the obstruction or growth. Recently he had the opportunity to examine two cases through a suprapubic opening in this condition, and he had learned a great deal that would have been impossible to learn if the cystoscope had been introduced through the urethra.

Dr. H. H. Young of Baltimore said that Dr. Lewis's models and specimens were beautiful and very instructive, but that he had met with several forms of prostatic obstruction which were not shown in the collection. One case, in which no enlargement could be found by rectal and cystoscopic examination, was found by epicystotomy to have a small globular tumor of the veru montanum, which was causing the obstruction. He had had several cases of so-called small sclerotic prostate, which also showed by rectal and cystoscopic examination very little evidences of hypertrophy, and on which a prostatectomy would be impossible, that was cured by the Bottini operation. In four cases which had previously been castrated he found, with the cystoscope, a collerette of mucous membrane and fibrous tissue around the prostatic orifice, which continued to cause obstruction after the lateral lobes had atrophied. This, also, was relieved by the very small blade of the electro-incisor. He wished to reassert his adherence to the radical removal by prostatectomy in fit subjects. He had used both the perineal and suprapubic routes, with but one death in fourteen cases. Many of his cases were so old that he feared the radical operation and general anæsthesia, and found the Bottini operation eminently satisfactory. He had had nineteen cases over seventy years of age, three over eighty, and operated under cocaine with the electro-cautery without a death, and with good results.

Dr. Sturgis of New York said that in the case of the tumor of the veru montanum the endoscope would have shown what the cystoscope had failed to show.

Dr. Bryson of St. Louis said he had had three or four such cases where he did an epicystotomy, and found a tuberculous condition; they were scraped, and cure followed.

Dr. William T. Belfield of Chicago said that none had as yet penetrated beyond the threshold in our endeavors to relieve these obstructions. It must be admitted that nothing was known regarding the etiology of these conditions. We all know that some of the most violent cases of so-called prostatic obstruction occurs when there is no prostate at all. We know of certain young men whose prostates are not enlarged; nevertheless they have symptoms of prostatism, with residual urine, etc. Such cases have been described by Chetwood and others under the name of contracture of the vesical neck. There are cases occurring in women with all the symptoms of prostatism, with complete retention, residual urine, trabeculated bladder, showing the efforts of the bladder to overcome the obstruction, and yet there is no prostate. He thought we were overestimating the importance of enlargement of the prostate as a cause of the trouble. He thought more attention should be paid to contractures, or fibrous degeneration of the vesical outlet, or what not, that may be present without any prostatic enlargement whatever. Again, we know that the prostate has no function except that imposed upon it by the internal secretion of the testicle; if we remove the testicle, the glandular part disappears by atrophy. If such is the case, and it be shown that the secretion of the testicle has anything to do with the production of the adenomatous enlargement, then it would seem rational to assume that no operation except a radical one would be of great benefit. The Bottini operation as a prophylactic one is unreliable. In the Bottini operation, simply scratching offers no improvement which cannot soon be overcome by some causative agent which may be circulating in the blood.

Detection of Stone in the Kidney by Skiagraph.—Dr. James Bell of Montreal exhibited photographs of a case in which the skiagraph had demonstrated a stone with perfect satisfaction. The patient was rather a slight, poorly nourished woman, forty-two years old. She had her first attack of colic when she was four months pregnant in 1897. She remained well until 1900, when, being three months pregnant, she had another attack. She then remained well until 1901, when she had other attacks occurring on the right side. She had observed no change in the urine, but she declared that she had noticed some swelling on that side with each previous attacks. After admission to the hospital, skiagraphs were taken which showed a small oval stone in the lower half of the kidney, which was removed by the loin incision, and it was shown to be of the size and shape as depicted in the skiagraph.

SECOND DAY, APRIL 30, 1902.

The morning session was devoted to a General Discussion of the Surgical Treatment of Genitourinary Tuberculosis.

Renal Tuberculosis.—Dr. F. Tilden Brown of New York opened the general discussion on this topic, and said that the results of necropsies were at variance with the clinical showings in the disease, as a rule, and that if we relied upon the evidence as produced at autopsies, we would be convinced that there were but few cases of isolated renal tuberculosis which justified surgical intervention. He thought that a contribution from the hospital records, extending over a period of ten years, would be of value, although the statistics were incomplete. At the Presbyterian Hospital, New York, from February, 1892, to March, 1902, there were 1,427 necropsies, of which number 258 (18 per cent.) showed tuberculous lesions somewhere in the body, and forty-eight of them (18.5 per cent.) showed renal tuberculosis. Of this forty-eight cases, thirty-two occurred in males and sixteen in females. Of the forty-eight cases, thirty-nine had tuberculous lesions in both kidneys, while but nine had tuberculosis of one kidney. Of these nine cases five involved the right and four the left kidney. Of the 258 tuberculous bodies it was shown that the kidneys were more commonly involved than the spleen, liver or adrenals (kidneys involved in forty-eight, spleen in thirty-two, liver in thirty-two, adrenals in eight, etc.). During the same time there were in the hospital seventy-eight cases diagnosed as renal tuberculosis, if the authorities be given the credit of making such a diagnosis in forty-eight cases where the kidneys were found to be involved in tuberculous lesions at autopsy. Of these seventy-eight cases, thirteen (16 per cent.) had nephrectomy performed, with one death occurring two months after the operation; at the autopsy the other kidney was found to be far advanced in the disease. That gave a mortality rate of 7.6 per cent. Of these thirteen cases, six fell into the speaker's hands; he had no deaths. The vast majority of cases that come to autopsy which show tuberculous lesions in the kidney were of the disseminated general miliary type, and with such a class of cases, of course, the surgeons have nothing to do with. At the present time we are sure that there is no form of medicinal, hygienic or climatic treatment that is at all curative in renal tuberculosis. The evidences at necropsies show as high as 3 or 4 per cent. of healed cases of pulmonary tuberculosis; whereas it is the rarest occurrence to find at autopsy any evidence of healed renal tuberculosis. The speaker then showed photographs of Nature's efforts in the attempt to cure renal tuberculosis. From a surgical standpoint, he was satisfied that no surgeon to-day would hesitate to perform an immediate nephrectomy when he was sure that one kidney contained the only appreciable focus of the tuberculosis. Through the courtesy of his colleague, Dr. Tuttle, he was able to show a picture of a case of pseudo-tuberculosis of the kidney, a very rare condition, which was first described in 1891.

Tuberculosis of the Seminal Tract.—Dr. Hugh H. Young of Baltimore said that although tuberculosis of the seminal tract had been the subject of much investigation and discussion during the past three years, there were still wide and important differences of opipion among prominent surgeons, both as to the pathology and the treatment of the disease. The main questions at issue, he said, were these:

Is the primary localization in the epididymis, in the prostate, or in the seminal vesicles? In disease beginning in the epididymis how often does the testicle become involved, and how soon? Does the disease ever begin primarily in the bladder, and from there travel to the genital organs?

In tuberculosis of the epididymis, is castration or epididymectomy the better operation, and what are the limitations of each? Is double castration followed by important psychical or sexual disturbances? To what extent should the vas deferens be followed and removed? Is forcible avulsing advisable? With disease of the prostate and seminal vesicles, what should be the treatment? What hygienic and climatic treatment should be employed? Should the patient rest or lead an active life?

The writer presented an exhaustive resume of the literature as bearing upon the questions as above set forth, and his conclusions were as follows: The disease may begin primarily anywhere in the tract, but in the majority of instances it starts in the epididymis. The bacilli, which are constantly being carried up with the testicular secretion along the vas deferens, very soon localize in the ampulla of the vas, the ejaculatory duct, the seminal vesicle, and the adjacent portion of the prostate. The testicle is very seldom the primary point of origin, and it becomes involved secondarily to the epididymis, generally much later than the seminal vesicles, though it seems not to be so immune as formerly supposed. Tuberculosis frequently travels from the kidney to the prostate and from there involves the testicles, but it is almost never primary in the bladder.

Dr. Young spoke especially of the question of treatment when the seminal vesicles were involved. There are to be found in the literature thirty-five cases which the seminal vesicles have been removed for tuberculosis; of these fourteen will have to be excluded, because the operator failed to state the ultimate results. Of the twenty-one which were followed six died, five had recurrences of the disease, and ten were classed as well. Only eight cases were followed over one year and of these two died, two had perineal fistulas, and four were classed as cured. In only one of the six fatal cases was pulmonary involvement present before operation. Considering then that both seminal vesicles were involved in but twelve cases, the infrequency of lung and bladder tuberculosis in these thirty-five cases were not the most intensive, as such cases go, and with cures claimed in less than 50 per cent. and with only eight of these followed longer than one year, the results obtained by operative removal of tuberculous seminal vesicles are indeed unsatisfactory, and apparently not nearly so good as where a partial operation upon the external disease in the testicle alone is attempted. In his own cases he had also had poor results with spermatocystectomy, and he now believed that the prostate and seminal vesicles should not be attacked early in the disease, for the statistics of Dimitresco, Kocher, Simon, and others showed that a remarkable disappearance of prostatic and vesicular disease frequently occurred after removal of the external focus of disease by epididymectomy, or castration. In later cases, with extensive caseation and abscess formation in the prostate and vesicles, it was necessary to operate to provide a proper escape of the fluid. Dr. Young showed diagrams of a method he was now using for epididymectomy and castration. The incision was made above the groin, the inguinal canal opened, and vas divided and brought out of the upper angle of the wound, where it was sutured and left to drain exteriorly. Through this stump iodoformized glycerine injections could be made down the deferential canal to the seminal vesicles and prostate, both of which could be filled with the medicinal fluid. The forcible avulsion of the vas deferens gave a splendid opportunity for the foci situated near the deeper end to drain into the perivesical and subperitoneal space and was, therefore, to be condemned.

Tuberculosis of the Testicle.—Dr. PAUL THORNDIKE of Boston presented a short paper on tuberculosis of the testicle, based upon seventy-five cases of the disease collected from the surgical wards of the Boston City Hospital. Sixty-seven per cent. of these cases occurred between the ages of twenty and forty years; 60 per cent. of these cases involved the left testis; 18 per cent. involved both testes. Gonorrhœa had preceded the development of the disease in 30 per cent. of the cases, and trauma in 12 per cent. The epididymis alone was involved in thirty-two cases. The vas deferens was palpably involved in twelve cases. The seminal vesicles were palpably involved in sixteen cases. The prostate was palpably involved in thirteen cases. Dr. Thorndike's paper discussed two points; one, the feasibility of removing the epididymis and leaving the testis behind, in proper cases; two, the benefit to the patient of operations which removed only a part of the disease in cases where total eradication of the tubercular process is impossible.

Cases of Genitourinary Tuberculosis.—Dr. THORNDIKE showed two such cases. In the first there was a deposit in the prostate, which was not alone the only manifestation of tuberculosis of the urogenital system, but also the only one in the body. In the second case it was clearly shown that the ureter on the same side as the diseased adrenal had been infected through its mucous lining by the tubercle bacillus carried there, presumably by the urine secreted by the kidney, the adrenal of which was tuberculous.

An Analysis of Ninety-six Operations for the Relief of Tuberculosis of the Testicle.—Dr. ORVILLE HORWITZ of Philadelphia, after recounting many cases, said that he seemed warranted in presenting the following conclusions: (1) A primary tubercular infection of either the epididymis or testicle may occur, the former being by far the more common; (2) A primary infection of the epididymis, secondarily that of the testicle, is more common than the descending one; (3) Primary involvement of either the epididymis or testicle usually takes place through the circulation; the soil being predisposed to the location of the tubercle bacillus, either by a slight traumatism or by some infective condition which has given rise to inflammation of that organ; most commonly an attack of gonorrhœa; (4) Secondary tubercular involvement of the epididymis or testicle sometimes follows a primary focus of the disease in other portions of the body; more commonly in those organs that are in a direct anatomical connection with the sexual glands, such as the seminal vesicles, prostate, urethra, bladder, ureter, or kidney; (5) The invasion of the testicle may be rapid, associated with acute inflammatory symptoms, an abscess soon developing; or the onset may be slow, the symptoms simulating those of either chronic syphilitic orchitis or malignant disease of the organ; (6) The tuberculin test should always be employed in doubtful cases where only one focus of the disease is known to exist; (7) In doubtful cases, associated with hydrocele, the fluid should be examined for the tubercle bacilli, and inoculating experiments made; (8) The injections of either emulsions of iodoform or of sulphate of zinc into the diseased part are not to be recommended; (9) In all cases of encapsulated caseous nodules, quiescent in the epididymis, epididymectomy should be performed; (10) Epididymectomy together, with resection of the vas deferens, is not attended by either atrophy of the testicle or sexual weakness; (11) The drainage of tuberculous abscesses, followed by the use of the curette, is only to be employed where radical treatment is not permissible, as it is attended with more or less danger and is generally unsatisfactory in its results; (12) In instances where the epididymis alone is involved, a resection of the diseased structure is all that is required, whether a partial or complete resection of the vas deferens is to be undertaken is still undetermined; (13) Double orchectomy should be performed when both glands are diseased, provided there is not extensive co-existing tubercular infection of other organs; (14) Whether infected seminal vesicles should be always removed at the time that the epididymis or testicle is resected, is a question open for discussion. From the fact that in a large majority of cases the removal of the primary seat of the disease is followed by a subsidence of the tubercular involvement of the vesicles, it is deemed wiser, as a rule, to wait and remove the vesicles later if necessary. (15) Hygienic and climatic influence play as important parts after operations in fortifying the constitution against further invasion as they do in other tubercular conditions; (16) The anti-tubercular remedies are of great value in controlling the disease, and should always be employed in conjunction with whatever surgical procedure may be deemed necessary.

Teratoma of the Testicle.—Dr. James R. Hayden of New York reported the case of a patient, twenty-seven years old, a butler, who was admitted to Bellevue Hospital April 19, 1901. There was no family history of tuberculosis or malignant disease. He denied ever having had syphilis, local traumatism or strain. Nine years ago he had gonorrhœa, which lasted about three months. Seven years ago he had a second attack, complicated with a right sided epididymitis, which was quite severe, and since then the affected testicle has remained a little larger and harder than its fellow. Two and a half months before admission, the right testicle began to increase in size, becoming firm and hard. During the past few weeks there has been some local pain and a feeling of weakness when still, but which disappears when he walks. Upon admission, his general condition was found to be good. The right half of the scrotum was occupied by a smooth, painless, heavy and densely elastic tumor, in which the epididymis and testicle proper cannot be differentiated. There was apparently no involvement of the cord, and there was no hydrocele of the tunica vaginalis. The circumference of the tumor at its largest part was eleven and three-quarters inches. The scrotum was normal in appearance and non-adherent. There was no glandular involvement. A diagnosis of malignant disease of the testicle was made, but in order to exclude the possiblity of syphilis, the tumor was enveloped in strong mercurial ointment, and the patient given large doses of iodide of potassium; in spite of which, the tumor grew so rapidly that this treatment was stopped and the tumor removed. The tunica was normal in appearance, and there was no thickening of the cord, which was ligated and cut high up. The wound healed kindly without complications, and the patient left the hospital one month after admission, but failed to return again, as was requested of him.

The pathological report gave the following microscopical appearances: The growth was mostly composed of a mixture of sarcoma and carcinoma, in combination with other varieties of tissue, and undoubtedly belonged to the class of teratomata. The sarcomatous tissue was both small, round celled and small spindle celled, a few giant cells being present in places. The cancer was adenocarcinoma an practically replaced all the glanular elements. A considerable cartilaginous element was seen throughout of the hyaline variety, with here and there beginning ossification. Mucous cycts were present. The connective tissue was fairly normal, but, as a whole, showed an unusual cellular element. The vessels were congested, with a proliferation of cells about them, and in parts well marked hemorrhages were found. Smooth muscular fibres were noted, with a slight degree of fatty degeneration and some necrosis. The tumor, taken as a whole, on account of its composition and the large proportion of cells over basement and intercellular substance, was to be considered as decidedly malignant.

Gangrene of the Penis.—Dr. James R. Hayden of New York reported the case of a patient, fifty-seven years of age, a printer, who was admitted to Bellevue Hospital, January 15, 1902. Family history negative. Denies having had any form of venereal disease, local traumatism or cauterization. He was a paranoiac, having various delusions regarding the cause and nature of his trouble, a brief history of which is as follows: About two weeks prior to his admission he noticed a small black spot on the end of the glans penis, which increased in size and gradually spread over the rest of the organ, giving rise to an offensive and penetrating odor. Upon admission, aside from his deranged mental condition, he appeared to be healthy in all respects. The entire penis, from the meatus to within one inch of the abdominal wall, was greenish-black in color, dry, hard and gangrenous, with an offensive and penetrating odor. The line of demarkation was well marked. The urine passed from the under surface of about the middle of the penis. Inguinal glands not involved. The parts were frequently irrigated and dressed with hot bichloride solution, which was followed by the removal of the slough in a few days, leaving a raw and bleeding stump about one and one-half inches in length, from the end and lower border of which the urine was passed in a good stream. Healthy granulations were established, and the entire stump was then covered with small skin grafts, the favorable outcome of which was admirably shown in the accompanying photograph, showing the corpora cavernosa entirely covered with sound integument. The patient left the hospital six weeks after admission.

Officers for the Ensuing Year.—*President*, Dr. Paul Thorndike of Boson, Mass.; *Vice-President*, Dr. Edwin C. Burnett of St. Louis, Mo.; *Secretary* and *Treasurer*, Dr. John Vanderpool of New York; *Council*, Dr. William T. Belfield, of Chicago, and James R. Hayden of New York. The next place of meeting will be Washington, D. C.

THE PRACTITIONERS' SOCIETY.

One hundred and seventy-first Regular Meeting, Held on Friday, April 4, 1902.

Joseph D. Bryant, M.D., President, in the Chair.

A Case of Vitiligo—presented by Dr. Hermann M. Biggs. The patient was an old man, apparently feeble minded, so that no reliable history could be obtained from him. For a number of years he has been leading the life of a vagabond, wandering about the streets and living upon the scraps of food found in ash-barrels. When he entered Bellevue Hospital, several months ago, his general condition was very poor. His circulation was bad, and soon after his admission he developed gangrene in the big toe and the adjoining toe of the right foot.

The striking feature of the case is the lack of pigment in certain parts of the skin, especially over the back. These patches of vitiligo are symmetrical in distribution and their milky appearance forms a marked contrast to the dusky colored skin covering the rest of the body.

Dr. Biggs said the man's blood had been examined and showed a leucocytosis running as high as 32,000, and of the leucocytes present, from 50 to 60 per cent. were eosinophiles. His urine contained an enormous number of granular casts.

Dr. Beverley Robinson asked whether the presence of the eosinophiles pointed to a neurotic origin of the disease? Increased eosinophilia has been reported in certain nervous affections, for example, in bronchial asthma, and it would be interesting to learn whether this change in the constituents of the blood is present, as a rule, in cases of skin disease of doubtful origin.

Dr. M. Allen Starr said that eosinophilia was not a constant factor in nervous affections. It was present in some cases and absent in others.

Dr. Biggs said he had not been able to find any of these cases on record where a blood examination had been made. In skin affections, generally, eosinophilia is present, and it is attributed not so much to the particular kind of skin disease as to the extent of it.

Dr. Francis P. Kinnicutt said he had an impression that cases of vitiligo had been reported in which the number of eosinophilic cells were increased; not, however, to the extent of that observed in Dr. Biggs' case.

Dr. Edward K. Dugham, who had made an examination of the urine in Dr. Biggs's case, said that it had a specific gravity of 1,018, was acid in reaction, and contained traces of albumen and indican, but no sugar. The sediment contained immense numbers of hyaline and granular casts.

The analysis made with a view to determining the presence of an acid intoxication yielded the following results:

Total acids, in terms of sodium	5.987742 gms.
Total bases, in terms of sodium	4.182052 gms.
Excess of acids	1.8056900 gms.

This would be equivalent to 3.533 gms. of oxalic acid in the 24 hours.

The normal acidity of the urine ranges between an equivalent of 2 to 4 grams of oxalic acid per diem. This study shows that whatever modifications in metabolism may exist in Dr. Biggs' case, an acid intoxication does not exist.

A Case of Internal Derangement of the Knee-joint.—Presented by Dr. V. P. Gibney. The patient was a young man, who three years ago made a misstep, producing pain and temporary disability of the left knee-joint. Since that time he has never been able to completely straighten his left leg, and he has had recurrent attacks of disability. He complains of pain on pressure over the left external semilunar cartilage. Flexion of the limb is almost perfect, but extension cannot be carried beyond 155 or 160 degrees. The contour of the joint has changed very little and there is nothing in the synovial sac.

Dr. Robert Abbe said Dr. Gibney's case resembled one upon which he had recently operated. In that case the *x*-ray clearly showed a piece of fibro-cartilage pinched between the two cartilages of the upper and lower bones. It was egg-shaped and gave an excellent shadow. Upon excision, it proved to be a fragment of dense fibro-cartilage, which had been held in place by a very extensive external attachment. This patient had suffered from a number of attacks of disability, but since the operation the movement of the joint has been perfectly free. Dr. Abbe said his impression was that the fragment of fibro-cartilage in this case had been chipped off from one of the cartilages of the joint and had been there for a long time.

The President, Dr. Bryant, said he agreed with Dr. Abbe that the interference with the function of the joint in the case shown by Dr. Gibney was propably due to the fibro-cartilage which had either become adherent, so that it could not be moved backwards or forwards, or else it had become thickened or broken.

Dr. Robert F. Weir said that about two years ago he saw a case of intermittent disability of the knee-joint, followed by permanent fixation, with considerable tenderness posteriorly. By means of the *x*-ray a cartilage was recognized in that part of the joint, An incision was then made, opening first into a bursa over the knee-membranosis; this contained two cartilages, which evidently had slipped from the joint and had been forced into this bursa, thus acting as a hindrance to free motion of the joint.

A Case of Old Excision of the Knee-joint—presented by Dr. Bryant. The patient was a man, fifty-four years old, who entered Bellevue Hospital eighteen years ago with an extensive osteo-myelitis, attended with necrosis of the lower end of the femur, involving the knee-joint. The disease was of long standing and had produced extreme deformity of the limb. An excision of the joint was done by Dr. Bryant, and the limb fixed in a slightly flexed position; this was at that time regarded by many in authority as the best method of fixing the limb, instead of in a straight position, as is now done. After removing the joint, diseased foci were found in the lower end of the femur; these were scooped out, leaving several cavities, each about the size of a small walnut. The sawn ends of the femur and tibia were then brought together and wired, and a plaster-of-paris bandage applied, the wound being drained. The man recovered with out any complication, and the joint gave him no further trouble until six months ago. Then he developed a sinus in the popliteal region, evidently due to the presence of dead bone at the lower end of the femur.

Dr. Bryant said that this operation, done eighteen years ago, was his second case of excision of the knee-joint. Altogether, he had done this operation twenty-five times, and all of them made a prompt recovery, with two exceptions. One of these died of exhaustion from suppuration, while in the other case the popliteal artery was accidentally opened while dissecting out diseased tissue in the popliteal space, necessitating prompt amputation. In but two of his cases—first two—the limb was put up in a flexed position.

In reply to a question as to whether he would now put the limb in a straight position in case another operation was undertaken, Dr. Bryant said he would be guided by the condition of the lower end of the femur. The man has become accustomed to the present position of the limb. and he did not think it advisable to alter it unless he could benefit the stability of the lower end of the femur by doing so.

A Case for Diagnosis—presented by Dr. Weir. The patient was a young woman with a subcutaneous swelling of the right side of the face, extending from the temple to just below the jaw and from the ear nearly to the angle of the mouth. This had first been noticed, about three years ago, as a slight puffiness just anterior to the ear, and had gradually extended downwards to the lower jaw and upwards, involving the eyelids, so that now the eye is entirely closed. There are a few enlarged glands in the neck. The swelling is hard to the touch, the skin adherent to it and anteriorly and inferiorly the edges can be clearly outlined by palpation, and resembles a slowly progressing lymphatic trouble. Its color is whiter than normal skin and mottled with pearl areas. The patient suffers no pain and is otherwise in good health. The swelling of the eyelids, she states, came on in September last. Dr. Weir said the case was possibly one of obscure sarcoma or lymph œdema, with rather unusual features. It also bears some resemblance to the form of chronic urticaria described by the French dermatologists.

Dr. Robert Abbe said the case resembled an elephantiasis from lymph infection or lymph œdema, the focus of infection possibly being a diseased tooth, of which the patient gives a history. Several months ago, the speaker said, he showed a number of cases with a somewhat similar condition, the lymph œdema being confined to the lower extremity, and probably originating from an infecttion of the deep lymphatics. In erysipelatous infections we sometimes get a condition resembling this, excepting that the swelling is not quite so hard.

Dr. Kinnicutt said the hardness of the lesion in this case was so pronounced that it was almost an induration, and this, he thought, would rather militate against the theory that it was a lymph œdema. The swelling of the eyelids somewhat resembles a lymph œdema, but the lower projecting edge of the mass is too hard to indicate such a condition.

Dr. **Abbe** said that while it was rather unusual to see such a hard border in cases of lymph œdema, still it might occur. Following the exudation in these cases, fibrinous changes are likely to take place.

Dr. **Kinnicutt** said that in this case the growth is spreading at its periphery, and we would not expect to find the greatest hardness there if the conditions was one of lymph infection.

Joint Derangements, Due to Movable Bodies, Defective Cartilages, Etc., in Joints.—By Dr. Joseph D. Bryant.—Dr. **Edward K. Dunham**, who had made a gross and microscopical examination of the movable body removed from the joint in one of the cases reported by Dr. Bryant, said that it appeared to have a bony surface throughout, without any interruptions that could be detected. This bony shell was continuous with a cancellated bony structure, forming the interior of the specimen, the spaces between the bony plates being filled with fatty marrow, quite like the normal marrow of bone, and well supplied with blood vessels. The surface of the bony plates, within and without, were covered with a layer of cells resembling those of the periosteum and endosteum of normal bone, and there was some fibrous tissue covering the surface of the bone externally. There were no evidences of any inflamatory or necrotic process, nor of any cartilage.

Dr. Dunham said the structure seemed of interest in view of the light it might throw on the etiology of this movable joint body. He had examined the records of 168 cases of bony joint bodies where the microscopic structure of these bodies was described, and in the majority of them the specimens consisted of both cartilage and bone, either hyaline cartilage of fibro-cartilage being present. In some instances the body was found to consist entirely of bone, but these were cases of arthritis deformans. In such cases the bone contains but few vessels, as a rule. It is usually quite dense and frequently necrotic.

Dr. Dunham said the structure of the specimen he examined did not agree with that of any of those recorded. If the body is a piece of normal or diseased bone, one would expect to find cartilage present or evidences of inflammation, but neither of these were fund. Arthritis deformans can be excluded in this case by the patient's history, as well as by the structure of the specimen. The body is probably a small osteoma which became pedunculated and remained attached only by a very small pedicle.

Dr. **Abbe** said he had seen perhaps eight or ten cases of loose cartilage in the joints, and taken out three or four of them under cocaine anæsthesia. . One case was that of a young man who received a blow over the knee with a hockey stick. For three days he limped about with a stiff, slightly bent, knee and some synovitis. An incison showed that the fixation was due to a wedge-shaped fragment of cartilage, about three-quarters of an inch long, which had been chipped from the inner side of the knee. One facet of the fragment presented a gritty bone surface. In the course of time, Dr. Abbe said, such a fragment might readily become covered with cartilage on all sides and thus resemble some of the so-called loose cartilages.

Dr. **Robinson** said that in a case of movable body in the knee-joint, which came under his care about a year ago, the patient made an ultimate recovery without surgical interference by wearing a knee-cap made of stiff canvas.

Dr. **McBurney** said that he agreed with the view which is held by most pathologists, that many of these loose bodies—perhaps the majority—are formed from portions of the synovial fringes, which, having being subjected to traumatism and gradual, slowly progressing inflammatory changes, finally became loose in the joint. Some of the specimens met with indicate plainly such an origin. In operating on the knee for other causes one frequently sees synovial fringe in various stages of pedunculation, sometimes in the shape of well-defined bodies, either entirely loose or hanging by a mere thread. The bony changes doubtless occur here as they sometimes occur after traumatism in other parts of the body.

Dr. McBurney said that about a year ago he saw a young woman of eighteen who suffered from much pain and disability of the right knee-joint, which had extended over a considerable time. She could neither walk nor ride with any comfort, and very frequently the joint became locked in the semiflexed position, causing a good deal of pain. The history was clearly one of a loose body in the joint, but in spite of repeated examinations it could never be detected. On the inner side of the joint localized pain could be elicited on pressure, and a slight localized fullness was made out. On opening the joint in this region a mass of synovial fringe was found, about he thickness of the little finger, and with a very broad attachment. It was firm and considerably swollen, and showed evidences of having been subjected to a good deal of traumatism. No other suspicious body could be found. The tissue described was removed, and since the operation the patient has never had any symptoms referable to the joint.

Dr. **Gibney** referred to the cases of so-called traumatic arthritis not infrequently met with in young persons, where there is at times locking of the joint, with much discomfort and disability, and thickening and tenderness, either on the inner or outer side of the patella. When, in addition to these symptoms, there is marked atrophy of the thigh or calf muscles, with reflex spasm and bony enlargement, tuberculosis of the joint should at least be suspected.

In the class of cases discussed by Dr. Bryant, it is not necessary always to have a complete luxation of the cartilage to cause trouble, a slight subluxation or a rupture of some of the fibres may be all that exists. If the history of each individual case is carefully inquired into, the original lesion can usually be pretty accurately reasoned out. As regards treatment, after these patients have been relieved for a time by various appliances, it is usually difficult to induce them to submit to an operation The operation itself is comparatively simple, but the danger heretofore has been that too much exploration is indulged in after the joint has been opened, and thus the danger of infection, with serious consequences, is increased. There are cases, both recorded and unrecorded, where amputation has become necessary after simple exploration of the joint for the removal of a loose body.

Dr. Gibney said he was convinced that many cases of so-called traumatic arthritis of various types could more properly be classified as cases of loose bodies in the joint, pedunculated synovial fringe, interference with the bursa, and other lesions that are now generally known as internal derangements of the joint.

Dr. Weir said that he had never seen a single instance, in his own work, where the nucleus of a loose body in the joint was composed of cartilage, with or without a bony nucleus; they all, apparently, originated from the fimbriated synovial membrane, excepting in six cases. Three of the latter were fleshy masses, pedunculated, and upon examination, they proved to be sarcomatous, probably mixed with inflammatory elements. In none of these cases, however, did a recurrence take place after removal. The three others were fatty growths which sprang from without the joint, either from underneath the ligamentum patellæ or in front of the femur. These masses when so entering the joint gradually harden, become mixed with effusions of blood, and often resemble the sarcomata. Two of these fatty growths were pedunculated. All these patients made a perfect recovery after operation.

Dr. **Weir** said he had seen recently two cases of chronic arthritis with multiple loose cartilages. In one of these cases there were four loose bodies and in the other five. In these the disability, though not great, brought up the consideration of an operation. This was negative mainly because of the probable inability to discover and remove all the offending bodies without too much damage to the joint.

THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, Held April 28, 1902.

Frank Van Fleet, M.D., President.

Defects of Vision the Result of Certain Drugs, Drug Habits and Occupations; Their Recognition and Treatment.—Dr. G. E. De Schweinitz of Philadelphia was the author of this paper. He said that the term amblyopia was usually applied to cases in which the disturbance was moderate, and the term amaurosis to cases in which the disturbance was more severe.

Quinine Amblyopia.—By far the most interesting of these amblyopias was that produced by quinine. It appeared in four ways: (1) As a temporary quinine blindness; (2) As an acute quinine blindness; (3) Relapsing quinine blindness, and (4) Permanent quinine blindness. The first form usually occurred in nervous individuals, especially women. The acute blindness usually developed after a single large dose of quinine, or after large doses on successive days, *e. e.* sixty to eighty grains or one hundred grains of quinine. This form of blindness was characterized by a more sudden and complete extinguishment of sight than in any other form of blindness which may be recovered from. It made no difference what preparation of quinine was administered, there would be found a blanching of the retina and great pallor of the optic disk, and usually a narrowing of the visual field. Dr. Ward A. Holden of New York had shown that, in animals at least, the primary lesion was a direct degeneration of the ganglion cells of the retina, probably caused by the intense ischæmia produced by the quinine. His personal belief was that there was a selective action on the ganglion cells of the retina. The treatment usually consisted in the withdrawal of the quinine and the administration of such drugs as digitalis, nitrite of amyl and strychnine. Quinine blindness was very similar to that caused by the salicylates and by salicylic acid, and hence it was probable that in both of these affections the same action took place on the ganglion cells of the retina. Antifebrin and antipyrin would produce the same result, the former in more marked degree.

Iodoform Amblyopia.—A number of cases of iodoform amblyopia had been reported in which the effect on the eye had been produced both by the absorption of the iodoform from surgical dressings and by the administration of this drug by the mouth. It was worthy of note that in the case of iodoform, as in that of quinine, that the dosage producing the amblyopia varied within very wide limits. The iodoform amblyopia in rare instances had been permanent. It was perfectly possible that some cases of so-called iodoform amblyopia had been the result of other causes, as for example, in cases of extensive burns, in which iodoform had been used in the dressings.

Thyroid Extract.—Some recent observations went to show that the continued use of thyroid extract produces an amblyopia similar to some of the toxic amblyopias. The condition disappears on the withdrawal of the extract and the use of some tonic.

Alcohol Amblyopia.—This form of amblyopia should be considered under two heads, the acute and the chronic. There was a difference also between the acute amblyopia from ordinary alcohol and that resulting from the use of methyl alcohol. Only two drachms of the latter had been known to cause blindness. In a large number of instances it produces first some gastrointestinal disturbance and delirium, and perhaps unconsciousness, ending in blindness. In about 90 per cent. of the cases the vision was permanently damaged. The essence of Jamaica ginger, the essence of peppermint and bay rum had all been known to give rise to similar effects. The active agent in these substances had been found to be an adulteration with methyl alcohol. The original coma sometimes ends in death. Methyl alcohol produced blindness by its action on the ganglion cells, as shown by Dr. Holden. It was quite probable that there was a simultaneous degeneration of the fibres of the optic nerve. Some cases, when seen early, recover under prompt treatment. Of the various methods, the best were those in which the essential feature was sweating produced by pilocarpin, followed by the hypodermic use of strychnine. About 10 per cent. recover with some sight.

Alcohol-Tobacco Amblyopia.—One could not consider chronic alcoholic amblyopia apart from that produced by tobacco, so that it was perhaps well to speak of this affection merely as an intoxication amblyopia. He thought alcohol when taken internally predisposed one to amblyopia, particularly if poor alcoholic liquors were used and were taken on an empty stomach. It was impossible to say what was the safe dose of tobacco, because of the great individual differences. Certain strong forms of tobacco, particularly if smoked in a pipe and on an empty stomach, were especially likely to give rise to amblyopia. Ordinarly some years elapse before vision becomes affected. The patient observes an indescribable fog over everything. Examination with the ophthalmoscope showed a pallor of the optic nerve and the field of vision with a central scotoma for red and green. If the person continued to use alcohol there was nearly always a depreciation of the vision. The modern belief was that the primary change was not in the axis of the optic nerve, but that the ganglion cells of the macular region first become degenerated, and this is followed by an ascending degeneration. The same general treatment previously indicated was appropriate for these cases, The active agent of tobacco amblyopia was still a matter of dispute. It used to be thought that the active cause was nicotine, but tobacco contains a number of powerful substances, and the special principle causing the amblyopia is not yet known. A certain number of cases of central scotomy credited to tobacco or alcohol should probably be attributed to other causes. A certain number of these cases probably represented an early stage of disseminated sclerosis. It was rather curious that at the beginning of the impairment of vision the usual toxic symptoms of tobacco, such as tachycardia, were not present, though they very soon made their appearance. Again, it was not uncommon to find an associated Bright's disease, and this was particularly apt to lead the physician to think this was the sole cause, and so overlook the part played by the tobacco.

Occupation Amblyopias.—In lead poisoning there might be a temporary amblyopia, an optic neuritis or a nerve atrophy, and finally a retinitis. Lead produces very widespread changes in the ganglion cells of the retina and of the whole cerebrospinal axis. It also causes a marked obliterating endarteritis. Not infrequently among seamstresses lead poisoning arises from the biting of silk threads which are coated with lead compounds. An interesting form of amblyopia was that occurring among rubber workers from the inhalation of the fumes of bisulphide of carbon. As a rule, the amblyopia did not develop until the person had been engaged in this occupation for months or years. Another form of amblyopia was that produced by nitrobenzole or by dinitrobenzole. Of course, a certain number of drug amblyopias were really occupation amblyopias. For example, tobacco workers sometimes develop amblyopia, and the same was true of persons engaged in varnish works, hat factories and other places in which wood alcohol is largely used.

Injuries to the Eye and Their Treatment.—Dr. J.

Morrison Ray of Louisville, Ky., read a paper on this subject. He said that wounds of the eyeball were serious in proportion to their nearness to the ciliary body In penetrating injuries of the eyeball the management of the wound and of the protruding structures must be carefully considered, also the danger of sympathetic involvement or the necessity for immediate enucleation. If there was only a prolapse of the iris and the case were seen in a few hours, an attempt might be made to replace it after very thorough cleansing and sterilization. If the iris were lacerated it should be excised. The lips of the wound are then coaptated and a bandage applied. No reliance should be placed upon mydriatics for the purpose of disengaging the iris from the wound. When the wound involves the sclera, excision is even more important than where the iris is involved. He thought enough importance was not attached to the grave possibilities of an incarcerated iris. It was often desirable to cut a narrow band of conjunctiva and dissect it up external to the line of separation, and then stitch it over the wound. The speaker said he felt sure that he had seen eyes saved from complete destruction by this procedure. When the injury was confined to the ciliary zone and the division of tissues was not great, the injury was the gravest of all to which the eye was subject. These injuries were usually made by a sharp object, such as the tine of a fork, and the penetration was usually deep. The vitreous usually contained large quantities of blood, and thus afforded an admirable culture-medium for the infectious matter carried into the eye by the object inflicting the injury. The best local application to limit the reaction was cold.

Foreign Bodies.—In penetrating wounds, where the presence of a foreign body was suspected, an exact diagnosis was of much importance. The history of the case, the appearance of the eye and the tenderness of the organ would aid the physician. Positive evidence was fortunately now at our command by the use of the *x*-ray. In his experience the most dangerous injuries of this kind were those in which particles of stone had been driven into the eye. In making the prognosis one must take into consideration the location of the injury and the possibilities of infection. The most hopeful cases were those in which the foreign particle had penetrated the cornea and lodged in the iris or anterior chamber. When the foreign body had penetrated more deeply, the danger would depend chiefly upon the nature of the body. The application of the large electromagnet for the removal of particles of iron was a triumph of modern ophthalmology. The sooner the magnet was used after the injury the greater the chance of removing the foreign body, and the less the chance of infection. After forty-eight hours or more, the foreign body would become embedded in lymph and the magnet would often fail to dislodge the particle.

Sympathetic Ophthalmia.—In no other part of the body was there a condition analogous to sympathetic ophthalmia. The most frequently observed form was a plastic inflammation of the uvule tract, characterized by ciliary injection and dust-like opacities in the vitreous. Later on there would be found adhesions of the lens capsule, and finally vision would be destroyed. The shortest time after the receipt of an injury, in which sympathetic ophthalmia had been noted, was fourteen days, but it might occur after a period of years. Children were particularly susceptible to it. The speaker said that he had seen it develop only once in an experience of fifteen years. In deciding upon the question of enucleation, one must consider this danger. An opportunity should be given for repair of the wound, guarding carefully against infection. If the wound healed kindly without infection the danger of involvement of the fellow eye was not great. If the wound did not heal well, or afterwards there was evidence of inflammation the eye should be removed without delay. Harmless blind eyes were better than glass eyes for prosthesis. When the eye was removed in childhood and an artificial eye substituted, he had found a defective development of the orbit and facial muscles on that side; moreover, the removal of one eye placed the person at a great disadvantage in the battle for a livelihood.

Contagious Conjunctivitis.—Dr. Myles Standish of Boston presented this paper. He spoke of the signs and symptoms of catarrhal conjunctivitis, and then stated that, according to his experience, the disease could be best aborted by dusting into the conjunctival sac every twelve hours for two or three times finely-powdered and dry iodoform. Dr. Standish then considered trachoma, gonorrhœal ophthalmia and diphtheritic conjunctivitis.

Trachoma.—He stated his own belief in the moderate contagiousness of trachoma, and said he could not understand how any one who had seen this disease spread through asylums could doubt that it was contagious. Confusion arose from confounding trachoma with follicular conjunctivitis. The latter presented low rounded follicles, principally in the lower conjunctival sac, and was rarely seen on the conjunctiva of the upper lid. On the other hand, trachoma presented rather round, purplish "frog spawn" follicles, appearing first on the fornix of the uppler lid, and then spreading over the whole conjunctival surface of the lid, and perhaps on to the lower lid. It was a disease which, according to the methods of twenty years ago, lasted usually for many years. Fortunately, about fifteen years ago, the practice of surgically treating trachoma had come into vogue. The method of expression was a good one, but after this manipulation the follicles should be vigorously rubbed with a 1 to 500 solution of bichloride of mercury, applied with a cotton ball on a stick. The patient was able to continue at work, and if the treatment were persevered in for a year or two the patient could be absolutely cured, and without leaving the extensive cicatrices observed under the older methods of treatment. In 1897, the speaker said, he had presented a paper to the Massachusetts Medical Society, urging that immigrants suffering from trachoma be excluded, and this suggestion had afterwards been acted upon. In order to form some conception of the amount of trachoma in the community, he had collected statistics from the case books of the Massachusetts Charitable Eye and Ear Infirmary, an institution practically representing the ophthalmic practice of the city of Boston. For the five years, 1880-1884 the cases of trachoma constituted 3.5 per cent. of a total of 35,280 cases, whereas in the last five years, 1897-1801, the percentage was only 1.2 out of a total of 110,638 cases. This improvement in the statistics was not entirely dependent upon the exclusion of immigrants having trachoma, but upon better methods of treatment, as shown by the figures showing the number of days of hospital care.

Gonorrhœal Ophthalmia.—The treatment of this disease had also greatly improved in the ophthalmic hospital already referred to. Formerly these cases had all been treated in the out-patient department, and the blind rate had been large. The first case of gonorrhœal ophthalmia admitted to the wards was in 1876, and at that time only a few severe cases were admitted, and then with their mothers to take care of them. In 1896 a special ward was provided, and all applying for treatment for gonorrhœal ophthalmia were either forced to enter this ward without the mother or were refused treatment. The principal remedy for the last twenty years had been the nitrate of silver, which in the strength of a 1 or 2 per cent. solution had been painted upon the conjunctiva. More recently a solution of protargol had been used to flush out the conjunctival sac, and with distinctly better results. In fifty cases in which nitrate of silver had been exclusively used, there were 6 per cent. of unsuccessful cases. In 150 cases in which protargol was the only remedy used there were only 2 per cent. of unsuccessful cases. The strength of the protargol solution had steadily increased from 4 to 20 per cent., the strength now employed. In the last fifty cases so treated there was not a single child, having a clear cornea on admission to hospital, which did not leave the hospital without any corneal complication. The protargol irrigation was repeated once in three hours. However, when there was a corneal ulcer present at the time of coming under observation, the protargol did not exhibit any special controlling power over the ulceration.

Diphtheritic Conjunctivitis.—This disease began with marked velvety condition of the conjunctiva of both lids, lachrymation and almost no mucus discharge for the first three or four days. At this stage it was impossible to make the diagnosis from the local appearances. As the disease progressed the lid became greatly swollen, and a dirty tough membrane appeared. The diagnosis was only made positive by finding the Klebs-Loeffler bacillus in the secretions. In 1889 it had been the general opinion of the profession that no mode of treatment was successful. His own method of treatment in recent years had been to give large doses (4,000 units) of diphtheria antitoxin, often repeated several times. After forty-eight hours there was no longer any occasion for anxiety about the eye. When corneal ulceration was present it was favorably affected by diphtheria antitoxin.

The Microscopical Examination of Conjunctival Discharge in Contagious Diseases ot the Eye.—Dr. EDGAR S. THOMSON of New York presented a brief paper on this subject as a supplement to the contribution of Dr. Standish. He said that the pus should be taken with a platinum loop and spread upon a glass slide. It was important to take the pus from the cul-de-sac and not from the edge of the lid, and also to spread the pus very gently. He advised rapid staining with Loeffler's methylene blue, drying and examining with a one-twelfth oil immersion lens. If a deeply-stained, encapsulated diplococcus of characteristic shape were seen lying chiefly within the cells, the diagnosis of gonorrhœal conjunctivitis was usually warranted. It could only be mistaken for the diplococcus of meningitis. The latter was usually found outside of the cells. Where there was doubt, cultures should be made. The Klebs-Loeffler bacillus was rarely found in the secretions from the conjunctiva, and when a bacillus having its morphological characteristics was observed, culture experiments were required to settle the diagnosis. The Weeks' bacillus was by far the commonest organism found in "pink eye," and was readily recognized by slide examination. Illustrative specimens were presented under the microscope.

Dr. CHARLES STEDMAN BULL, speaking of the first paper, said that he had been deeply interested in the remarks on quinine amblyopia, having himself suffered from it at one time. Having contracted malaria in Missouri he was given thirty grains of quinine three times a day for four days. His vision was then reduced to 10-200ths and the optic nerve was white. It was nearly seven weeks before vision returned, and he could confirm what Dr. De Schweinitz had said about such an attack leaving one subsequently very sensitive to the action of quinine. He had never seen iodoform amblyopia, except in connection with absorption of this drug from the surface of the body. He had observed one case of methyl alcohol amblyopia occurring in a wood chopper who had bought what he supposed to be whiskey, but which was proved to consist chiefly of methyl alcohol. The man remained in coma for two days and after that was permanently blind. Dr. Bull said he had seen two cases of tea amblyopia, both of them in the female wards of the almshouse. It was never easy to diagnose lead amblyopia, because it almost always occurred in persons who made free use of both alcohol and tobacco.

Dr. D. B. ST. JOHN ROOSA discussed Dr. Ray's paper. He emphasized the fact that the danger line in injuries of the eye was the ciliary region. Although great progress had been made in the removal of particles of iron and steel from the eye, sufficient time had not elapsed to make a complete classification of the cases in which early removal in this way had been effected and the ultimate result had been observed. Ophthalmologists should still be exceedingly cautious in cases of infected wounds of the eye, and in the case of any wounds, infected or not, in the ciliary region. Sympathetic ophthalmia he characterized as still a *terra incognita*, for even bacteriology had not discovered the method of transference in cases of sympathetic ophthalmia.

Dr. HERMANN KNAPP took up the discussion of the paper of Dr. Standish. He said that the pathology of trachoma was not yet clear. There were two forms distinguished as folliculosa and granulosa. Between the follicular and the ordinary granular trachoma there was only one step, and it was not known in what way the follicle differed from the granule. No one had yet found any microbe or bacillus in connection with either of them. The histological entity was the granule. The disease was curable in itself, and its malignancy, in his opinion, must depend upon some infection. These diseases, in the absence of infection, recovered even without treatment. If the follicles were at all numerous recovery did not take place, as had been said, without cicatrices. In the older cases both lids were markedly granular, and yet unattended by inflammation, so that in some instances the person was not even aware of the presence of this condition. There was an innocent form, known as acute trachoma, in which the microbes were not mischievous. By personal observation he had found in some of the best schools of Egypt that no less than 92 per cent. of the children presented cicatrices on the eyelids. In July and August in each year there is an epidemic there of ophthalmia, either gonorrhœal or mixed with other microbes, which give rise to these scars.

Silver Harmful at Beginning of Gonorrhœal Ophthalmia.—The preventive treatment by the Credé method was most important. Not only should a 2 per cent. solution of nitrate of silver be instilled into the eye, but the eyelashes and the outside of the lids should be washed with the same solution. It was very rare, indeed, for the eyes to be injured by this treatment. The treatment of the first stage of gonorrhœal ophthalmia by nitrate of silver was, in his opinion, most reprehensible. In the healthy eye of a child even a strong solution of nitrate of silver would do no harm; but in gonorrhœal ophthalmia, before the stage of suppuration had begun, the use of even a 2 per cent. solution of nitrate of silver would irritate the eye without doing any good. The silver solution should not be used until the dense infiltrate around the cornea had softened and the swelling of the conjunctiva had diminished. In this first stage the treatment should be strictly antiphlogistic. As soon as this stage had passed there would be a purulent discharge, and then the nitrate of silver should be used. He did not believe in cutting through the conjunctival ulcer; treat the conjunctiva properly and the ulcer would take care of itself.

Protection for Well Eyes.—He had found the best means of protecting the healthy eye was by the application of a shield of mica, held in place by strips of adhesive plaster.

Dr. STANDISH, in closing, said that the fact that the exact nature of trachoma was not understood was no argument against its being infectious. Regarding the protecting shield, he would say that it was not applicable to children.

The Lincoln Hospital.—The name of the Colored Home and Hospital of this city has been changed to the "Lincoln Home and Hospital." The hospital has recently been designated as an ambulance station by the city authorities, and the ambulance service will be provided for in the emergency ward.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending May 10, 1902:

	Cases.	Deaths.
Measles	450	20
Diphtheria and croup	281	44
Scarlet fever	402	41
Smallpox	58	9
Varicella	68	..
Tuberculosis	294	168
Typhoid fever	23	14
Cerebro-spinal meningitis	..	3

Mouth Washes.—Max Loewe describes the results of a very elaborate series of observations made to determine the absolute and relative values of a number of the proprietary mouth washes in common use. In contradistinction to those authors who have considered the habitual use of such preparations injurious owing to the destruction of the lining epithelium of the mouth it entails, he believes that desquamation of these cells goes on constantly as a physiological process and is not stimulated to a harmful degree by mouth washes. In all cases it was found that the rinsings contained enormous numbers of bacteria, and also that their growth was but slightly influenced by the presence of the mouth wash that had been employed. A marked difference in effect between the various preparations was, however, noticeable; only two of the large number examined exhibiting appreciable antiseptic properties. Of these, one containing formalin far surpassed the other, the tests showing an average of forty-four colonies as against one thousand and fifty-nine. The presence of formalin in such preparations is not at all injurious but a distinct advantage.—*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten.*

Suprapubic Cystoscopy.—P. Kraske employed this method of exploring the bladder in two cases in which a suprapubic opening had been made for therapeutic reasons and was so pleased with the results that he made further trials which lead him to recommend the measure as one adapted to frequent application. It is particularly cases in which the introduction of the instrument by the urethral route is difficult or unsatisfactory that can be examined with advantage in this way, while the performance of all intravesical operations, such as Bottini's, for prostatic hypertrophy can be admirably controlled. In practice the ordinary curved vesical trocar may be used, the canal being dilated with laminaria tents sufficiently to admit the passage of the instrument, or a trocar of such caliber may be chosen that the cystoscope can be slipped in through the canula. The author has devised a special form of cystoscope, with detachable trocar point, which permits the instrument's removal and re-insertion from time to time for the purpose of irrigating the bladder and washing out blood or mucus obstructing the view.—*Centralblatt für Chirurgie.*

The Continued Fevers of the South.—W. A. Evans, from his studies of about forty-nine cases, concludes that there is no such disease as the so-called febris innominata. In regard to combination fever, or typho-malarial, most of the cases are of true typhoid. Typhoid fever in a malarial district is modified as to its symptomatology by malaria. The author is not prepared to state whether this modification occurs in the bacillus outside the human body, in the bacillus in the human body, in the human body itself, due to acute or chronic malarial intoxication, to nervous habit begotten from repeated malarial attacks, or to the effects of prolonged high temperature. The post-malarial continued fevers are usually malarias, pure and simple. These have been most thoroughly studied by Bastianelli, Biguami, and Marchiafava. The continued fevers left after the above have been subtracted are of the following groups: Septicæmias (so-called cryptogenic), tuberculosis-pulmonary and miliary, intoxications, anæmia, lukæmia, and diarrhœas.—*Memphis Medical Monthly*, April, 1902.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended May 10, 1902:

SMALLPOX—UNITED STATES.		Cases.	Deaths.
Alabama, Birmingham	Mar. 1–31	11	
California, San Francisco	Apr. 20–27	3	
Stockton	Apr. 1–30	20	
Colorado, Denver	Apr. 19–26	7	
Illinois, Belleville	Apr. 26–May 3	5	
Chicago	Apr. 26–May 3	5	
Galesburg	Apr. 26–May 3	4	
Indiana, Evansville	Apr. 26–May 3	5	
Indianapolis	Apr. 26–May 3	8	
Muncie	Apr. 1–30	3	
South Bend	Apr. 26–May 3	4	
Terre Haute	Apr. 26–May 3	3	
Iowa, Ottumwa	Mar. 29–Apr. 20	18	
Kansas, Wichita	Apr. 26–May 3	4	
Kentucky, Covington	Apr. 27–May 4	5	
Lexington	Apr. 26–May 3	1	
Louisville	Apr. 27	2	
Maine, Portland	Apr. 26–May 3	..	1
Maryland, Baltimore	Apr. 26–May 3	1	
Massachusetts, Boston	Apr. 26–May 3	28	4
Brockton	Apr. 26–May 3	2	
Brookline	Apr. 26–May 3	..	1
Cambridge	Apr 26–May 3	1	
Malden	Apr. 26–May 3	6	
Michigan,	Apr. 19–26 (Present at 110 places).		
Ludington	Apr. 27–May 4	16	
Minnesota, Minneapolis	Mar. 29–Apr. 19	27	
Winona	Apr. 19–26	1	
Missouri, St. Louis	Apr. 27–May 4	39	2
Montana, Helena	Apr. 1–30	4	
Nebraska, Omaha	Apr. 26–May 3	30	
New Jersey, Camden	Apr. 26–May 3	4	1
Newark	Apr. 26–May 3	80	5
Plainfield	Apr. 26–May 3	6	1
New York, New York	Apr. 26–May 3	54	14
Ohio, Cincinnati	Apr. 26–May 2	18	
Hamilton	Apr. 27–May 3	3	
Pennsylvania, Erie	Apr. 26–May 3	10	
Johnstown	Apr. 19–May 3	3	
Philadelphia	Apr. 26–May 3	15	1
Pittsburg	Apr. 26–May 3	16	
Rhode Island, Providence	Apr. 26–May 3	4	
South Carolina, Greenville	Apr. 19–26	6	2
Tennessee, Memphis	Apr. 27–May 3	9	
Utah, Salt Lake City	Apr. 26–May 3	4	
Vermont, Burlington	Apr. 27–May 3	2	
Rutland	Apr. 27–May 3	1	
Virginia, Roanoke	Apr. 1–30	11	1
Washington, Tacoma	Apr. 20–27	9	
Wisconsin, Greenbay	Apr. 27–May 4	3	
Janesville	Apr. 27–May 4	4	
Milwaukee	Apr. 19–26	9	
SMALLPOX—FOREIGN.			
Brazil, Rio de Janeiro	Mar. 16–Apr. 6	..	21
Canada, Hamilton	Apr. 26–May 3	1	
Quebec	Apr. 19–26	10	
Winnipeg	Apr. 19–26	8	
China, Amoy	Mar. 8–27	(Present).	
Colombia, Panama	Apr. 21–28	50	5
Egypt, Cairo	Apr. 1–8	..	1
France, Paris	Apr. 12–19	..	5
Rheims	Apr. 6–20	7	5
Roubaix	Mar. 1–31	..	1
Great Britain, Birmingham	Apr. 12–19	2	
Dublin	Apr. 12–19	1	
Dundee	Apr. 12–19	4	
Glasgow	Apr. 18–25	7	1
Leeds	Apr. 19–26	1	
Liverpool	Apr. 12–19	5	
London	Apr. 12–19	328	42
Newcastle-on-Tyne	Mar. 30–Apr. 19	1	
North Shields	Mar. 30–Apr. 19	27	
Southampton	Apr. 5–12	1	
South Shields	Mar. 30–Apr. 19	21	
India, Bombay	Apr. 1–.8	..	6
Calcutta	Mar. 22–Apr. 5	..	13
Karachi	Mar. 30–Apr. 6	3	
Italy, Bovino	Apr. 12	(Epidemic).	
Naples	Apr. 5–12	10	
Mexico, City of Mexico	Apr. 13–27	3	
Vera Cruz	Apr. 19–26	5	1
Russia, Moscow	Apr. 6–12	5	5
St. Petersburg	Apr. 6–12	10	2
Spain, Cartagena	Apr. 15	(Epidemic).	
YELLOW FEVER.			
Brazil, Rio de Janeiro	Mar. 16–Apr. 6	..	105
Colombia, Panama	Apr. 21–28	5	2
Costa Rica, Port Limon	Apr. 14	3	1
Dutch Guiana, Paramaribo	Mar. 1–31	3	1
Mexico, Vera Cruz	Apr. 19–26	9	6
CHOLERA—INSULAR.			
Philippines, Manila	Mar. 20–29	84	65
CHOLERA—FOREIGN.			
India, Calcutta	Mar. 23–Apr. 5	..	255
Turkey, Djiddah	Feb. 19–Mar. 26	3,000 estimated and 1,300 deaths.	
PLAGUE—UNITED STATES.			
California, San Francisco	Apr. 20–27	1	1
PLAGUE—INSULAR			
Hawaii, Honolulu	Apr. 19	..	1
PLAGUE—FOREIGN.			
China, Pokhoi	Apr. 25	(Epidemic).	
Egypt	Apr. 7, 1901—Apr. 7, 1902, 382 cases and 228 deaths.		
India, Bombay	Apr. 1–8	..	830
Calcutta	Mar. 22–Apr. 5	..	1,239
Karachi	Mar. 30–Apr. 6	111	100

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Original Articles.

RADIOTHERAPY FOR CANCER AND OTHER DISEASES*

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IT is with great pleasure that I have accepted the suggestion to read a paper relating to the *x*-ray before our association. The twentieth century is offering to us an ever newer and broader science of medicine. This new medicine is not one built on theories, but rather one which keeps pace, step by step, with the unraveling of the physical problems of matter. Each new discovery in physics is seized upon by trained medical minds and applied to medical practice. But so long as chemistry stood on an isolated pedestal as a medical entity, so long medication by drugs alone seemed impregnable in its therapeutical fortress.

But to-day, when chemical affinity falls into line as an electrical phenomenon, when placing the rate of vibration of electricity at the lowest end of the scale, we may ascend upward through the vibrations of heat, of the visible spectrum, of the actinic rays, of uranium radiation, and, finally, to the Röntgen radiation—we are forced to a larger conception of therapeutics, and forced to admit that medicines are but a part of a much greater whole, whose inclusive title might be simply "physical therapeutics."

The twentieth century dawns with a new conception of the ion or the elektron and ionization; with new conceptions of the relation of electricity to life and health and disease, and with new conceptions of radiations in their applications to the treatment of disease.

Prominent among these new therapeutic contions is that of radiotherapy, and we may well pause here and express our profound gratitude to Prof. Röntgen for his discovery, whose beneficent influence in medical practice at the present moment bids fair to rival its interest to pure physical science, and our equal gratitude to Prof. Finsen, who, in relation to Radiotherapy, may well be termed the Apostle of Light. But while Röntgen's discovery came into the world in great completeness, the therapeutics of his discovery, except for purposes of diagnosis, have been of slow development. True, marvelous claims were at first heralded, but these have given place to sober second thought. It is admitted to-day that the *x*-ray has in a certain number of instances cured cases of every form of malignant growth and that it cures lupus. Also eczema, psoriasis, prurigo, acne vulgaris, sycosis, favus, rosacea, and tuberculous foci have been cured by the *x*-ray.

If we go no further than this, we are at once struck by the fact that it is in just those diseases and conditions least amenable to our former treatment that the *x*-ray scores its most signal successes.

But the *x*-ray has also a promise of extreme utility in pulmonary tuberculosis; it has a remarkable effect in relieving pain; it assists in healing burns, wounds, ulcers and sores, and its curative effects reach internal diseases.

For these reasons I believe that a few observations from me, relating to technique and indications, may be worthy of attention.

I. Technique.—The therapeutic use of the *x*-radiation is based upon the fundamental fact that this radiation exerts a specific influence upon the life-processes of animal and vegetable tissue. This influence is beyond dispute: it is most openly manifested when exerted upon the integument, but laboratory experiments show beyond question that small animals, like mice and guinea pigs, weeks after irradiation, unnoticed by them at the time, suffer internal structural changes, which even end in their death, and may be likewise demonstrated post mortem. These structural changes are invariably of the type of ordinary inflammation. Kaposi, indeed, expresses the view that all the changes thus far noted, whether of the integument or internal, differ in no wise from common inflammation. Dr. Carl Beck reports that in the case of mice irradiated by him by the *x*-ray, the autopsy showed congestion and, microscopically, signs of inflammatory changes in the viscera. Tarchanoff has reported that mice, guinea-pigs, rabbits and birds died after prolonged irradiation, exhibiting paralytic symptoms. It is not our purpose, however, to enumerate in detail the various pathological and physiological changes in living animals already demonstrated as the direct and inevitable effects of *x*-ray irradiation.

But the sole point I wish to emphasize here, and it is an important one, is that Radiotherapy is by no means, as seems to be commonly believed, to be confined to exterior and superficial diseases and conditions, but is equally applicable to diseases of the interior, like internal cancer, and, in general, to internal diseases.

Included in the specific influence of *x*-radiation is also naturally a bactericidal action, which the experiments of Rieder and many others have established beyond doubt. Granting our basis of a specific influence of the type and kind above described, we may next consider: (1) The active agency, namely, the *x*-ray; (2) The disease; (3) The source of energy; (4) The vacuum tube; (5) The effect of the exposure; (6) The time and other conditions of exposure.

The x-Ray.—Antecedent to the production of the *x*-ray is an electric current of high potential, a vacuum tube, and the production of a cathode ray. The cathode rays are held to be streams of material particles torn off from the negative electrode, each particle not an atom in the usual sense of the word, but rather primary atoms of the primary matter out of which the ordinary atoms are formed, each primary atom or particle constituting a carrier of negative electricity. When this cathodic stream strikes the platinum mirror or other sort of target, a new sort of radiation is established, called by Rōntgen the x-radiation. This new radiation is considered both by Rōntgen and Lenard to be in all probability of the same nature as the cathodic stream, differing only in the scale of radiation; while, on the other hand, other physicists claim that it is an ether vibration of the nature of light, but of much shorter wave length. Of most interest to those of us who wish to apply the x-rays in practice is the view of Professor J. J. Thompson, that they are a mixture of vibrations, which may be termed "pulsations of the ether," and may be compared to the irregular pulsations of the air in producing those sound waves which we term "noise." This would account for the very great uncertainty which, we cannot deny, exists in the effects of the x-ray when utilized for treatment.

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* Read at a stated meeting of the Medical Association of the Greater City of New York.

But whether we regard the x-ray as an ether vibration or as a storm of material particles, certain it is that, in a given vacuum, it is seldom, for any length of time, of one and the same quality. It runs up and down a scale, whose rates we cannot now determine. To add to our uncertainties, we must also take into account the S-rays and the Goldstein rays, each, respectively, secondary productions of the x and of the cathodic rays.

It is the x-ray itself which sets up dermatitis, produces necrosis, or, when properly used, cures disease. The cathode rays do not escape from the vacuum tube. I cannot believe that, as claimed, the electric pulsations given off from the tube exert a harmful influence. On the contrary, I believe that they benefit the patient, in accordance with the well-known laws of the therapeutic effects of high potential currents. In this respect, indeed, they should act as an offset to any baleful influence of the x-ray, and possibly, at times, to its curative influence. Regarding the electric vibration, therefore, in this light, I do not consider it essential to employ an aluminum grounded screen, or if I should employ the screen, it would be for the purpose of cutting off the beneficial, not the harmful, effects of the x-ray.

2. *Cancer.*—Turning to a consideration of the principal disease to which we would apply the x-ray, it would greatly hasten therapeutic progress if we had any adequate knowledge of what the pathology of cancer is. However, in this respect the physician can be said to be groping in no less ignorance than is the physicist, in regard to the true nature of his x-ray.

As practitioners, therefore, our attitude must be almost entirely empirical and clinical, and we must feel our way along with careful experimentation and observation.

3. *Source of Electrical Energy.*—A Rumpkorff coil, a static machine, or an oscillator provides this, with, so far as is known, no demonstrable differences in the quality of the x-ray produced.

4. *The Vacuum Tube.*—The Crookes-Jackson vacuum tube with platinum deflector is the universally adopted type of tube. It should be provided with a spark-gap device, by which the vacuum is lowered by chemicals in an adjunct tube, as employed originally by Crookes.

Functionating tubes may be divided into "soft," "medium soft" and "hard." At either end of this scale are the tubes which are too soft, namely, contain too much air and do not allow of the transformation of the current into x-rays, and the tubes which are too hard, namely, contain too little air and cannot be penetrated by electrical currents at our present disposal.

The x-ray from the soft tube possesses but little penetrating power; its shadow picture presents "black bones"; its radiation is quickly and superficially absorbed by the tissue; it has slight therapeutic value.

The x-ray from the medium soft tube transforms most of the electrical energy imparted to it into x-ray energy; its shadow picture is sharply defined and the one most commonly desired and obtained; its radiation has a good penetrating power, though much of it is absorbed by the integument; it should, therefore, be employed when we wish to produce an effect upon the skin.

The x-ray from the hard tube possesses the most highly penetrating power; its shadow picture presents comparatively little contrast, though it does not lack in other signs of definition; its energy is not lost in superficial tissue, but is also expended upon the deeper tissues; it should, therefore, be employed when we wish to affect the deeper parts of the body.

The sole point to weigh, I imagine, as to this entire question of vacuum is, at what part of the patient's body do we wish to have a transformation of x-ray energy into chemical energy. If in the integument, then we would use a medium soft tube; if deeper, a hard tube. Personally, I may say, I lean in my preference toward a hard tube in all my treatments.

5. *Effect of the Exposure.*—There is no evidence to justify the assumption of an idiosyncrasy on the part of the patient to dermatitis, ulceration, or necrosis. We should, however, keep in mind that the skin of the face and hands is more susceptible than that of other regions, that the mucous membrane is more sensitive to the ray than the skin, and that areas of existing inflammation are the most susceptible.

The general effect of an exposure is, as has been said, to produce, when carried to extremes, the common symptoms of inflammation. When not carried to extremes, or when used within other therapeutic limits, I suppose the effect to be due to a reaction in the vital tissue processes (metabolism), ascribable to having set up new chemical exchanges. If metabolism is the sum total of all the chemical exchanges which take place in a living animal organism; and if, secondly, the x-ray effect is a transformation of x-ray energy into chemical energy, then the conclusion seems inevitable that the effect of the x-ray in the cure of disease is due to a primary chemical reaction, affecting in turn the metabolic processes. How far the dissociation of the common atom and the molecule into the ion enters into this explanation, should be in time easily demonstrated. For my own part, I believe that scientific analogy points to the action of the x-ray as one of ionization. X-ray dermatitis and necrosis are too familiar to require description here.

I have noted two rather constant reactions in the treatment of cancer. The first, occurring in general carcinomatous infection, may be termed an early reaction period. In this the temperature may rise from 1 to 2°F., the pulse is increased in frequency, and the patient experiences "nervousness" and unrest and an increase of general fugitive pains. But the rule is an immediate cessation of pain, and within a few days the disappearance of small nodules, to be followed by the later reaction next referred to.

The late reaction is local and shows itself at any time in from one to three weeks, and seems to resemble in this respect the familiar effects of dermatitis. This reaction is in reality the first objective evidence of a retrogession of the new growth (carcinomatous or sarcomatous tumor). Illustrative of this point I quote the following:

Dr. C. B. Ferguson, President of the British Medical Association, reports a case of carcinoma of the manubrium of the sternum, involving a tumefaction and an open ulcer, where the patient received treatment daily, extending over a period of twenty days, and then ceased treatment, and went home, showing at the time but little evidence of improvement. After several months the patient returned and, to Dr. Ferguson's surprise, the ulcer and the tumor had entirely disappeared; the patient was cured.

Cases of failure to secure any improvement in sarcoma within eight or nine days have been reported. In all such cases the lateness of a possible reaction must be kept in mind.

6. *Time and Other Conditions of Exposure.*—The time of exposure depends primarily upon the intensity of the *x*-radiation. Our effort should be to standardize every step of treatment. If we use a coil, we must know the volts and amperes and number of interruptions per second; if a static machine, the number and diameter of the plates and the number of revolutions per minute. With these data, an established and constant quantity, we should adopt a standard intensity of *x*-radiation, a standard distance of the tube from the patient's skin, and a standard duration and frequency of application.

Instruments to measure fairly well intensity of penetration have already been devised, based upon Professor Röntgen's original suggestion, and we may soon be able to buy them.

Roughly speaking, I select a tube just beginning to be hard (corresponding to from five to seven inches spark-gap of the coil), giving a good photograhic picture of the hand in one minute at a distance of two feet, and equally clearly giving a good fluoroscopic outline of the skeleton of an average man at the same distance. I select a distance of eight inches and a duration of from six to eight minutes, and give it treatment three times a week. In this manner, where sound skin intervenes, I usually get a dermatitis of a mild type in from one to two weeks. This dermatitis I do not fear, but, on the contrary, anticipate producing. But now, instead of stopping treatment, I go right on (shifting the central focus of the tube however often) until I have converted a bright erythema into a brown and often, in brunettes, into a blackish "tan." The patient once properly "tanned," it is extraordinary how great an intensity of *x*-ray may be administered. In some of my patients whose skin is already tanned as black as a dark mulatto's, I am giving treatments of from eleven to fifteen minutes, three times a week, with no harm to the skin. I think the effect is exactly the one aimed at by the bare-backed and bare-armed oarsman, who systematically tans his body. Daily and short ex-exposures to the sun soon enable him to defy its hottest rays, whereas one single, first and long exposure would set up blisters and ulcerations and cripple him for weeks.

However, I wish here to distinctly put myself on record as refusing to advise anyone else to "tan" a patient with the *x*-ray. It is a process that each must judge for himself and decide accordingly. It is mainly, however, a question of systematic and standardized technique. It is commonly advised, I am well aware, to cease treatment as soon as dermatitis sets in, but for the reasons given above, I have discarded this advice. After the skin has been hardened, say at the end of two to three weeks, I give ten to fifteen minutes' treatment three times a week. In cases of internal cancer, it would be impossible to succeed unless we could continue in spite of the erythema and tan the patient as described. On the whole, as to frequency and intensity of treatment I would say, feel your way along the first two weeks; force your way the next two weeks and after. And, following this general advice, certain cases of exterior cancer, or interior cases, where the same area of skin is not necessarily constantly subjected to radiation, may be *x*-rayed more frequently, and even daily.

Finally, as a last word in regard to technique, I cannot protest too strongly against the submission of a patient to *x*-ray treatment by unskilled hands.

The outfit, like the surgeon's knife, is a simple one, but the outcome, in the hands of the immature operator, is as if the surgeon should turn over his scalpel to the nurse. It is the state of the vacuum and the consequent quality of the radiation produced, which is both the fickle and the dangerous feature of administration. At one moment with one tube a radiation flashes forth which cuts down animal tissue as does the hot wind of Sirocco cut down plant tissue life. At the next moment, or with another tube or vacuum, a deceptive ray glows to the eye at the fluoroscope, and yet has little or no effect upon the disease. There is always some danger, even in skilled hands, and likewise uncertainty enough, but, in unskilled hands, the danger is as unpleasant to contemplate as is the report of results obtained, valueless.

In such hands a negative result has no meaning, an affirmative result is an accident. It would be wise if a school of instruction for *x*-ray workers could be established.

II. Indications and Observations. — The *x*-ray worker, from his standpoint, may classify his cases naturally, according as they are: (1) Exterior; (2) Interior; (3) Operable; (4) Inoperable.

1. *Exterior.*—When the disease has involved the skin, or the skin has broken down, the case is exterior. When, on the other hand, healthy skin covers the new growth or other disease, the case is interior. The operable and inoperable classification explains itself.

In exterior cases, as for example, of epithelioma' papilloma, rodent ulcer, lupus, etc., the effect of the radiation may be closely watched. A shield protecting the sound skin is desirable, though I see no reason for insulating it.

In this class of cases the indications of experience thus far gained fully justify a resort to the *x*-ray in preference to any other treatment. True, a small and isolated epithelioma may sometimes be preferably cut out or scraped out or be treated by caustics, but, on the other hand, cases of large areas of destructive and advancing epitheliomas and lupus have already been reported in great number, where nothing yet known except the *x*-ray would have saved the patient from extensive surgical mutilation and possible death.

2. *Interior.*—In interior cases the operator's hands are tied, and his efforts are limited by the fear of breaking down the normal and intact integumental tissue. It is here that the "tanning" proces may be resorted to, as, for instance, in osteosarcoma, and in carcinoma of the breast and other tumors either immediately or remotely underlying the skin. In these cases the high vacuum tube, with its deeply penetrating *x*-ray, is indicated.

And in these cases, I have no hesitation in claiming that the *x*-ray has an immediate and continuous effect of relief from pain and circumscription and retrogression of the disease. In a case of abdominal and inoperable sarcomatous tumor, closely watched by Dr. Leonard Weber, who kindly referred the case to me, the gnawing, constant pain ceased entirely within the first week; by palpation the tumor is greatly reduced in size, and can now scarcely be felt, and, by fluoroscopic examination, is visibly reduced more than one-half in size.

In a similar case, I am now treating, the pain ceased at once, and the patient can walk about and attend to business. In two cases of malignant growth at the pyloric orifice of the stomach, the pain has entirely ceased, and the patients can, for the first time in many months, take solid food.

In two cases of epithelioma within the fauces, and necessitating treatment through the skin, the sensations of burning and discomfort have ceased, the tumors are reducing in size and, to say the least, an advancing disease is arrested in its progress. The same statement applies equally to cancer of the rectum and of the uterus. Will these cases be cured? I frankly say I don't know. Their treatment has not yet extended over a sufficient period of time, and it is, therefore, too early for me to venture an opinion.

In another class of "interior" cases, namely, carcinoma of the breast, the results thus far obtained are most hopeful. One recurrent carcinomatous tumor of the breast I have reported cured, and it remains cured to date. Three other cases of this type, not yet reported, exhibit now no tumors and no symptoms of cancer. They seem to be cured. Unfortunately, of a large number of such cases I am treating, all but one, just beginning treatment, are of long standing. Their behavior varies. In some of them the ulcerations have already healed with a clean cicatrization; scattered nodules, hardened and reddened areas have softened and disappeared, indurated glands are no longer to be found, and pain, of course, disappeared very early.

In only one case has merely moderate progress been made in reduction of the size of the tumor. This tumor is of stony hardness, attached to the periosteum of the ribs, and of intense redness. The case is inoperable. This much, however, even in this case, has been gained. Previously, at each menstrual period the tumor increased at least one-fifth in size. Now, two periods have passed and the tumor is somewhat smaller, and certainly more movable.

I am, furthermore, treating a patient with appendicitis, who was suffering daily pain and advised to submit to an immediate operation, but who has presented no further symptoms of the disease from the first week of treatment, except one mild attack.

As a further instance of interior effect, I have treated and cured two patients with melancholia by *x*-raying the brain, and relieved a tic douloureux, which has undergone two operations to remove the nerves, by *x*-raying the casserian ganglion.

There is, therefore, no question in my mind, but that the *x*-ray should be employed in interior and in internal cancer and other diseases internally located.

3. *Operable Cases.*—In so-called operable cases of cancer, particularly those of carcinoma of the breast, the propriety of employing the *x*-ray will, no doubt, be long a debatable ground. For my own part, I now believe that no case should be operated upon until it has first been treated by the *x*-ray, and for these reasons:

(*a*) The earlier a case can be treated the more rapidly it yields to the influence of the *x*-ray.

(*b*) The infective process (distribution and growth of the cancer particles) often ceases under *x*-ray treatment; the proof of this assertion lies in the fact that this process, even when fully developed, may be arrested by the *x*-ray, and visible carcinomatous nodules and kernels disappear, while no new ones occur.

(*c*) Circumscription of the area of invading disease, retrogression of the growth, and relief from suffering can be confidently predicted.

(*d*) So long as a malignant growth continues to improve under *x*-ray treatment no operation is necessary.

(*e*) Of the two, the *x*-ray and an operation, the former appeals to the patient as an infinitely preferable procedure, and should it fail no valuable time has been lost.

(*f*) A sufficient number of carcinomas of the breast, of sarcomas, and of epitheliomas cured, have already been reported to justify the claim that the percentage of permanent recoveries may compare favorably with the results attained by a surgical operation.

And where infection (distribution of the disease) has once actually and visibly or palpably occurred, there is in my mind no shadow of doubt that the *x*-ray should be first employed. For, and it is an important reservation, a conceded percentage of recoveries after surgical operation for carcinoma of the breast is probably no more than 15 to 25 per cent. Indeed, Dr. R. Fitz of Boston is quoted as saying that the records of ten years in the United States show that seven out of every eight cases operated upon have recurred. Dr. Sands of this city is quoted by Dr. Abbe as even refusing, during the last years of his life, from conscientious motives alone, to operate any more upon the carcinomatous mamma. It should, however, be mentioned that some most excellent authorities claim a percentage of permanent recovery as high as 33½ per cent.

In view of this showing, and comparing it with what has thus far been accomplished by the *x*-ray in both carcinoma and sarcoma, we can at least contend that the *x*-ray is on even terms with an operation, and from the patient's point of view also, preferable to one.

In relation to the propriety of using *x*-ray before an operation, I can contribute an interesting observation. In a case of rapidly advancing epithelioma of the upper jaw a bright beef-red diffused coloration extended almost across the mucous membrane of the roof of the mouth. At the third treatment a clean line of demarcation appeared just to one side of the median line, presenting a characteristic serpentine edge. Here, clearly, the disease was circumscribed, and there can be no question that if operation should be deemed advisable, that this outline would be of the greatest assistance to the surgeon in making his work complete.

So, likewise, in all malignant tumors, their outlying areas contract in extent, and the tumors, so to speak, kernelize. They grow harder and smaller.

That the *x*-ray should be used after an operation would seem to me also a most justifiable conclusion. It can search out foci and areas of infection unreached by the knife and unsuspected by the operator.

The cases of carcinoma of the breast which I have found to be without exception the most susceptible to *x*-ray treatment are those of a recent recurrence after operation.

In one case a fresh recurrent nodule disappeared in three weeks. In two cases recently treated, referred to me by the surgeons who had operated upon the primary cancer, a recurrence took place in nine and four weeks respectively after the operation. The recurrent tumors were situated in the scar, and were about one and one-half inches broad by two long and fairly hard. These tumors disappeared within two weeks, leaving a thin and flexible line of scar tissue. In one of these cases there still existed a drainage opening with most foul odor. The odor at once ceased, and the drainage opening, distant, by the way, from the recurrent tumor, closed.

The above instances emphasize what all recognize, that the next important step in the x-radiation of cancer must be toward a proper selection of cases. For, not only do different kinds of cancer vary in their vulnerability to the x-ray, but also, even, phases of the same kind, vary.

Finally, under proper conditions of administration, the x-ray builds up tissue. The following case is instructive: I treated a young woman for an enlarged gland and gland inclusion in the right axilla. At the end of six weeks the lymphatics were comfortable, but the patient remarked, and it was plain to see, that the neck, chest, shoulder and breast on that side had remarkably developed, and that the skin on that side was firm and glossy. The patient now desires to receive treatment in the left axilla to even up matters.

In treating the brain in the two cases of melancholia which I have previously referred to, the hair became glossy and abundant and healthy where it had previously been dry and scant.

In fact, the question may, be reasonably asked whether the general therapeutic effects of x-radiation are not due to a capacity for establishing favorable tissue metamorphosis, rather than to a capacity for destroying or modifying bacteria or other microorganisms.

4. *Inoperable Cases.*—As to inoperable cases of cancer, there can be no discussion. There is but one simple axiom—so long as improvement continues, continue the treatment. It is here merely a question of a race between the x-ray and a fatal termination.

Conclusions.—1. Radiotherapy broadens our conceptions of the possibilities of the therapeutics of modern medical science.

2. The x-ray has a general application for the relief of pain.

3. As to technique, a standardization as to apparatus and its capacity, and as to duration and frequency of treatments and distance of the tube is recommended to operators.

4. The x-ray has a curative effect in internal cancer and other internal diseases.

5. For superficial diseases a medium soft tube may be used, for internal cases a hard tube. The hard tube is applicable, however, in all cases.

6. *X*-radiation is recommended prior to any operation, to clear the tissue of cancer particles and foci, and to circumscribe the disease.

7. *X*-radiation is recommended after operation to preclude a recurrence.

8. *X*-radiation may be recommended in place of an operation, and may be preferable to one for the reason that operation secures but a comparatively moderate percentage of permanent recoveries, and because up to date the x-ray procedure shows a continued improvement in cases, and a percentage of cures which will, undoubtedly, compare favorably with surgical operations.

9. There is danger to the patient or uncertainty as to what might be accomplished when the x-ray is employed by immature operators.

10. In x-radiation we possess more nearly a solution of the problem of curing cancer than by any other method of treatment.

19 East Twenty-eighth Street.

BENIGN TUMORS COMPLICATING PREGNANCY.

By BACHE M. E. EMMET, M.D.,
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This subject is a larger one to consider and discuss than might appear at first sight, for, commonly, our mind is prone to dwell mainly upon uterine fibromyomata on account of their relative frequency as a complication. But such tumors fall far short of representing the total number which may occur and act in this wise.

When we look over the field, only to mention those of benign character, we find that there is not a single organ in the pelvis, nor scarcely in the abdomen, which does not, upon occasion, yield a tumor which may complicate pregnancy.

Though I shall not seek to enumerate all, certainly not to dwell upon them individually at length, yet may I bring to your attention for a few moments such as shall be of more than passing interest.

To take up, first, the possible tumors of the abdomen. Passing over tympanites, we have ascites, which may be due to a disease of the liver, heart or kidneys, or to a diseased peritoneum. The accumulation may reach such a degree that it shall prove a most uncomfortable complication, not only in the way of pressure upon the developing uterus and of pressure downwards upon the enlarging veins and softening vagina, but, also, by pressure upwards of the intestines against the diaphragm, producing dyspnœa, both by displacing this muscle and by compressing the lungs into a limited space.

Apart from these effects, the added size to a pregnant woman makes her difficulty of locomotion pronounced; hence such a complication may well call for treatment by evacuation by one means or another to minimize the suffering which it induces.

Hydatids may also produce a like tumefaction and discomfort.

An enlarged spleen has been known to drop so low in the abdominal cavity as to seriously inconvenience a pregnant woman. We may strive to replace and hold it in proper position. Fortunately, cysts of the spleen are rare, but we find an occasional paludal example. In such a case, should we consider that quinine might prove a beneficial agent for its reduction in volume, we are at once met by the objection that this drug is a first-class abortifacient, and, therefor, the discomfort must be endured throughout pregnancy, possibly to the marked detriment of the woman's health, considering what is the rôle of the spleen in the normal state; or it may even become necessary to bring about a miscarriage.

A kidney which may already have been displaced, it may be cystic and possibly adherent, is certainly not prone to assume a better position because of an established pregnancy. I know of no observations by which to estimate its conduct under such circumstances, but, with the chance of the vessels and ureter being pressed upon by an enlarging uterus, which circumstance so frequently leads to the presence of albumin in the urine, even leaving out of consideration the tendency to hyperæmia which may be established by the pregnancy, we may confidently assume that a displaced kidney will become very considerably increased in volume and present a most unpleasant complication.

Add to such consideration the fact that a nephroptosis is already productive of very positive reflex symptoms upon the stomach, and we have at hand a factor which may do much toward establishing incoercible vomiting. It may be that this condition has been noted as a concomitant of that most terrible affliction; I have never heard it mentioned, but I think we may recognize that, as a reflex agent, and in the way of inducing hyperæmia, nephritis and albuminuria, we have in such a tumor a very decided and serious complication of pregnancy.

Any attempts made to replace and maintain this organ, or perhaps the two, in position will, under these circumstances, probably prove futile.

It seems, therefore, as if such a condition might entail a most troublesome and tedious course of the pregnancy, and necessitate maintaining the woman in the recumbent posture with hips raised, if not even the production of abortion or premature labor.

Excessive distension of the bladder, either as a neurosis or due to forcible ascent of a pregnant uterus, owing either to lack of space in the pelvis (deformities) or the presence of tumors, or again, from pendulous belly, in which case the uterus may hang over the pubes, is not an unknown occurrence.

Cystocele in women who have borne a great number of children has at times proven a most troublesome complication. Protruding from the vulva, such a sac has at the time of labor even been mistaken for the membranes, and has been opened up to allow the liquor amnii to escape. In another instance, by reason of its thin wall and because it contained fluid, it was mistaken for a hydrocephalic presentation and punctured. Such a bulging of the neck of the bladder and the anterior portion of the base may occur, even though the woman appear to pass her water regularly; yet I cannot think that a careful physician could misinterpret the appearances nor allow such a hernia to persist. Yet these unfortunate circumstances do happen, probably to women who have no proper advisers.

A stone in the bladder has been known to form a most objectionable tumor, sometimes encroaching upon the caliber of the pelvic canal. As the time for labor approaches it may be carried forward by the pressure of the head and prove a positive obstacle to delivery. We can the better understand the possibilities of a complication of this character if we realize that such calculi may be of any size. I have seen one as large as an ordinary orange, which would most surely have established an insuperable barrier; and those of smaller size may also become imprisoned in the lower segment of the bladder in vaginal cystocele, giving great pain and blocking the way.

Smellie reports such a case, of which he says, "a calculus of large size" worked its way out through the base of the bladder. This admitted of the immediate passage of the child. A midwife was in attendance. There must have been a terrible vesical catarrh antedating the pregnancy and distress of the bladder sufficient to call for medical care, were it at hand; it is even wonderful that such a sufferer could allow coitus to take place.

The care of the bladder during pregnancy cannot be too urgently insisted upon, both on its own account and in view of the approaching labor.

As already said, some women will seemingly empty their bladder, and yet, in one instance, it may still be overdistended,—"ischuria paradoxa"—or in another, like cystocele, a certain small portion may be retained, which will undergo deterioration, even putrefaction. The bladder may be adherent to a fibroid or to an ovarian or parovarian tumor, and cannot, therefore, contract fully to empty itself, and thus becomes an innocent party to a possible overdistention. Exploration with a sound will reveal either condition as well as the possible presence of a polypus or a stone.

The question of ultimate treatment under like conditions might lead us too far in this paper; methods for mediate relief will, however, quickly suggest themselves, seeing that the bladder may be emptied in either case. Should we find a foreign body of any type in the bladder, we may proceed to remove it at once if it threatens to prove a troublesome complication—of course, in the case of the bladder being attached to any tumor, the question of the tumor itself being removed will be involved. This will be considered later on. I mentioned vaginal enterocele above. Such a condition has been noted as a complication of pregnancy in quite a fair number of cases. One observer collected as many as twenty-seven. This is surely of sufficient frequency to have the possibility of its occurrence in mind. These cases have been due mostly to an injury of the posterior wall of the vagina, a separation of the muscular fibers, brought about by contusion in antecedent pregnancies. This, with considerable pressure from above, allowed the gut, possibly the omentum as well, to protrude.

In others, the vagina had been injured in a similar manner on its lateral or anterior aspect.

I fancy that it is fair to assume that a general relaxed condition of all supporting parts was also, in a measure, the cause, facilitating an enteroptosis.

Such a complication may prove exceedingly distressing and difficult to manage, no doubt requiring the continued use of vaginal tampons, and possibly calling for complete inactivity on the part of the patient.

When the omentum descends along with the gut, we realize that quite a tumor is formed. Such a one has protruded even at the perineum, forcing down Douglas's pouch behind the vagina to that extent.

A similar tumor has formed in the labium of one side or the other, the bowel escaping along the Canal of Nuck.

They may prove very difficult of diagnosis, especially where the omentum accompanies the gut or descends alone.

Fortunately the treatment of such cases is all of one kind, replace and maintain in position.

As a matter of curiosity, I may mention that the gravid uterus has itself been found in the inguinal canal, forming a tumor which quite reached to between the patient's thighs. It has also developed *upon* the abdomen after passing through the linea alba.

In the way of other hernias, viz., inguinal and crural, many are recorded which, under peculiarly favoring conditions, have reached to dimensions to be called tumors, especially when the patient has not been under the observation of a physician.

An abscess of the gland of Bartholini has shown itself of enormous size, really a tumor, and there have been other large, solid and cystic tumors of various kinds found within the vagina and at the vulva, which, though complicating pregnancy, presented their worst features at the time when labor set in.

One author is quoted in the "American Textbook of Obstetrics" as having collected sixty such cases; among them were twenty-three cysts and echinococcus sacs. I may mention another; an hæmatoma, perhaps a rare occurrence, yet of considerable importance, as it has been known to be caused by the rupture of an artery during the late months of pregnancy. Usually, of course, one vein, or several, which have been varicose from earlier pregnancies are the vessels at fault, but in the case of an artery giving way even before labor sets in, we can well see what are the possibilities of a tumor forming in the cellular tissue, even causing death before the exact state of things may be recognized; at all times giving much annoyance by pressure both to the rectum and to the bladder.

Of sixty-two such cases, which were reported in one instance, "the mother succumbed in twenty-two, and, with the exception of a single case, the children in those twenty-two cases were lost."

Hardened fæces in the descending colon, sigmoid flexure and in the rectum, form occasionally in one portion or the other a tumor of such volume and comparative immobility that it gives rise to much surmise and no little discomfort. Such a mass is sometimes side-tracked in a pouch, and allows of other fæces passing by it or even through it. The mass may attain to a very great size and one may have to scoop it out, after flushing the bowel repeatedly with hot water and inspissated ox-gall or crude kerosene, and giving salines or castor oil by the mouth to soften it and bring it down within reach.

I at one time knew a family in which the habit was established of defecating only once a month, when the menses appeared. Such had been the habit, I was told, of grandmother, daughter and granddaughter. It is not difficult to imagine a fæcal tumor forming a complication of pregnancy in one of that family.

Polypi growing from the uterine canal are not at all uncommon, either within the canal or hanging in the vagina. A mass of this kind may become a great annoyance during pregnancy, as well as prove a very threatening complication to labor. Such tumors can readily be disposed of at any time; should the woman, however, not be under observation, there is every reason to fear an abortion or an early miscarriage from its presence, not to speak of its being such a common factor in dystocia.

There is one class of growths which I shall scarcely more than bring to your notice for the purpose of rounding out somewhat my presentation of complications of this character. I allude to exostoses about the pelvis and to diseases of the vertebræ, giving rise also to deformities which assume the type of tumor. The first may form a prominence upon the promontory of the sacrum, which may diminish the caliber of the superior strait, crowding the pregnant uterus, so that it may hang over the pubes, or such a growth may form upon the symphysis pubes; one as large as an egg has been noted. Then there is the spondylolisthetic condition, in which the last lumbar vertebra may slip down upon the first sacral; it has been known to almost turn face downward, and the two bones have been found united by bony callus. Such an occurrence allows of the vertebræ immediately above dropping also—indeed, they must of necessity, once this prop is removed—this condition is called lordosis, and the bones project very positively into the pelvic cavity, forming properly a bony tumor, usurping the space necessary to a pregnant uterus, possibly displacing the organ backwards in its early development.

A fracture of the sacrum may produce a like deformity, the whole pelvis tipping forward, thus again making the promontory project markedly.

I shall only casually mention that form of exostosis giving rise to the name "pelvis spinosa" on account of the sharp edges or rims assumed by the osseous formation which projects into the pelvis, more especially at the pubo-iliac junction. These have been known to perforate and lacerate a pregnant uterus.

Cystic ovarian tumors form a very frequent complication of pregnancy. Though it may be held as an uncommon occurrence that pregnancy should exist when both ovaries are diseased, yet it is not unknown and, of course, the complication is greater than in the case of only one being involved, both from the fact that there is a two-fold cause of impaired health, and, further, that the chances of mechanical interference with pregnancy and labor are multiplied. Ovarian cystomata may further complicate a pregnancy by establishing adhesions, and they may prove as difficult to displace as a cyst of the broad ligament or any other retroperitoneal neoplasm. Such growths may also assume various changes in structure, and thus present still further complications.

Some surgeons might decide to leave such tumors during the term of pregnancy and deal with them after labor, inasmuch as they generally rise high in the abdomen and may not crowd the uterus. It may be, however, that one has attained such a growth that the patient will undoubtedly experience great discomfort as pregnancy advances. In past times such a tumor has been tapped, the surgeon holding himself in readiness to operate immediately should any unfavorable symptom develop; to-day, if pregnancy is still in the early months or, again, if it has attained the later months, a laparotomy may and should be performed, with perfect confidence that it will not interfere with gestation in the least. Occasionally, a cyst will drop down behind the uterus, and so worry this organ that one may fear an abortion. One may then be led to tap it, especially if one finds it late, or one may remove it per vaginam; still, even ovarian tumors and dermoids adherent in Douglas's pouch have been removed in the eight and ninth month. In one case the uterus was turned out upon the abdomen for the purpose, and gestation went on to full term without accident.

Most all other tumors of the adnexa, dermoids, fibroids and cysts, if they remain well up in the abdomen, may prove harmless to the pregnancy and may be ignored. If they develop, however, to an excessive size, but, particularly, if they fall into the pelvis and cannot be so raised and displaced that they shall remain above the brim, they must be dealt with by operation, to prevent abortion or dystocia.

Pus-tubes cannot be raised, and are, at all times, in the way; one cannot ignore their presence. As soon as they are recognized they should be removed, otherwise they may be crushed as pregnancy advances or during labor by the child's head, with the immediate result of acute peritonitis.

Fibromyomata and myomata form, perhaps, the most frequent tumor complications of pregnancy with which we have to deal. They are generally multiple, and may be situated in any part of the organ—the body, the lower segment, or the neck. They may be submucous, interstitial, or subperitoneal; these and the submucous may be sessile or pedunculated, and a pedicle may be of such length that a tumor, or a portion of it, may be quite considerably displaced from its base.

Such tumors constitute a serious complication of pregnancy from the very first, in that their presence frequently breaks up the regularity of menstruation, so that patient and physician may be very much at a loss to know when pregnancy has begun. A cessation of an habitual hemorrhagic condition may simulate a missed menstruation;

again, pregnancy may really have set in, and we may overlook it by witnessing the occurrence of a show due to a fibroma. Even if a woman, who is known to have fibroids, becomes pregnant, the increase of volume of the uterus may bear two interpretations. The difficulty may be as great if we have not known of a prior fibroma; recognizing such a tumor, one may not know but that there is also a pregnancy.

Again, one may appreciate pregnancy and overlook a fibroid. Of course, in the latter months such points may be cleared up. Auscultation may be much interfered with by the presence of fibromata; still, if the heart-beats are once heard, a positive diagnostic point is established.

Then, touch and palpation serve also for the later months; although if a fibroma be on the posterior face of the uterus or interstitial or submucous, error is still possible, or it may never be recognized at all. Another curious instance of error is that in which the entire development of pregnancy took place in the cervix, and the uterus, from the internal os up, formed a tumor upon this mass and was mistaken for a small fibroid.

There was, however, also found in this case a real fibroma on the inside of the cervix, flattened and projecting into the vagina, where it blocked the way and prevented delivery.

An immense tumor at the junction of the neck and body, interstitial and yet submucous, was not recognized at all, yet it prevented the dilatation of the neck and absolutely prevented the head engaging. The woman died undelivered.

In spite of these many possibilities, we must admit that pregnancy frequently progresses normally and reaches its term without any mishaps. Especially will this be the case if the fibromata are subperitoneal, are in the body of the uterus, if they are not numerous, are not large, and do not grow rapidly. Per contra, if we have large fibroids, the patient will probably suffer severe abdominal pains; she will be much encumbered by their weight, and it will be difficult for her to get about. By pressure they may produce ascites and albuminuria, or the uterus may be retroverted. Furthermore, they may themselves break down and poison the patient. The interstitial and the submucous may cause a faulty implantation of the placenta, and they are constant menaces of hemorrhage and abortion.

But it is to those developing within the pelvis, those in the lower segment of the uterus and about the neck that we must look for the worst symptoms and the most troublesome complications of pregnancy. By their increasing size they interfere with neighboring organs, just as we have seen that other growths are harmful. By annoying the bladder, they produce dysuria; by compressing the ureter, they may cause pyelitis or hydronephrosis; they favor constipation and provoke cramps in the legs and neuralgia by pressing upon the sacral nerves; they may also be the cause of death of the fœtus; this may mean putrefaction and the subsequent death of the mother—finally, fibromata may be the cause of faulty presentations; such are said to be common.

Now, for a moment before closing, we should consider the manner of dealing with this complication.

It is evident, from what has been said above, that the question of differential diagnosis is an all-important one, and next in importance is the correct estimate of the possible evil influence of fibromata during each pregnancy.

The limitations of this paper, or time limit, will not allow me to enter upon a discursive study of these two most interesting subjects, each one of which is worthy of a prolonged discussion; so my remarks will be confined to setting forth my condensed views upon the subject of when to interfere and when not to interfere.

From what has gone before it may be inferred, and correctly, that I would willingly operate on all young women non-pregnant who may expect to become so at any time, and remove any fibroid of the uterus which is accessible. Should the young woman be recently pregnant, I would remove such growth, if it be large, wherever situated. If it has grown slowly and is small, I should leave it if in the body, but remove it if in the lower segment or neck. If the patient be midway in pregnancy, and such growths be discovered, I should leave them alone absolutely, if they are in the body and not giving rise to trouble. If in the lower segment or neck, I should temporize, seeking to crowd them out of the pelvis, and try to tide over until the uterus has become thoroughly accustomed to the pregnancy; when I might still hesitate about interfering at all, but watch and choose my method at the time of labor; possibly no interference may be necessary, or it may prove desirable before that time to induce premature labor. Should such growths be discovered only in the late months, I would operate only if they grow in the neck and of such size—egg or larger—as to threaten to impede delivery. Then I should operate from below. However, even then, I might decide to await events at time of labor, or induce a premature birth. But tumors may be so general and threatening that one is obliged to remove the whole uterus, even early in pregnancy; I have reported such a case, and with all our desire to be progressive, yet conservative, we may still be driven to Cæsarean section or to the Porro operation.

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MALIGNANCY COMPLICATING THE PREGNANT STATE.*

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The individual experience of any operator dealing exclusively with the subject which your chairman has selected for me must, of necessity, be very limited. And this for several reasons. Malignancy is a condition of advanced life, and is very seldom found during the procreative period. We except, of course, in this statement the other forms of malignant growths, such as sarcomata, which are growths of younger life. All malignant tumors of the genitalis, except those of the uterus, seem distinctly to prevent the possibility of conception. For the reason that in malignancy, attacking the appendages destroys the life-yielding element furnished by the ovary and transmitted by the oviducts, and thus inhibits, if not absolutely prevents, the male and female products coming together. But where the cervix uteri, or even the body of the organ, is attacked by a malignant tumor during the period of possible fecundity, there is, from my individual experience, a greater possibility of impregnation than under normal conditions. This, I believe, is due to the increased succulence from an increased blood supply to the parts, making their receptive conditions decidedly a favorable one for the lodgment of the impregnated ovum. Whether the ova under these conditions are as successfully carried to term, is another question, and not within the line of discussion. Clinically, this is proven by the large number of cases reported in which pregnancy is associated with malignant tumors, especially carcinoma of the cervix. Consequently, this subject becomes one of the greatest importance, in view of diagnosis, prognosis, and especially treatment. The very fact that the condition is a rare one, generally speaking, makes it all the more important that its possibility should ever be borne in mind, and a differential diagnosis must always, if possible, be made, not alone against, but in favor of, malignancy. This is readily done by exclusion, by direct examination, or by the excision of a piece of the suspected part for a microscopic examination, even at the expense of terminating the pregnancy. If there be no visible sign of malignancy, and the suspicious bleeding or a foul odor persists, and a diagnosis by exclusion is impossible, one is certainly warranted in emptying the uterus in the interest of the woman. I hold here, as elsewhere, that hemorrhage is inconsistent with normal pregnancy, and a woman who bleeds presents a pathologic condition, for some reason or other, and, as such, requires not tentative but active treatment. An instructive case is the following one in which a diagnosis of beginning carcinoma was made by two very able physicians in a woman pregnant eight months: This error was made because the patient presented a badly eroded os, and she bled very profusely. A careful examination showed the patient had a very low placental implantation, and that the hemorrhage came from this and not from the supposed cancer of the cervix. Labor was induced and the woman made a normal recovery. It is now two years, and the patient is fully recovered. This error in diagnosis is excusable, since it must be remembered that the disease is very rare, occurring in less than ½ per cent. of all cases of cancer in the female. There is only one way of making a diagnosis, and that not always a positive one. This is by exclusion.

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A direct visual examination is the only method we have to clear up the diagnosis as between malignant conditions of the cervix and other lesions causing persistent hemorrhage: as an eroded cervix, varicosities, and so forth. Direct examination or local findings will, in all probability, give us the clew as to the presence of a vicious implantation of the placenta, a condition which will very often simulate a possible cancerous state. If neither a microscopic or macrocopic result can clear up the condition to our absolute satisfaction, we are justified in provoking an abortion. This is advocated not alone for the purpose of making a diagnosis, but for the sole object in view in order to rid the mother of an unknown danger, the life of the child not being taken into consideration at all, since in all these cases the danger to the fœtus is especially great; for either the woman aborts or, if she should go to term, or at least live, the chances for the fœtus are small, for over 40 per cent. of the children are born dead. But, independent of this factor, it is absolutely essential for the future welfare of the mother, that an early diagnosis be made, and often, without the help of a preliminary emptying of the uterus, this is utterly impossible. If we are to help these patients to a successful termination, it is certainly necessary to operate early, and in order to do this timely and safely, an early diagnosis must be made. Thus it is advocated that, if in any case this cannot be done, it would be far more advisable to be sure, even at the expense of terminating the pregnancy, than to flounder around in total obscurity until safe and timely operating is out of the question. The plea for an early diagnosis of carcinoma holds good under these conditions, even as it is essential in cases where no pregnancy exists. We might say it is probably even more urgent to diagnose carcinoma during pregnancy than under ordinary conditions, for the stimulus which the uterus obtains from the presence of a fecundated ovum, causing a greater congestion and a more rapid growth of the lymphatics, will, we surmise, be an important factor in the rapidity of the growth of a malignant tumor during pregnancy.

The most important subject to be considered relates to the treatment of the subject under discussion. For practical purposes, we naturally divide the cases into those that are operable and those that are inoperable. For, while in the former, our duty lies solely in the interests of the mother, in the latter ones—the inoperable cases—we exercise our energies in the interest of the fœtus, since nothing of a curative measure can possibly give us the slightest hope of staying the lethal termination. Once a diagnosis of carcinoma is made, and a successful issue is to be premised, the uterus must be emptied by any measure that serves the mother the best chances. The child cannot be seriously taken into consideration, for in the cases discovered early the period of viability has as yet not been reached. What means we have at our command must always vary with the individual experience of the operator. He must choose between (*a*) terminating the pregnancy, and in a few days extirpate the offending organ; (*b*) To do both operations at one sitting, namely, to empty the uterus and extirpate the organ. There are a variety of ways in which this can be done: (1) Empty the uterus by the ordinary method, or, in the advanced cases of pregnancy, those at or near term, doing the so-called vaginal Cæsarian section; (2) This is followed by the removal of the organ by the vaginal route. It is remarkable how simple it is to do a vaginal hysterectomy, even in the case of a uterus at term after that organ has been emptied of the fœtus. The method of operating is as follows: The diseased parts are thoroughly destroyed by the cautery. The vaginal portion is then circumcised, and the bladder and rectum are dissected off. Both the uterine arteries are then secured and the uterus is split up to the point of separation into four parts. This at once dilates the entire cervix uteri and the lower uterine segment. The child is delivered by version or forceps, if it is viable, or a total embryotomy is done, if that period has not been reached. This is followed by the total removal of the cancerous organ; (3) Empty the uterus by the usual route and then attack the organ by doing an abdominal extirpation; (4) The performance of a classical Cæsarian section, especially if the woman be near the end of pregnancy, followed by a total abdominal hysterectomy. This last method is one that appeals to all, and seems to be the ideal and the favorite one in cases at term. There can be doubt as to its feasibility, but the great danger ever remains as to the possible infection of the peritoneal cavity, if the operation is done as is usually described. To overcome this danger we wish to add a slight modification. After thoroughly cauterizing, if at all possible, the ulcerating area, we pack the lower zone tightly with iodoform gauze, and whip this over and retain the gauze within the cervix by a running suture so as to occlude the uterine cavity. The abdomen is then opened, the child removed, and a typical total hysterectomy is done. There is no doubt that in the earlier cases the ideal method is the vaginal route, preceded by a vaginal Cæsarian section, for it has appealed to us as the simplest and safest for the selected cases, possibly even advisable in cases at term.

For those tumors that are discovered too late to render certain a radical care by any operation, there remains but one factor to be taken into consideration, and that the unborn child. We simply tide the woman to term and make her as comfortable as possible by the liberal administration of opiates, and wait until the end of pregnancy, or until she goes into labor. Then we elect the only operation that appeals to us, namely, a deliberate Cæsarian section. Not that we care particularly for the interests of the mother, but so many of these women suffer from uterine rupture (over 40 per cent.) during labor, that the life of the child may be sacrificed because of this rupture. We wish to avoid this in order to bend all our energies in saving the child, for the mother's existence is of such minor importance under the conditions presented.

Occasionally, there is presented for our consideration a patient who is the victim of a malignant growth in some distant organ not connected with those of procreation, and that patient pregnant at the same time. Generally speaking, there is no indication for us to interfere in these cases. Except that we are to deal directly with the advice to remove the tumor, if removable, we can do nothing except we feel that the pregnancy is an associate evil factor in the case. Then it behooves us to terminate the gestation. This indication becomes urgent, mainly in the interest of the child, while, occasionally, we interfere in order to overcome dangerous symptoms due to the pregnancy which would, in all probability, cause the mother's death in a short time, unless this interference were instituted. Such emergencies happened in two cases coming under my personal consideration.

A sixth multipara. Labors and pregnancies always normal. At the second month of the present pregnancy a small pigmented nævus was removed from the back, because of the annoyance it entailed and because it started to increase in size. She was then well until the sixth month of pregnancy, when she noted that the abdomen was growing rapidly in size. There was no reason for this, and it was thought due to a mild hydramnios. Urine normal. The distention now increases so rapidly that in two weeks it is enormous. The patient has now circulatory disturbances, cyanosis, and marked dyspnœa on exertion. There is no vomiting and no pain, and in other respects she is in good condition. The urine is markedly diminished in amount. In a short time, when I am invited to see the case, the abdomen was enormously distended up to the ensiform and the skin was tense and drawn and shiny. There was a distinct wave of fluid, and the percussion note varied with the position of the patient; in other words, a hydroperitoneum. No fœtal parts to be felt. Urine diminished in amount and the urea estimation shows only 9 grams in twenty-four hours. In view of the general symptoms, denoting a severe toxæmia, and the uncertainty of the complicating condition, it was thought advisable to induce labor. This was done by the cervical tampon, and in eight hours the fœtus was born. The abdomen did not collapse and the possibility of a twin pregnancy arose. I again saw the case and certified that the uterus was empty. The distension was found due to a peritoneal ascites. To account for this the patient was now carefully examined. At the ensiform cartilage a broad elongated rounded tumor was found which was movable and of semi-solid consistency. From the evident disturbance in the portal circulation, and the position of the tumor, and the rapid development of the ascites, our diagnosis was inclined to a malignant growth of the gall-bladder or the left lobe of the liver. This was confirmed a few weeks later by an exploratory section.

In this case, certainly a typical case for interference, even though the pregnancy were uncomplicated, we felt justified in terminating the labor solely in the interests of the mother; not alone for therapeutic purposes, but in order to clear up the diagnosis. This we certainly did without any material sacrifice, and at the same time making the closing days of the poor woman free from suffering.

The second case referred to our service from the neurological wards with a diagnosis of glio-sarcoma of the brain. The young woman was about eight months pregnant. We received her completely unconscious and with some evidence of beginning labor. Child alive and in good condition. With only an attempt at a narcosis, we got rid of the vaginal portion of the uterus by manual dilatation and then performed the classic vaginal Cæsarian section, and, by version, rapidly delivered a living child. The patient succumbed to her malady in twenty-four hours, and the autopsy revealed the correctness of the diagnosis.

In this case we acted solely in the interests of the child, for the mother's condition was utterly hopeless, and she was in danger of death at any moment. To anticipate this, we followed our invariable rule to act in that direction where we could do the most good. In this case, in the interests of the child, and in the former recited case, in the interest of the mother. There are a number of other conditions, due to tumors complicating pregnancy, which grow so rapidly and cause so much distress and danger, that, while not strictly malignant ones histologically, yet clinically simulate them so much so as to deserve the name pseudo-malignant growths. Witness, for instance, the rapidity of the growth of certain uterine fibroids in pregnancy which cause such grave disturbances as to preclude the possibility of a woman going to term. Here we are again justified to provoke labor in the interest of the child, of course always postponing such measures, if possible, until the time of fœtal viability. Unless the patient cannot be delivered except by an abdominal operation, we believe it far wiser to induce labor when the indication presents itself; and then at some time in the near future when the patient is not pregnant, to anticipate the recurrence of these growths by the removal of the now very much smaller tumors. Malignant tumors of the appendages, as a rule, are bilateral, and cause such destruction of the ovaries that pregnancy is the very rarest possible condition. But should pregnancy nevertheless occur, it becomes necessary to adopt a waiting policy until that time when we are called upon to interfere either in the interests of the mother or the child. A final topic now comes for our consideration, and while not strictly within the limitations of this paper, yet we feel that we are justified in calling attention to the so-called deciduoma malignum in an article devoted to the malignant growths occuring during pregnancy. We do this for the reason that it is our individual opinion that this affliction occurs, or at least begins, its inroads early in pregnancy, and is the cause of the abortion and the other abnormal conditions which are invariably associated with it, such as cystic degeneration of the chorian, and not due to the results of the abnormal changes in the products of conception. On this subject we can go no further, except to state from our investigations and clinical experience and theoretical knowledge, based upon careful perusal of the many cases now on record, that the chorioma malignum originates solely from fœtal structures, and the strongest proofs that we have rest in the fact that the condition is always dependent upon, and closely associated with, the pregnant state.

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UTERINE DISPLACEMENTS COMPLICATING PREGNANCY.*

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The subject of uterine displacements complicating pregnancy seems to best permit of classification according to cause rather than variety, and, while this cannot be accomplished succinctly, I offer the following as fairly satisfactory:

Displacements Due to Uterine Sources.—Retroversion and flexion, anteflexion and anteversion, prolapsus, incarceration.

Adhesions.—To bladder, to rectum, to abdomen (ventrofixation, suspensio uteri), to broad ligament, and to intestines.

Periuterine Pressure.—Pelvic abscess, appendicitic abscess, ovarian tumors and cysts, hernia uteri, hernia intestinalis, kidney (floating, sarcoma), bladder (urinary distention), extrauterine pregnancy, myomata, intestinal distention.

Retroversion.—The most important bearing of this displacement in pregnancy is the liability of the latter's ending in abortion or miscarriage. The uterine circulation is usually congested and slow moving, causing plethoric and asphyxiating conditions, which are prone to provoke either choriodecidual apoplexy or cellular disintegration—endometritis decidualis gravidarum. Endometritis and subinvolution are usually involved in the original causes of the displacement. The only treatment admissible after impregnation is support of the fundus with a pessary, regulation of the bowels, and avoidance of the erect posture as much as possible until the uterus begins to rise in the pelvis in the fourth month. Most cases do better without any local treatment.

Retroflexion.—Retroflexion is usually produced during subinvolution after pregnancy at full term by intestinal pressure on the fundus. Its most serious liability, aside from abortion, is to result in uneven expansion of the uterus, producing a double-pouched condition. The anterior wall expands ahead of the posterior, with the fundus somewhat at a standstill. The fetal head may thus be impacted in the lower pouch. Upward displacement of the head, even the entire change of its position, will best relieve the irregularity in uterine shape and growth.

Prolapsus Uteri.—Marked hypertrophy of the cervix may be mistaken for procidentia. Almost every grade of prolapse of the pregnant womb has been reported, although no case of complete extravaginal prolapse has, I believe, been reported as going to full term. Abortion has always resulted. In endeavoring to prevent abortion we should aim to obtain space above the pelvis through light diet and free bowel action, avoid the evils of gravity by having the patient remain recumbent most of the time, as needed, during the first four months of pregnancy, and assist the uterus to rise, if necessary, by the use of pessaries. Inflated soft rubber rings are the best for this. It must always be remembered that, in long existing prolapsus it is not feasible to push the uterus up, adhesions having developed with shortening of the ligaments. Spontaneous abortion will then usually occur.

Incarceration.—Fixation of the fundus beneath the promontory is a possible, and may be a serious consequence of retroflexion in pregnancy. It may occur without inflammatory condition, especially in extreme retroflexion. The fundus lies in the hollow of the sacrum, and the cervix is pressed against the bladder. So extreme may the displacement become as to threaten a fatal result. With sufficient enlargement of the uterus to fill the pelvis snugly, the bladder becomes unable to empty itself, the rectum has great difficulty in doing so, and, in addition to grave cystitis and constipation, emptying of the uterus in abortion may be impossible without operation. Pernicious vomiting may be caused by incarceration.

Should adhesion of the uterus occur in this position, there may be other resource than to induce abortion; but efforts should always be made by taxis to replace the organ. Such efforts should be preceded by catheterization, which will sometimes render replacement easy. Should catheterization be impossible, direct puncture of the bladder above the pubes should be employed.

Martin has seen 121 incarcerations in 24,000 patients. Symptoms do not usually appear before the tenth week. Severe cases cause bulging of the perineum. Unusual difficulty in micturition should awaken suspicion and lead to examination. Storer has rightly stated that cases of pregnancy in a retroverted uterus are more difficult than retroversion in a pregnant uterus.

Taxis for several days, at intervals, rubber bags filled with shot, laparotomy, Cæsarian section, Porro's operation, and symphysiotomy have all been done for this condition.

Class II.—Adhesions.—The uterus may become adherent to the bladder as far as the top of the fundus through ordinary sources of such adhesions or traumatisms in previous labors or gynecological work. I have met with such cases in abdominal work, and in one in pregnancy, in which the bladder was pulled upwards by the ascending uterus until it measured 10½ inches from the meatus. Separation then occurred spontaneously. Generally the bladder will be the only organ affected, though the uterus may be anteverted and later anteflexed. These cases are usually best let alone, as gradual elevation of the uterus gives the best taxis possible.

Adhesions to the Intestines.—Aside from displacements due to adhesions of the rectum and lower portion of the sigmoid flexure, which may cause retroversion, or retrolateral flexion during the first four months, adhesions of the uterus to the intestines rarely affect the normal elevation of the uterus, or its progress to normal labor. I am unable to state whether rupture of the intestines from adherent uteri have occurred, although it would seem that such accidents must have taken place. Should symptoms of such danger appear, such as severe colic with inability to secure movement of the bowels, the induction of labor would be indicated.

Ventrofixation and Suspensio Uteri.—When the operations that were devised to take the place of Alexander's method for supporting the non-pregnant uterus were first undertaken there was little, if any, regard given to the future obstetric possibilities. The consequence has been that many cases of pregnancy ended badly, a number of fetal lives being sacrificed. A Lapthorn Smith (Pregnancy Following Ventrofixation." Transactions of the American Gynecological Society, Vol. 23, 1898), was among the first to strongly emphasize the need of discrimination in method employed where the woman was liable to become pregnant. He reported thirty-six cases out of one hundred and forty-eight operations in which obstetric difficulties occurred when these women became pregnant after ventrofixation which gave firm attachment of the uterus to the abdominal wall. As a general proposition, it may be stated that those methods of anchoring the uterus, which leave it with some freedom of motion independent of the bladder or abdominal wall, do not interfere with pregnancy necessities; while those which do either of these may not, but most likely will, cause trouble sufficiently great to make their peformance unwise in child-bearing women. I believe this statement now represents the general views of gynecologists.

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* Read before the Obstetric Section of the Academy of Medicine, April 24, 1902.

Ventrofixation attaches the posterior fundus to the abdominal wall by union which includes the extraperitoneal fascia as well as peritoneum. Unless drawn upon with great power, as in elevation of the pregnant uterus, in which case it may give way altogether, this union tissue does not stretch.

Suspensio uteri, in which the fundus is attached to the peritoneum only, not infrequently results in the formation of a peritoneal band of indefinite length, independent of pregnancy. I believe there have been no specially bad results follow from this operation in pregnancy, although it is quite possible such have ensued. None of the various methods of operation which readjust the round ligaments, transplantation and doubling backing on themselves, or vaginal fixation, have proved obstetrically objectionable.

In pregnant women with ventrofixation the dangers are: Premature expulsion of the ovum; excessive expansion of the posterior portion of the uterus, thinning and rupture of the uterus, malpositions of the fœtus and the general effect of pain. Where the symptoms are indicative of these complications, I favor severing the uterus from the abdomen, a very simple operation and less likely to do harm than the fixation.

Adhesions to the Broad Ligament.—Women who have had unilateral salpingectomy performed, especially for extrauterine pregnancy, are liable to sharp displacement of the uterus to that side during the first three or four months of the succeeding pregnancy. It may prove necessary in operating on the tube to shorten this base and thereby leave the uterus drawn down to the side. An interesting illustration occurred in a case of abdominal pregnancy, the fœtus dead, at full term, in which I operated. The placenta spread over all the left pelvic region and considerable shortening of the left uterine tissues was necessitated. On becoming normally pregnant later, I predicted an abortion, miscarriage taking place during the fourth month. The patient subsequently carried a child to full term. While it is the rule in performing salpingectomy to bring anteroposterior wound edges together and so preserve uterine position; yet, in unilateral operation, this effort to preserve normal uterine position should be made a point of special consideration.

Displacements Due to Periuterine Pressure.—In some of the forms of displacement under this head the latter is incidental and secondary to the cause of displacement. Such forms do not directly apply to the subject of this paper and will be only mentioned.

Pelvic Abscess.—The uterus may be sharply pressed to one side by a large accumulation of serum or pus within the broad ligament. The displacement is important only as a point in diagnosis and that leads to proper treatment of the abscess.

Appendicitis.—Appendicitis is likewise excluded from consideration here.

Ovarian Tumors and Cysts.—The frequency of ovarian tumors, and the readiness of one ovary to enlarge while the other continues ovulation, permitting impregnation and not affecting its course during the first half of pregnancy, result in presenting complications with considerable frequency.

Heiberg gives a mortality of 25 per cent. maternal and 75 fœtal in cases going to full term. The condition is, therefore, serious. The sources of evil are: the increased rate of growth of the ovarian tumor from collateral blood increase; consequent decreased blood supply to the uterus and prematurity from malnutrition; torsion of the tumor pedicle; rupture of the tumor, if cystic; disclocation of the uterus; subuterine dislocation of the tumor and prevention of vaginal delivery. Infection of the cyst during the puerperium has been rather frequent.

Many mistakes have been made in diagnosis. It is always best in cases of abdominal enlargement to first endeavor to determine if pregnancy exists, and, if it does, to palpate from this as a base line which has a very constant set of symptoms to the abnormal features of the case. The second proposition, to determine pregnancy abnormalities, is often like catching the robin by putting salt on its tail, quite simple if only the first question could be solved. In the earlier months of possible pregnancy we practically depend upon finding the uterus enlarged and cystic, and mapping its fundal boundaries. Ballottement is the one diagnostic sign. But I need not dwell on this diagnosis of pregnancy. If determined, then the most likely abnormal sign is the greater size of the enlargement, if an ovarian tumor is present, than the menstrual history would give for the uterus alone. The *x*-ray is helpful in showing the fœtus and giving its size. Probably the most usual cause of error in diagnosis of the combination is the failure to pursue our examination when one or the other condition has been determined.

The management of this combination requires careful discrimination. If the diagnosis is made before crowding of the uterus has begun, and the ovarian enlargement is sufficient to prevent uterine growth to full term size, it is best to remove the tumor, and the sooner the better. If the tumor is cystic, such removal is best in any case, because of the liability of the cysts to rupture during uterine contractions in labor. If no operation is done during pregnancy, the bowels should be kept carefully emptied and prompt application of an abdominal binder made after delivery, to prevent torsion of the tumor pedicle. If the size of the tumor renders its removal during pregnancy especially dangerous and full term development very difficult, we should induce labor at the latest period of fœtal viability consonant with the mother's interests. The presence of restricting adhesions, if we can discover them, should determine the induction of labor regardless of the interests of the fœtus. If the ovarian tumor is lying within the true pelvic basin, and cannot be replaced above the uterus, it should be removed through the vagina, and the sooner the better.

The mortality from ovariotomy during pregnancy is given by Dsirne (Textbook of Gynecology, Reed, p 648.), as 5.9 per cent. Pregnancy has been interrupted in 22 per cent., as given by the same writer.

The most favorable period for operating without provoking labor seems to be during the fourth month, the first months more readily permit villous apoplexy and the later months greater uterine disturbance by reason of its bulk.

Kidney Displacements and Enlargements.—I am able to report six cases of interference of pregnancy by floating kidney, given by Winckel. (*Wiener* *klinische Wochenschrift* Nos. 51 and 52, 1888.) Theoretically we would expect pregnancy to act favorably, rather than otherwise, on a floating kidney by the uprising uterus pressing the kidney back into place. If the latter were both displaced and adherent the complication might prove serious.

Hydronephrosis and sarcoma of the kidney are the most prominent forms of its enlargements. Usually hydronephrosis is a result of pregnancy. It takes but slight pressure on the ureters to occlude their caliber. This is not relatively frequent in the earlier months of gestation unless uterine cancer exists.

Sarcoma is very rare. I have heretofore reported a case that was of unusual interest and complication. The diagnosis was largely determined by the presence of hematuria, in addition to the abdominal enlargement in the right side. The patient was seven and one-half months pregnant, and the kidney too large to permit full-term pregnancy. It was the size of a man's head. Labor was terminated first and the kidney removed after the puerperium. The patient, as was expected, died. It may be stated, as a general proposition, that when the removal of the complicating tumor promises to be of marked difficulty and danger, it is better to first empty the uterus and delay operation until the patient has recovered from her puerperium.

Distention of the ureter may attract attention where sudden filling of the bladder occurs in pregnancy at irregular times, preceded by a general feeling of being "ill at ease." There must be such placement of the fœtal head at the brim as to permit of pressure on the ureter to justify a diagnosis. Urine from such distended ureters shows more decomposition than normal. Charlton (*Indiana Medical Journal*, p 10, 1902) reports finding about six ounces of urine at autopsy in the right ureter. Close watch for this complication in cases of sudden reduction in the amount of urine passed in twenty-four hours, in cases connected with eclamptic questions, may give us valuable data in the near future.

Extrauterine Pregnancy.—Straus (*Zeitschrift für Geburtsch. und Gynakologie*, Bd. XLIV., H. I., 1900) reports thirty-two cases of combined extra and intrauterine pregnancies, in which thirteen continued to term. It seems extraordinary that any case ever should go to full term when we consider the usual course of ectopic gestations; but, on the other hand, no possible method of gestation ever has been conceived in imagination that has not occurred. A wandering ovum, fortified by the courage of impregnation can, like the tramp, make a bed in any spot and live on little or nothing. Of the thirteen combined pregnancies reported by Straus, there were four in which both fœtuses were living and two that were delivered alive. In three cases pregnancy went to term, with death of the "ectopers."

The proper treatment in all such combined cases would seem to be to first remove the external gestation sac by abdominal section, no matter what the period of pregnancy, leaving the intrauterine pregnancy to follow its own course.

Hernia of the Pregnant Uterus.—The varieties of hernia of the pregnant uterus are: umbilical, ventral, (between the recti abdominalis) and inguinal. Umbilical hernia is not as frequent as ventral, but may be more serious. It is possible for the uterus, which passes through a ring of tissue limited in dilatability and of considerable strength, to become constricted, swell and become gangrenous. When such condition is threatened the constriction ring must be severed and the uterus returned into the abdominal cavity if possible; otherwise, either temporary closure of the integument over the womb may be possible and support given until labor, or Cæsarian section is performed and the hernia ring closed.

Ventral hernia is usually due to excessive stretching of the abdominal wall in previous pregnancies and malnutrition, the skin and fascia relaxing, stretching and thinning until the fundus begins to enter as a wedge between the recti abdominalis. It would, on first thought, seem easy and simple to stay this form of hernia by pressure of an abdominal binder, but such is not the case. Sufficient pressure, even when applied during the middle term of pregnancy, prevents needed general expansion. Advanced cases, including the variety known as "pendulous abdomen," must frequently remain displaced until labor, as efforts to press back the uterus cause direct pressure on the heart through the intervening tissues, causing shortness of breath. We sometimes find the uterus lying in a position that is almost a complete reversal of the normal in these cases, the longitudinal axis running from the fundus below and in front of the pubes through the plane of the inlet at an angle of 45°. The fetal head may lie entirely in front of and below the pubes. In treating these cases, where replacement is impracticable, we should keep the bowels fairly empty, and have the patient wear an abdominal supporter as snugly applied as comfort will permit, the important point being to promptly attend in the beginning of labor and assist in getting the head to enter the pelvis; otherwise, a breech delivery is necessary. Nature may surprise us by bringing the head into proper position unassisted.

Inguinal hernia is very rare, but very serious. Of ten cases reported by Adams ("Hernia of the Pregnant Uterus," *American Journal of Obstetrics*, Vol. XXII., p. 25), Cæsarian section was performed in eight. Delivery was spontaneous in one.

Hernia Intestinalis.—Pregnancy and labor may be seriously affected by several displacements of the intestine, such as: Inguinal, femoral, labial and post-vaginal herniæ. The small intestine is involved, the large being seldom found.

Hernia of the intestine through a rent of the wall of the uterus into its cavity is a form that should be mentioned. I was once informed of such a case, in which the doctor exsected the loops in-utero without considering that he was removing intestine.

The best diagnostic of intestinal presence in these hernial tumors is the percussion note indicating the presence of gas. The possibility of every case of intrapelvic hernia being intestinal should always be kept in mind. Mistaking such for an ovarian cyst might easily prove disastrous. Inguinal and femoral herniæ discovered during pregnancy should be reduced, if possible, and suitable trusses applied. Posterior vaginal herniæ, anterior are very rare, found during pregnancy may make the artificial termination of pregnancy desirable, as later incarceration and rupture of the gut may occur in labor. During labor groin herniæ may be reduced between pains and then kept back by bringing the thigh close to the abdomen on the affected side and placing the patient on that side. Vaginal herniæ should be either reduced, or, if not possible, kept empty by ballooning the vagina with a colpeurynter until the advancing fœtus pushes it out. If there is much gaseous distention of the gut which cannot be reduced, Cæsarian section may be best for delivery.

Myomata Uteri.—Displacements of the pregnant uterus due to tumors in its body scarcely come within the scope of my topic.

50 West Forty-seventh Street.

A NEW SUBSTITUTE FOR SILVER NITRATE.*

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For the past two years we have devoted much time to research work in the chemistry and pharmacology of the native and derived proteids and combinations to be formed from them, and have developed a number of interesting scientific facts which will be published in special journals. The present communication deals with a derived proteid, heretofore undescribed, and its chemical combination with silver. This new proteid is obtained in the following manner: Gliadin, one of the proteids of wheat, is extrated by means of hot diluted alcohol, evaporated to dryness, dehydrated with absolute alcohol, treated with ether and dried *in vacuo;* gliadin thus obtained is a white friable mass.

This is then heated in an autoclave under pressure for several hours with dilute hydrochloric acid whereby the new proteid arises and is obtained in white granular form by means of precipitation. This new body differs materially in elementary constitution and solubility from gliadin; the solubility of the new proteid, in both dilute and concentrated salt solutions, classifies it as a vitellin—a proteid occurring naturally in the yolk of egg and in certain plants.

This transformation of one proteid into another of a totally different character has been recorded by other investigators, *e. g.* Blenn (*Zeitschrift für Anal. Chem.* Bd. 22, 1896), by complicated chemical treatment of egg albumen, obtained a new proteid possessing characteristics different from any known proteid. The chemical combination which our vitelline forms with silver is herewith described.

Silver Vitelline.—To a salt solution of vitelline, obtained in the manner already mentioned, a concentrated solution of silver nitrate is gradually added until precipitation no longer occurs. The supernatant fluid is decanted, and the precipitate filtered and dried *in vacuo*. Silver vitelline is thus obtained as a dark brown powder.

The chemical and physical properties of this compound are unique. First of all, it contains 30 per cent. of silver—twice the amount of any proteid silver heretofore produced. The extreme solubility of our silver compound is remarkable. One ounce of it is freely and completely soluble in less than a dessertspoonful of water—a fact which will be wondered at by physicins who have been able, only with great difficulty, to obtain even a 5-per-cent. solution of other proteid silver compounds.

Solutions of silver vitelline, no matter how concentrated, do not precipitate albumen or sodium chloride; hence it can have no coagulating or caustic effects upon mucous membranes, nor can it be chemically changed by their secretions. The disadvantages of silver nitrate are due to its coagulating effect on mucous membranes whereby its action is limited to the surface and its penetrative power to the deeper structures prevented; it is, moreover, irritating and caustic. Briefly stated, the pharmacologic laws governing the therapeutic value of any silver compound are these: It must not coagulate albumen nor precipitate chlorides; must not be irritating, and must possess the power to penetrate into the submucous structures. It is also a pharmacologic axiom that with the above conditions fulfilled, a silver salt depends for its therapeutic activity upon the amount of silver contained, *i. e.* the greater the amount of silver the greater its therapeutic value.

We have made a number of experiments to determine the penetrative action of silver vitelline upon the human tissues covered with mucous membrane, but the simplest one was suggested to us by Dr. Edward Martin, Professor of Clinical Surgery, University of Pennsylvania. This experiment consists in immersing a strand of ordinary catgut in a solution of our silver salt and afterwards making sections of the catgut. For this purpose the thickest piece of catgut obtainable may be immersed in a 1-per-cent. solution of silver vitelline over night; on the following morning section of the gut reveals that it is impregnated through and through with the silver. This is the severest test that can be made, and demonstrates that solutions of our silver salt have an intensely penetrating action on albuminoid structures even when they are hard, tough, and tightly compressed. The integrity or flexibility of the catgut are in no wise impaired by the immersion. The practical deduction from this experiment is that this salt will exert the antiseptic effects of silver in the deep submucous structures where, in most pathological conditions, gonococci, or other pathogenic organisms, find and maintain a lodgment in spite of energetic measures to eradicate them.

Reasoning from its chemical and pharmacological attributes, our silver compound should be valuable in the treatment of genito-urinary diseases and in the various inflammatory affections of eye and nasal passages in which silver nitrate or one of its substitutes is indicated. Through the courtesy of Dr. H. M. Christian, Surgeon-in-Chief, Genito-urinary Department of the University Hospital, an extensive trial of the compound has been made in the treatment of gonorrhœa and cystitis, both by injection and irrigation. Similar trials in the same class of cases were made by Dr. George Knowles Swinburne of New York in the Good Samaritan Dispensary and by Dr. M. Wassidlo in his clinic at Berlin.

Dr. Swinburne employed a 1 per cent. solution of the silver in sixty-six cases of acute gonorrhœa; in sixty-four of these the therapeutic effects were striking. Unpleasant symptoms were done away with entirely, the amount of discharge was markedly diminished from the start, gonococci were greatly reduced in number and the course of the disease shortened. To quote Dr. Swinburne's words, the silver solution was "not in the least degree irritating, but, on the contrary, as soon as the injections were begun, the signs and symptoms of inflammation were markedly allayed." The method employed in the above cases was the injection, by Dr. Swinburne or his assistants, of a 1 per cent. solution once daily at the dispensary.

Dr. Christian employed the silver at the University Hospital by directing his patients to use the ordinary hand injection two or three times daily; he also employed it at his clinic by deep urethral injections and by irrigation. Forty cases of acute gonorrhœa were thus treated; in fifteen of these cessation of discharge occurred within ten days.

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*Read at the third annual meeting of the American Therapeutic Society, New York, May 14, 1902.

In spite of the fact that the strength of silver solution used was as high as 5 per cent., in no instance did it produce irritation, but was of distinct value from the start in allaying inflammation, diminishing the discharge and reducing the number of gonococci. In the very acute cases a 1 or 2 per cent. solution was used; in those cases presenting themselves during the third or fourth week of the disease, the average strength of the solution was from 2 to 5 per cent. Dr. Christian states "that in a large proportion of cases the effect of the silver in checking urethral discharge was so marked that after three or four days' treatment it was difficult to secure enough discharge to stain a cover-glass for purposes of microscopic examination."

At both the University Hospital and the Good Samaritan Dispensary careful studies are being made as to the effect of the silver compound (by instillation through the catheter, and by irrigation) in cases of cystitis. In not a single case of cystitis thus far treated has a 1 to 1000 solution of the silver been productive of the least degree of irritation—a remarkable fact when one considers the extreme intolerance of an inflamed bladder to silver in any form heretofore employed, and of even half the strength above mentioned.

We have received a number of other clinical reports concerning the effect of our silver salt in the treatment of gonorrhœa and they all agree with the above in every detail. From these clinical tests it is therefore certain that silver vitelline is a valuable contribution to therapeutics, because of its penetrating bactericidal powers, absolute freedom from irritating effects and its power to allay inflammation. Its effects in gonorrhœa are uniform in checking the discharge, affording the patient freedom from *ardor urinæ* and the other symptoms of inflammation, and in shortening the duration of the disease. Dr. Swinburne and Dr. Christian express the opinion as the results of their experiences thus far with the salt that it is the best silver compound available for the treatment of gonorrhœa. Professor Martin authorizes us to quote him as follows: "I consider your silver preparation the best I have ever used; it is remarkably efficient and absolutely non-irritating."

It is safe to predict that silver vitelline will practically revolutionize the treatment of certain inflammatory diseases of eye, such as opthalmia neonatorum, purulent conjunctivitis, dacrocystitis, etc., in which silver is indicated and always employed, but in which a silver salt, which is freely soluble, penetrating to the deeper tissues, nonirritating, and at the same time contains a high proportion of silver, is regarded by oculists as a desideratum. Silver vitelline contains 30 per cent. of silver—about half the amount in silver nitrate; hence a 50 per cent. solution of silver vitelline corresponds to a 25 per cent. solution of silver nitrate with greater penetrating action, but without the caustic irritating properties of the latter. Clinical studies of our silver salt in opthalmology are now being made by Dr. A. G. Thomson of Philadelphia at the Children's and at Will's Hospital, and by Dr. Gustav Hartridge at the Royal Westminster Opthalmic Hospital, London.

In conclusion we desire to express our thanks to the clinicians who have assisted us in our investigations, and especially to Dr. H. M. Christian of Philadelphia and Dr. George Knowles Swinburne of New York for their painstaking efforts, and for the permission to quote their experiences with our silver compound.

Clinical Department.

BILIOUS REMITTENT FEVER.

By R. H. PHILLIMORE. M.D.,

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It has been my misfortune to have suffered somewhat severely from bilious remittent fever, and there is nothing to my mind that so tends to stimulate a person's investigation into the etiology, diagnosis, and treatment of a disease than the fact that he himself has been its unfortunate victim. This, at least, has been my own experience. I was appointed surgeon on board a large steamship in August, 1901. We were bound for the west coast of Africa—a region which is somewhat lugubriously dubbed "The White Man's Grave." Nor is the title by any means misapplied, though this part of the coast is now not nearly so fatal to white residents as it used to be in times gone by. This is conclusively shown by comparing the statistics, published years ago by the late Sir Alexander Tulloch, with those of the present day. From his table referring to the relative mortality of remittent fever at the foreign stations of the British Army I extract the following details:

STATION.	PERIOD OF OBSERVATION.	PROPORTION OF DEATHS TO ADMISSION INTO HOSPITAL.
St. Helena,	Nine years	1 in 25
Bombay,	Five "	1 in 25
Canada,	Twenty "	1 in 16
Cape of Good Hope,	Nineteen "	1 in 15
Ionian Islands,	Twenty "	1 in 11
Jamaica,	Twenty "	1 in 8
Bermudas,	Twenty "	1 in 3
W. Coast of Africa,	Eighteen "	1 in 2

It was when we were homeward bound that an epidemic of malarial fever broke out in the ship—after our voyage up the creeks of the Niger River. So severe was the epidemic that at one time only two white sailors were in a position to attend to their work. I was the first victim, so we will charitably assume that my own inabilty to perform, for a number of days, my official duties was responsible, to some extent, for the rapid spread of the disease.

Before, however, relating my personal experiences on this voyage, permit me to briefly refer to the nomenclature and history of this form of paludal fever. There is, I suppose, no disease which passes under so many aliases as bilious remittent fever. Wherever it prevails it seemingly acquires the name of the district or locality. Thus in Africa it is termed the African fever; in the Netherlands we find it described as gall-fever—a by no means inappropriate appellation. In the Mediterranean it is called the Mediterranean fever. Other synonyms are the Walcheren fever, Hungarian fever, jungle fever, Bulam fever, Bengal fever, Puka fever of the East Indies; while in America it is not infrequently described as lake fever. It is also sometimes designated as country fever, river fever and marsh fever.

This remittent form of malaria dates back to very ancient times. Among the Greeks its ravages in that part of the plain of Argolis, which is known as the marshes of Lernœa, were so great that the disease was personified as a many-headed hydra—to-day we might more appropriately represent it as a magnified mosquito; and my classical readers will doubtless remember that it became one of the labors of Hercules to overcome this terrible and death-dealing monster. Hippocrates, the illustrious descendant of Æsculapius, also observed that an enlarged spleen was due to drinking marsh water.

In regard to the mode of introduction of the malarial parasite into the human system, this, of course, still forms a fertile source of discussion. For my own part I believe that drinking polluted water is the principal origin of the mischief. And here I cannot help quoting one historical instance: "In 1834 eighteen hundred soldiers, all in good health, embarked in three vessels to pass from Bona in Algiers to Marseilles. They all arrived at Marseilles the same day. In two vessels there were 680 men without a single sick person. In the third vessel the *Argo*, there had been 130 men; thirteen died during the passage, and of the 117 survivors no less than ninety-eight were disembarked with all forms of paludal fevers. This was due to the water supply. In the two healthy ships the water was good, but the soldiers in the *Argo* had been supplied with water from a marsh, which had a disagreeable taste and odor." Now, the experience which I had on my voyage demonstrated very clearly that the origin of the trouble could be traced to the water supply. At any rate, we may exonerate the mosquito. On the 9th of November the health of the ship was excellent. From that date till the 24th every officer and sailor on board the vessel, with the exception of two men, was incapacitated more or less from duty. In addition to this, I may mention that, upon making inquiries of the surgeons on other ships, I was informed that no outbreaks had occurred, and yet we were all in the same locality, subject to the same meteorological conditions, and all equally exposed to attack. I understand that we had taken in a fresh supply of water at one of the ports—a circumstance which would absolutely confirm my suspicions.

The following account of my own case may prove of interest to your readers:

My attacks were as follow:

	DATE.	DURATION.
1st attack of bilious remittent	Nov. 9, 1901	Six days.
2d " " "	" 20, "	Six days.
3d " " "	Dec. 3, "	Four days.
4th " " "	" 15, "	Four days.
5th " " "	" 26, "	Three days.
6th " " "	Jan. 6, 1902	Three days.
7th " " "	" 15, "	Twelve d'ys

About twenty-four hours prior to the actual manifestation of the disease I suffered from a sense of malaise. I was "off chop," as they say on the coast. This was followed by extreme nausea, and on the 9th of November I vomited large quantities of bile. This vomiting was most persistent and distressing. My temperature in the morning was 104°, pulse 120 and bounding. I was restless and sleepless, but I experienced no perceptible chills, neither did I suffer from headache. Thirst was intense. In the evening my temperature was 104.2°, and for the next three days it fluctuated between 101° and 104°. On the 10th and 11th vomiting was still uncontrollable, and I felt weak and depressed. I was, during all this time, treated by an old coaster. "Pile on the blankets," he would say; "there now, as long as you are sweating and that prickly heat shows well, you are all right." Then he would add the comforting remark: "If you don't sweat, and you show no prickly heat, you are a dead dog! And, whatever you do, keep your belly warm." All old coasters, I may mention, wear a bandage around the abdomen—they think far more of this than they do of their prayers. When I recovered from my first attack I found several of the crew worse off than myself. Two of my patients presented well-marked typhoid symptoms—tongue brown, parched and cracked, tenderness of abdomen, with uncontrollable vomiting, and an anxious expression of countenance. These paludal-enteric types gave me much anxiety, and were practically indistinguishable from typhoid fever, except that the temperature chart was not consistent with the latter disease. In some cases the temperature rose alarmingly—for instance, 106.8, yet, strange to say, a high temperature did not always appear to indicate the severity of the disease. During my second attack, for example, when the thermometer registered 105.4, I felt actually more comfortable than when it registered 103° the previous day.

That bilious remittent fever is infinitely more to be dreaded than the intermittent form is, I believe, generally recognized. During the outbreak of which I speak one sailor died—a man over sixty years of age. This patient suffered from intense jaundice, extreme depression, and a feeble pulse. His temperature never rose above 101°. He became delirious at night, and the administration of quinine entirely failed to relieve his condition. In every case the nervous symptoms were very pronounced, while total abstainers apparently suffered more severely than those accustomed to the use of alcohol. This, of course, may have been a mere coincidence, though I was informed by a number of old coasters that total abstainers did not appear so well able to resist the attacks of malaria as other persons who habitually indulged in alcoholic stimulants. It must be clearly understood, however, that I am not making any authoritative assertion. I am simply repeating what I was told upon several occasions.

In conclusion, I am in hopes that the foregoing remarks on bilious remittent fever may call forth the experiences of other readers of the MEDICAL RECORD who have visited the west coast of Africa.

The Anatomical Factor in the Production of Baldness.—George Elliott says that the skin of the scalp overlying the epicranial aponeurosis has no underlying muscles to exercise it, and has only the action of the occipito-frontalis to depend on, and moves only when that muscle is put into action. That is not often. The scalp is very vascular; there is nothing to interfere with or retard the arterial supply, but there is also nothing to accelerate the return flow—no active muscular exercise in the part whatever, to hurry along the waste products and the deoxygenized blood in the vessels. These structures being superficial, and easily compressible, their compression by the rim of the hat will further retard the flow. In women the scalp is well exercised by the combing, plaiting and throwing from side to side of the hair—men scarcely give more than a moment to the brushing and combing of their hair. Massage is the treatment to be applied, especially as a preventive.—*Dominion Medical Monthly*, March, 1902.

Treatment of Tuberculosis by Spectral Analytical Blue Light.—Sterkel and Gustav Kaiser have conducted numerous experiments with blue light on bacilli, with the result that the bacilli were killed or else much enfeebled. Operations were then begun on tuberculous patients. After six weeks treatment, with six sittings daily, the night-sweats and bacilli in the sputum disappeared, notwithstanding bad weather and indifferent circumstances. In a second patient, who had a tuberculous ulcer on the leg, this healed within four weeks. An eczema of six months' standing was healed within five weeks. These results confirm the theoretical assumption that the blue to the ultra-violet rays are bactericidal; that the heat of the rays can be abrogated; that the intensity of the light is in proportion to the distance; that the blue rays are a powerful absorbent; and that they are also anæsthetic — *Medical Press and Circular*, March 26, 1902.

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SURGERY AND MITRAL STENOSIS.

It has long been recognized that the medical means at our command for combating the effects of mitral stenosis are tentative and unsatisfactory, and the possibility of mechanical relief for the overloaded ventricle has frequently been discussed. In the *Lancet* of February 8 of this year Lander Brunton gives the results and the conclusions drawn therefrom of a number of experiments upon animals, and he suggests the possibility of relieving the circulation in the human being by incision of the stenotic mitral ring with a narrow-bladed tenotome, passed through the ventricular wall and operated largely by the sense of touch.

Brunton's experiments and a few reported experiences in cardiac surgery in man have proved that the heart is much more tolerant of handling and manipulation than was supposed to be the case a few years ago, and it has more than once been suggested that an aspirating needle be plunged through the chest wall into the distended ventricle in cases of stenosis of the auriculoventricular openings, so that, by the withdrawal of a certain amount of blood, the laboring heart might be relieved. This suggestion was never favorably received, and has rarely been acted upon for obvious reasons. No such uncertain and unsurgical procedure would be thought of at the present day, since the surgical *sine qua non* of an operation of such boldness and danger would be a proper exposure of the part operated upon, which in this instance would necessitate an osteoplastic resection of the thoracic wall. This is, of course, in itself a formidable procedure, especially in a patient with a disordered circulation to begin with, and it is hardly necessary to say that patients with cardiac disease are not good subjects for anæsthesia. However, we have no doubt that in some carefully selected cases of mitral stenosis the mere exposure of the heart could be accomplished without any prohibitory mortality, though carrying the operation further would probably make a very great difference in the percentage of recoveries. It is not at all certain that, even if the heart were successfully exposed, any reasonably accurate work could be done toward dividing the stenotic ring. The technical and physiological difficulties would necessarily be enormous, and working with a tenotome in the interior of a pulsating heart does not present any great attraction to the surgeon. Experiments upon animals and in the dissecting room would undoubtedly greatly increase the deftness of the operator and increase his chances of success.

It would probably be difficult to get the consent of the average patient for such an operation, and it is a question whether the surgeon would be justified in recommending it, since the chances of immediate and remote success would be very difficult to estimate. A further consideration depends upon the nature and extent of the changes, which may have already occurred in the heart, lungs, liver, and kidneys, the bearing of which upon expectation of life are not always clearly marked until some unusual physical or physiological strain accentuates them, and, as we know, a surgical operation often supplies such a strain.

The selection of cases would involve almost as much difficulty and responsibility as the performance of the operation, but we may be sure that we should only occasionally meet a case in which all conditions were such that we should recommend any treatment which would mean serious surgical work, apart from the intrinsic dangers of the procedure in question. Anatomically speaking, exposure of the heart is an operation which requires great care, but which, in itself, is not specially dangerous. It must be remembered that operators who have found it necessary to expose the heart in attempting to close wounds in its wall have found that its action always becomes tumultuous and irregular when it is handled or when its walls are pricked with the needle. This fact increases the difficulty of accurate manipulation very seriously. It is still too early to draw any positive conclusions in regard to this bold form of surgical intervention, but there is some reason to believe that the future will establish its limitations more definitely, and assign to it a measure of usefulness.

MEDICAL LITERATURE.

A CRITIC once ventured the opinion that the readers of most literary productions drew the line, variously placed, between being properly edified on the one hand and being becomingly bored on the other. Further than this he was free to say that very many of the books and articles were scarcely read at all save by those whose duty it was to tell how worthless they were. The main ends of the hopeful authors were thus rendered entirely purposeless. This outcome of laudable effort was not due so much to lack of knowledge of the subject as to the style and method of its preparation.

All this applies so directly to the medical literature of to-day that it can serve as the excuse for some general considerations bearing upon the proper means to a given end. The medical man, as a rule, should, by virtue of his cultivated powers of observation, be a good writer. He is trained to observe and interpret facts, and he should have an equal power in expressing them. That this is the exception in a very general sense rather than the rule, is painfully evident in the dull and wordy pages of our many medical treatises and in the long, stupid, and tiresome articles that so often fill the columns of our medical periodicals.

When a great painter was asked by a pupil how he mixed his colors, the significant reply was, "With brains, sir." Another artist solicited to criticise a picture, after commenting on the conception, the coloring, and perspective, offset all his praise for the work in general by emphatically declaring, with an appropriate gesture, that it lacked snap.

Both judges had the proper appreciation of the real art of putting things—the proper reciprocation of giving and taking. It was not the mere formulation of an idea, but its practical application to the actual receptivity of the one for whom it was intended. No one needs be told that the hole in the bull's eye has any other reason for its existence than due accuracy in aim. This question of hit or miss should concern every writer who wishes to make the proper score with his readers. It is the instinct of precision and directness on the start and its proper cultivation afterward. It is the saying of the thing to be said and knowing when to stop.

Fulsome writers rarely, if ever, escape being tedious—and their number is legion. They inflict themselves upon us at every opportunity, and write against time and space; so that the mere title of the article is of itself enough to forbid further reading. What should be in one volume is amplified into a series, and one page of facts is diluted into ten of senseless and inapplicable theories. The difference in interest of many medical articles is strikingly manifest from this point of view. A practised writer handles his pen as an artist does his brush. The subject is balanced properly from all sides and the fine touches bring in the high lights with their proper telling effects. It is the presentation of the salient facts as they appear to the practised observer—what interests him interests his reader.

Scientific writing, dealing, as it does, with facts should be necessarily terse in style, but this is no argument against decent literary finish making easy and interesting reading. The medical man who is skilled in descriptive writing has a better opportunity for exercising his talent than most authors in any other line of work. In fact, his field has been so constantly trenched upon by makers of fiction that there is no excuse on the score of lack of material for most finished literary efforts. What may be imagined by the novelist is real with him. He has simply to describe what he sees day after day in hovel or palace, and the actual drama of human suffering shows itself in all its forcible and realistic outline. The more accurately the clinical phenomena are presented, the more useful and interesting they become. What finer medical classic, with its easy narrative style, its accurate pictures of diseased conditions, its charming rhetorical allusions, and its graceful rendering of classic English, can be found than "Watson's Practice of Medicine," which was to medicine what Blackstone was to law; but where are their equals to-day? The ancient writers were models of their kind in accurate delineation of clinical phenomena, and their facts stand for all time. We know their statements were truthful, because we verify them every day centuries after they were written. Theories have come and gone, but, with ever-changing views as to the reasons for this or that symptom, we rehearse the incontrovertible fact every time we feel a throbbing pulse, listen to hurried pant, note a sluggish pupil, or watch for the face of death. The picture is always before us, but the hand of the present-day delineator is fast losing its cunning. We are drifting into machine-like methods and working in ruts. Our books are arranged on stereotyped plans, and individuality is lost in efforts to cast our figures in conventional moulds. It is bulk against compactness. Aspiring medical journals pride themselves on the number of pages they can print and the quantity of paper that can be wasted. The much gives way for the what—the form for the substance. Any one accustomed to read manuscript for publication and to wade through books for review, knows how few good writers there are, but the touch of the master hand is seen as readily in the first paragraph as in the last sentence. When the latter is manifest the reader takes a second look and contently and profitably goes on to the end. If the writer is seeking a large and appreciative audience his first thoughts should be brevity, terseness, and point emphasizing his best efforts in the direction of the parallel cardinal virtues—faith, hope and charity—the last the greatest for the expectant reader.

THE FAILURES OF STERILIZATION.

It has become almost an article of faith with the general public and some medical men that sterilizing is necessary to render milk a suitable food for young children, so that the doubt cast upon the method by certain prominent physicians, and especially by Dr. Victor Vaughan of Ann Arbor, Mich., comes in the nature of a surprise.

Dr. Vaughan read a paper before the Section on Diseases of Children at the fifty-first annual meeting of the American Medical Association, in which he set forth his views on the subject.

He said that he was sure that the sterilization of milk, as ordinarily carried out, and even the pasteurization is not desirable, but that perfectly fresh milk from the cow, with certain common-sense modifications, is the best food for the baby. The chief proteid in milk is a nucleoalbumin, and there is no question that it is changed by high temperature.

As to the temperature at which this change takes place Dr. Vaughan states that the result of numerous experiments has convinced him that it is fairly high. A milk heated to 158° F shows but little change; a milk heated to 160 F° shows quite a marked change. If the milk be heated long enough and two or three times, it can be fairly well sterilized by heating not higher than 158° F.

In his opinion the high death rate from the summer diarrhœas, which continues, notwithstanding the sterilization of milk, is due to failures in sterilization. The colon germ is the most frequent bad germ in milk, being almost universally present in market milk. This germ varies exceedingly in virulence. If a colon germ of moderate virulence be taken, its virulence can be so increased that .05 cc. will kill a guinea-pig of a given weight in two or three hours.

The colon bacilli, and probably other bacilli, grow rapidly in milk under certain conditions, and there is no amount of sterilization known that will destroy the toxin of the colon bacillus. If some of these bacilli are grown on an agar culture for two or three weeks and then scraped off the surface growth, the germ can be heated to 160° C, or 356°F in a sealed tube with water, and there will not be the slightest effect produced upon the toxicity of the poison. When, according to Dr. Vaughan, you can get a colon bacillus that furnishes a poison one-fourth of a milligram of which—1-270 of a grain—will kill a guinea-pig, some idea can be formed of the powerful toxin that this germ produces, and impossibility of destruction by any method of milk sterilization that can at present be practised.

Our aim must therefore be to take care of the milk and to prevent its contamination.

No amount of sterilization, Dr. Vaughan asserts, can make milk containing this germ sterile. The colon germ has an envelope varying greatly in its resisting power, according to the virulence of the germ. The toxin is contained within this envelope. If you will take some of the colon germs, grow them, scratch off the germ cells and put them in artificial gastric juice and leave them there, it will completely dissolve the cell wall and leave undigested the substance which will kill guinea-pigs in a dose of 1-270 of a grain. No amount of heat up to 160° C or 356° F has been found to have the slightest effect on the toxicity of this poison, and a milk which is already a good culture of colon bacillus cannot be made safe for a child by any known method. We can kill the germ, but we cannot get rid of the poison.

These conclusions, reached by the painstaking investigations of so well-known an authority as Dr. Vaughan, would seem to clearly demonstrate the fact that sterilizing milk has its limitations, and, indeed, is a more or less ineffective process of producing a nourishing and healthful infant food. The theory that the act of boiling milk at a high temperature destroys all its properties hurtful to a child of tender years and renders it an ideal food has been over-ridden.

The procedure most worthy of adoption to attain this object is a careful and rigid supervision of the cows and the dairies, in order to ensure the delivery of milk as free from contamination as possible.

The present-day knowledge of germs is not nearly so full and exact as believed by many, and the bactericidal action of the typhoid bacillus is still a stumbling block to investigators.

FOUNDLINGS OF A GREAT CITY.

A writer in *Ainslie's Magazine* for May gives a very excellent description of the manner in which the foundlings of New York are cared for, and how immensely improved is the system of rearing destitute children to that in force but a very short time ago.

The abandoned young ones only four years ago were first taken to Bellevue Hospital and then to the Infant Asylum on Randall's Island, where the little waifs, despite the best of care and nursing, literally, died like flies. The mortality at that institution during a certain period reached almost 100 per cent.

This appalling death rate at length became so great a scandal that two large charitable associations caused an investigation to be undertaken, and it was resolved to alter the system of caring for these infants. It was decided that thereafter the babies should be taken to Bellevue and, to some extent, be built up, but that from Bellevue they should be nursed out in individual homes, the homes to be supervised and selected by special agents employed for that purpose alone. The plan had been adopted elsewhere in America, as well as on the European, continent with surprisingly good results.

The first report under the change was made in 1899. It showed that the death rate had fallen from 98 per cent. at Randall's Island in 1895, 99 in 1896, and 100 per cent. in 1897 to $55\frac{9}{10}$ per cent. The second report showed a still further decrease to $31\frac{1}{10}$ per cent., and at the present time the percentage of foundling deaths is below 15 per cent.

Mr. Robert E. Macalarney, the writer of the article in *Ainslee's*, gives a pleasing description of the manner of life and training of these deserted children.

THE EFFECT OF INOCULATION AGAINST TYPHOID FEVER.

A vivid interest is being shown everywhere at the present time, with regard to the etiology and means of prevention of disease, and of none can this fact be more truly stated than of typhoid fever.

The opportunities for studying this affection have been exceptionally favorable during the long protracted campaign in South Africa, and it may be said that our knowledge of the disease has been proportionately increased.

The theory advanced by Dr. Victor Vaughan and others, while the Spanish-American campaign was in progress, that probably flies played a somewhat important part in spreading the infection of enteric fever, would seem to have received a certain amount of confirmation from the recorded observations of British surgeons in South Africa within the past few years.

With respect to inoculation against typhoid fever, although some undoubtedly valuable information has been gained, no convincing proofs that the method is of any striking and definite value as a means of prevention have been forthcoming.

Brigade-Surgeon Lieutenant Colonel Crombie, late of the Bengal Department of the British Indian Army, gives in the *Lancet* of May 3 some statistics on the subject, from evidence afforded by the war in South Africa.

Of 250 officers who recently came before the Medical Board, London, invalided from South Africa on account of wounds and disease, it was found that 112, or 44.8 per cent., had been inoculated against enteric fever; that 29, or 11.6 per cent., had had previous attacks of typhoid, and that 109, or 43.6 per cent., had not been inoculated or had a previous attack. Of the total number (250) 59, or 23.6 per cent., suffered from enteric fever in South Africa, but of these a considerable number were actually invalided on account of debility following enteric fever, so that this latter percentage cannot be put forward as representing the real proportion of officers so infected. It is, of course, considerably higher than the actual ratio. Of the 112 who were inoculated, 32, or 28.5 per cent., suffered from typhoid. Of the 29 who had had a previous attack only 3, or 10.3 per cent., had a second attack in South Africa, and of the 109 not inoculated, 24, or 22 per cent., had attacks in South Africa. Of the 112 who were inoculated, 102 had been inoculated once, with thirty cases, or 29.4 per cent., and 10 with two cases, or 20.0 per cent., had been inoculated twice.

It is stated that there would seem to be a very general consensus of opinion among medical officers in South Africa that inoculated cases run a milder and more favorable course than those not inoculated. According to the statistics of Dr. H. H. Tooth this leads to a higher percentage—2.5 per cent.—of recoveries among men, and, for obvious reasons, it would, probably, be higher among officers.

Thus inoculation would seem to afford a certain amount of protection against typhoid fever.

War Office "Sweating" of Civilian Surgeons.

The policy of the government of the United States with regard to its treatment of contract army surgeons has not been characterized by any marked degree of liberality, and has in many instances given rise to much dissatisfaction.

The British War Office, however, according to medical journals, has acted in a particularly mean spirit towards the civil surgeons engaged for the South-African war. General parsimony has not been a distinguishing feature in the history of the South-African campaign, money has been poured out like water, and the Boer war will undoubtedly rank as one of the costliest ever undertaken. With respect to the medical branch of the British service, an altogether different tale has to be told, and no economy has been too small and petty for the authorities to practise.

The unfortunate scandals connected with the hospitals and the refugee camps in the South-African war have been largely owing to the undermanning and defective organization of the army medical service.

The *Medical Press* says that at home the military hospitals, by the withdrawal of every available army surgeon to the seat of war, left gaps which have been filled by civil surgeons. The latter have been paid at the miserable rate of $1,350 per annum, less than $500 of gratuity given to all other branches of the service. They have been also hopelessly overworked, as there are not enough of them to discharge adequately the duties required of them. At Aldershot the civil surgeons in the military hospitals are being "sweated" with little pay and excessive work in a manner that is discreditable to the nation, and likely to be harmful to the patients. A more liberal scale of pay, say $1,825 a year, would quickly draw enough competent medical men for temporary service.

The miserable rate of pay and the excessive amount of dirty work demanded in return are not likely to secure the best men available. A few of the many millions that the war office has handed over to swindling contractors for the purchase of horses and preserved meat would have put the army medical service on a sound footing, both at home and at the seat of war.

It appears that the United States government does not possess the monopoly of evil fame either for providing its soldiers with preserved meat of questionable quality or for niggardly treatment of its contract army surgeons. There can be no doubt that such a policy is a penny wise and pound foolish one, for an able army medical service is essential to the well-being of the troops.

It is well that the faults in the army medical service should be thoroughly ventilated in the medical press, for by these means will reform come.

The Health of Havana.

The health report of Havana for the month of March, just received, gives a death rate of 20.85, which is less than that of Baltimore, New Orleans, New York, San Francisco, Liverpool, Manchester, Edinburgh, Barcelona, Madrid, and many other cities of the United States and Europe.

Six consecutive months have now passed without the occurrence of a case of yellow fever in Havana, which seems abundant evidence that the disease has been eradicated from that city. In bringing about this result, the sole effort on the part of the health authorities has been bent toward the destruction of the mosquito. This general work against mosquitos has naturally worked for the reduction, also, in the number of cases of malarial fevers; and the health officer, Major Gorgas, is confident that malarial disease could be eradicated from Havana, as yellow fever has been, if it were not constantly being introduced from the surrounding country. The sanitary statistics of Havana show that there were nearly 350 deaths from malarial fever in that city in 1900. In 1901, the first year of work against the mosquito, the deaths fell to 151; while during the month of March of this year there were only 4 deaths from this cause. Economically considered, Major Gorgas says that the work of mosquito destruction during the past year has cost about $50,000, has given work to an average of about 100 men; the return for this expenditure is represented by the extermination of yellow fever, which formerly cost 400 lives annually, and a saving of about 250 lives annually from malarial fevers. This does not take into account the number of sick who recovered, and who do not figure in the mortality statistics.

The energies and attention of the health authorities of Havana are now directed principally against tuberculosis, which has always been the cause of the greatest mortality in that city, as it is everywhere else. So far the death rate from this disease has been reduced to about three-fifths of what it was during Spanish domination. During the month eighty houses, which had been occupied by consumptives, were disinfected. A dispensary for the tuberculous has been established, and medical inspectors, who dwell very extensively upon the subject of tuberculosis, are systematically sent to tenement-houses and tobacco manufactories. A total of 138 public lectures on hygiene was delivered during the month. It is believed that there are about 2,700 cases of tuberculosis in Havana, of which 2,500 have been recorded and classified for reference. Popular literature has been sent to those affected, explaining the character of the disease, its communicability, and the best method of care in its prevention and treatment. Major Gorgas believes that if this system can be continued for four or five years tuberculosis can be eliminated from Havana as yellow fever has been.

The Value of an Occasional Convulsion in Certain Cases.—William P. Spratling states that two classes of individuals have come under his observation in which occasional convulsions were productive of good. The first includes epileptics, in which prolonged periods of mental disturbance or insanity are prevented through the occurrence of a fit; the second, selected cases of incipient alcoholism, in which a persistence in the drinking habit would probably lead to confirmed epilepsy were it not for the emphatic warning given by the convulsion. Epileptics of a certain type make up the first class, which includes those in whom the disease seems dependent on fluctuating internal causes; on the action of certain toxins as yet unisolated, which grow in intensitiy until a limit is reached, when their toxicity is, in some manner, neutralized or destroyed by a convulsion, only to repeat again and again the same process of development, growth, and decadence, the latter occurring each time as the result of one or more epileptic convulsions. In some, perhaps in all alcoholic cases, a convulsion may, perhaps, be regarded as only a protest on the part of the nature against the presence of an irritant of some kind in a part of the body where it ought not to be, and it only remains for science to locate and determine the nature of the irritant.—*Albany Medical Annals.*

News of the Week.

American Medical Editors' Association.—The annual meeting of this association will be held at Saratoga Springs, N. Y., June 9 and 10. The annual dinner of the association will be given at the Hotel Kensington on the evening of June 9. The officers of this association are Dr. Alexander J. Stone of St. Paul, *President*, and Dr. O. F. Ball of St. Louis, *Secretary*, to whom all correspondence should be directed.

Segregation of Lepers in Guam.—A number of cases of leprosy have been found among the natives of the island of Guam, and steps have been taken by the medical authorities of the Navy for their collection and segregation. The establishment of a permanent colony on thirty acres of ground on Tumon Bay Beach, within practicable reach of Agana, the chief town of Guam, by a fairly good road, is intended. Steps have already been taken to acquire this ground and plans are being prepared for the necessary buildings. It is understood that the nursing of the unfortunates will be undertaken by a Catholic religious organization. The report says: "It appears that during the interregnum immediately following the withdrawal of the Spanish government from this island, the lepers gradually slipped out of the Asan hospital, being received and cared for by the kind-hearted people of the villages, who are loath to betray them. When the last inmate died it was generally asserted that the disease was practically extinct; several reported cases proved, upon examination, not to be leprosy, and such search as was feasible failed to discover any until now. It is believed that no material harm in the way of dissemination has resulted from this recent lack of segregation."

A Martinique Relief Expedition has been sent by the Army Medical Department in aid of the sufferers of the Martinique disaster. The personnel of the expedition consists of Lieuts. J. B. Clayton, J. R. Church, and J. H. Reilly, assistant surgeons, and six enlisted men of the Army Hospital Corps. The complete equipment for two regimental field hospitals of twenty-four beds capacity was taken along, together with about $5,000 worth of medical supplies for issue to the sick. It was expected that the services of the relief expedition would not be required in Martinique more than about three weeks.

Emergency Hospital for the Grand Army of the Republic.—During the coming encampment of the G. A. R. in Washington, D. C., a large building will be secured and fitted up as a temporary hospital, in addition to the hospital accommodations which could be afforded by the local hospitals during the period of the encampment. The age and feebleness of many of the veterans make it certain that a very large number of cases will require medical treatment. Dr. Percy Hickling is chairman of the medical committee.

The Summer School in Philanthropic Work, conducted by the Charity Organization Society in New York, opens its fifth annual session June 16, continuing six weeks. It consists of a series of discussions and visits each morning, combined with practical work in the afternoon, intended to introduce the students to life among the poor in New-York, and the best means toward improving their condition. The Director of the School is Mr. P. W. Ayres, 105 East Twenty-second street, New York City.

Medical Deputies in France.—The recent elections in France have resulted in the return of forty-three physicians to the Chamber of Deputies. Of this number twenty-eight have been re-elected, and fifteen will undertake legislative duties for the first time.

Fire at the Naval Hospital.—Fire in a store-room of the U. S. Naval Hospital in Brooklyn, one day last week, destroyed about $25,000 worth of drugs, chemicals, and other articles belonging to the medical department. The building in which the fire occurred was formerly used as a laboratory, and stands in the rear of the hospital building. Lately the main floor has been used for offices and by the United States Naval Examining Board. The hundred patients in the hospital were not alarmed, as the fire was some distance from them. Improperly insulated electric light wires probably caused it.

The Spitting Nuisance.—According to an amended ordinance, which was adopted by the Health Board of this city a few days ago, spitting upon the sidewalks or upon the floors of public halls, of tenement houses, theatres, hotels or other public buildings is to be a misdemeanor, and the offender will be liable also to pay a penalty of $50 recoverable in a civil action by the city. Other provisions of the new law provide that all tenement owners, hotel men or theatrical managers shall have printed notices stating the law posted in prominent places and that they shall supply sufficient cuspidors.

The Yale Medical School.—At the May meeting of the Yale University Corporation, two new clinical professors were elected in the medical school: Arthur N. Alling, M.D., Columbia, '91, to be clinical professor of ophthalmology, and Ralph A. McDonald, M.D., Yale, '92, to be clinical professor of dermatology.

An Emergency Medical Service in Congress.—The House of Representatives in Washington is to have a medicine chest in the office of the sergeant-at-arms. The resolution introduced last December by Dr. Wilson of Brooklyn, directing the sergeant-at-arms to purchase an emergency case of medicine, and suitable instruments for minor operations for use in case of illness or accident to persons in attendance at the House, was favorably reported recently by the Committee on Accounts, with an amendment providing that the contents of the case be selected by Representatives Wilson of New York, Ball of Delaware, and Showalter of Pennsylvania, all members of the medical profession. A medicine chest may do for the House, but in order to meet emergencies in the Senate a well-stocked case of surgical instruments would be imperatively necessary.

American Laryngological Association. — The twenty-fourth annual meeting of this association will take place in Boston on May 26, 27, and 28. The session will be held in the Boston Medical Library Building and the Harvard Medical School. Dr. John W. Farlow of Boston will preside. The secretary is Dr. James E. Newcomb, 118 West Sixty-ninth street, New York City. The program contains the titles of a number of papers which promise to be most interesting.

Association of Military Surgeons of the United States.—The eleventh annual meeting of this very active association will be held in Washington on June 5, 6, and 7, under the presidency of Lieut.-Col. John Van R. Hoff, Deputy Surgeon-General, U. S. A. The Secretary is Major James E. Pilcher, Brigade Surgeon, U. S. V., Carlisle, Pa. Invitations have been sent out through the State Department to the various governments to send delegates, and the responses have been such as to lead the officers of the association to expect a large representation from the medical departments of the European armies and navies. Many plans are being made for the entertainment of the members and their guests, the following being the program so far as determined upon: June 4, from 8 to 11 P.M., an informal reception at the New Willard; June 5, exhibition drill of hospital corps at the Washington Barracks from 3 to 5 P.M., excursion down the river from 5.30 to 11 P.M.; June 6, reception at Soldiers' Home from 4 to 7.30 P.M.; June 7, banquet at New Willard from 8 to 11.30 P.M. The Chairman of the Committee of Arrangements is Major George Henderson, D. C. N. G., Washington. The convention will be opened by President Roosevelt. The Secretaries of War, Navy and the Treasury will also be present at the opening meeting, and the attendance of General Miles and Admiral Dewey is also expected. It is desired that all ex-surgeons of the Spanish-American War, whether members of the association or not, will attend. The papers to be discussed will be on the following subjects: (1) The National and State Services; (2) Hygiene and Sanitation; (3) Tropical Service and Tropical Diseases; (4) Military Surgery and First Aid; (5) Military Hospitals and Nursing; (6) Miscellaneous.

The Retirement of Surgeon-General Sternberg.—The bill providing for the retirement of Surgeon-General Sternberg with the rank and pay of major-general has been favorably reported to the Senate by the Committee on Military Affairs. Dr. Sternberg's many friends and admirers purpose giving expression to their appreciation of his long and faithful services to the country and the medical profession by a dinner, to be held in this city on June 13. Those wishing to join in this recognition of Dr. Sternberg's scientific labors, of his professional standing, and of his high personal character are invited to be present at this dinner. The subscription is $10, which shall be sent to Dr. Hermann H. Biggs, 5 West Fifty-eighth street, New York City.

Society of the Alumni of St. Luke's Hospital.—At the annual meeting of this society, held last month, the following officers were elected: *President*, Dr. J. Arthur Booth; *Vice-President*, Dr. William H. Sherman; *Secretary*, Dr. W. Scott Schley; *Treasurer*, Dr. J. Bentley Squier.

The Late Professor Paul F. Mundé.—*Whereas*, In the death of Dr. Paul F. Mundé, the Woman's Hospital Society has lost one of its most earnest and active members, who had won, through his ability and energy, a most eminent and honorable position.

Be it Resolved, that this society express its deep regret at a loss which will be felt, not by it alone, but by the entire medical profession as well; and that we extend to his family our sympathy.

Be it further Resolved, that a copy of these resolutions be forwarded to his family, and also that they be placed on the minutes of the society.

LeRoy Broun, M.D.,
James N. West, M.D.,
Committee.

Philadelphia County Medical Society.—At a stated meeting, held May 14, Dr. Chas. W. Lefever exhibited "A New Inhaler Especially Intended for Use in Operations on the Eye and Face." It consists of metal, and comprises a mask for the nose and mouth connected at an oblique angle with a hollow cylinder expanding into a cup-shaped receptacle covered by a cap in which a bit of gauze can be placed for the reception of the anæsthetic. It is provided with two valves, one opening outward and the other inward, permitting the escape of exhaled air and the other for the admission of the anæsthetic vapor. Drs. Jas. Thorington and Geo. C. Harlan testified to the successful use of the apparatus in a number of operations. Dr. Thos. C. Ely read a paper entitled "Cyclic Vomiting in Children, with a Report of Cases." He designated the condition a toxic neurosis of metabolic origin, the gouty diathesis being an etiologic factor in some of the instances recited. Eliminants and sedatives proved to be the best remedies, the most serviceable of the latter being morphine hypodermically. Dr. J. P. Crozer Griffith suggested the designation recurrent vomiting. Dr. John B. Shober read a paper entitled "Infection of the Female Bladder; Diagnosis and Treatment," and reported a case attended with ulceration of the vesical mucous membrane. Gonorrhœa and parturition appear to be the most common causes. Cystoscopic examination is necessary for diagnosis, and an instrument was shown with the aid of which the bladder could be readily illuminated and inspected and catheterization of the ureters practised. Topical treatment also can be most conveniently applied by means of the cystoscope. For this purpose salts of silver are useful, as is also powdered adrenal gland for the control of hematuria. Dr. Alfred Gordon read a paper entitled "Saline Infusions and Their Administration for Meningeal Symptoms in an Infant." He related the case of a child some seven weeks old, in which symptoms of cerebral irritation developed in connection with gastro-intestinal derangement. A fatal issue seemed imminent, but relief was afforded by injecting, slowly, beneath the skin about ten ounces of normal salt solution, in conjunction with the administration of solution of nitrous ether, with ultimate recovery.

Philadelphia Pediatric Society.—At a stated meeting, held May 13, Dr. A. H. Davisson made an "Exhibition of a Cretin Shown a Year Ago." The child had intermittently been kept on thyroid extract, and, notwithstanding the development of an acute intercurrent disease, followed by prolapse of the bowel, it had improved. Dr. Davisson exhibited also "A Case of Paraplegia in a New-born Infant." The child was now seven weeks old. There had been much difficulty at birth, the feet presenting and being delivered first, the head last. The paralysis was flaccid in type and involved, in addition to the lower extremities, the muscles of the trunk and the chest, with the exception of the diaphragm, and with it was associated, apparently, anæsthesia of the same parts almost to the level of the nipples. Hemorrhage into the cord or the spinal membranes or fracture or dislocation in the neighborhood of the lowermost cervical vertebræ was suggested in explanation of the symptoms. Dr. F. A. Packard exhibited "A Case of Enlargement of the Liver and Spleen in a Congenital Syphilitic." The child came frequently under observation for the relief of tonsillitis. The enlargement of the abdominal viscera was thought to represent a condition of amyloid disease. Dr. S. McC. Hamill read a communication entitled "Report of a Case of Heart Disease with Very Much Enlarged Spleen; Autopsy; Demonstration of Specimens." The child originally came under observation with symptoms of mitral insufficiency, to which, in the course of an attack of chorea, those of mitral obstruction became superadded. Death took place suddenly, it was supposed from cerebral embolism, and in addition to verrucose endocarditis and enlargement of the spleen, old infarction of the kidney was found. Dr. Arthur Van Harlingon read a paper entitled "Report of Three Cases of Creeping Larvæ in the Human Skin." Two of these occurred in children and one in an adult.

The lesions consisted in curved and wavy lines of redness and vesicles. They disappeared on incision, although no parasite could be found. Dr. Alfred Hand, Jr., presented a communication entitled "The Positive Diagnosis of Meningitis, Particularly Tuberculosis, by Means of Lumbar Puncture." He pointed out the value of this procedure as a diagnostic aid and the significance of the presence of bacteria and cellular elements in the fluid secured. In some cases improvement followed in the train of the manipulation, and, apparently, as a result thereof.

Obituary Notes.—Dr. Marie E. Zakrzewska, the pioneer woman physician of Boston, founder of the New England Hospital for Women and Children, and for nearly forty years a director and physician there, died May 20 at her home in Jamaica Plain, Mass. She was born in Berlin, in 1829. Her great desire to study medicine, which the law forbade her to do at home, led her to come to America in 1853. She took the degree of M.D. from Western Reserve Medical School in 1856. Drs. Elizabeth and Emily Blackwell of New York were among Dr. Zakrzewska's associates in the early days of women doctors.

Major John Brooke, Surgeon United States Army, retired, died at his residence at Radnor, Pa., on May 12. He was born in Delaware county, Pa., in 1830. He was graduated from the University of Pennsylvania and engaged in private practice until the Civil War. He was appointed assistant surgeon in the Regular Army, November 22, 1862. He served through the Civil War, part of the time in the Army of the Potomac and part of the time in the Columbia College Hospital in Washington. He was breveted Captain and Major in the Regular Army for faithful and meritorious services during the war. After the Civil War he was stationed for many years in the West and was engaged in several Indian campaigns, notably that with the Nez Perces. He was stationed for several years at San Juan Island, and Sitka, Alaska, and was afterward post-surgeon at the Presidio, San Francisco, Fort Monroe, Va., and Fort Leavenworth, Kan. He was retired from active service on February 22, 1894.

Dr. John G. Elliot, assistant physician at the Hudson River State Hospital, died suddenly of heart disease. He was thirty-one years old and was from England. He was graduated from the Medical Department of the University of Buffalo in 1897.

Dr. William Todd Helmuth, the leading surgeon in the Homeopathic School of Practice in this country, died at his home in this city on May 14, of angina pectoris. Dr. Helmuth was born in Philadelphia, in 1833, and was educated at St. Timothy's College, Baltimore. His uncle, Dr. W. S. Helmuth, who was one of the first homeopathists in this country, induced him to study that branch of medicine, and he was graduated from the Homeopathic Medical College of Philadelphia in the class of 1853. Soon after graduation he was made professor of anatomy at the Homeopathic College, and published his book, "Surgery and Its Adaption to Homeopathic Practice," which became a textbook for the surgeons of his school. In 1858 he went to St. Louis and helped to establish the Homeopathic Medical College there. He was elected president of the American Institute of Homeopathy in 1867. In 1870 he came to New York. For many years he held the chair of surgery at the New York Homeopathic Medical College and Hospital, and was at one time or another consulting surgeon for every homeopathic hospital in this vicinity. Both the British and French National Medical societies made him a complimentary member. Yale University gave him the degree of LL.D. in 1891.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

UNIVERSITY EDUCATION—RELATION OF MALIGNANT AND RHEUMATIC CARDITIS—DEFECTIVE MORAL CONTROL IN CHILDREN—MEDICAL MISSIONS—MAJOR ROSS—SMALLPOX AND CHILDREN'S EXCURSIONS.

London, May 2, 1902.

The reorganization of the London University is leading to appeals for endowments on a considerable scale. The institutions which are to be incorporated are also, for the most part, in want of money. An abundant opportunity for the wealthy and generous is therefore afforded of promoting the higher education.

Lord Reay, president of University College, is asking for more than £100,000 for the immediate wants of that college to render incorporation possible, and he plainly states that much more money will eventually be required. To render incorporation fruitful, he computes that a million should be raised. Mr. Waldorf Astor has given £2,000, an old student £30,000, and the Drapers' Company £30,000; and this day a week there is to be a public meeting at the Mansion House, over which the Lord Mayor will preside in support of this appeal. University College is, accordingly, in a fair way of securing her immediate necessities.

But what of the other colleges and educational institutions to be incorporated?

No doubt we shall hear a good deal about their wants before the University fulfils the expectations that have been raised about it.

Connected with this subject is the length of the working terms and vacations at the older universities, about which there has long been controversy.

The Rhodes' bequests to Oxford have directed further attention to the subject, and a number of letters have appeared in the *Times*, advocating modifications. The terms of Oxford and Cambridge amount altogether to twenty-one to twenty-four weeks in a working year. Thus two years of the students' life are occupied in what could easily be accomplished in one, and those intended to be benefited by Mr. Rhodes' bequests, might, many of them, be thereby prevented from taking advantage of his endowments. The old universities would do well to settle the question by arranging their terms to coincide with those of the medical sessions.

The relation of malignant to rheumatic endocarditis has occupied the attention of the Medical and Chirurgical Society for two evenings, and is being widely discussed. At the first, Drs. F. J. Poynton and Alexander Paine communicated the results of their latest research in the department in which they have made such distinct advances. Rheumatic valvulitis being now known to be infective, they think the term "malignant" endocarditis better than "infective," and they conclude, from their researches, that there is a group of cases of malignant endocarditis of rheumatic origin. They offered evidence of this from clinical experience, morbid anatomy and bacteriological and experimental investigations. They isolated from such cases a diplococcus which could be grown in pure culture, which reproduced the disease (in rabbits), and which, in its morphology and cultural characteristics, resembled the diplococcus of acute rheumatism. Further, the diplococcus of rheumatic fever produced malignant endocarditis in rabbits, while this new diplococcus, from some cases of malignant endocarditis, produced rheumatic fever in those animals. Lastly, every grade of valvulitis, from simple to malignant and *vice versa*, may be produced by these two diplococci. These two organisms only differ in the smaller size and more rapid growth of the malignant one. It was possible that their acid-producing properties might play some part in rheumatic processes. Drs. Poynton and Paine do not think rheumatic valvulitis the only manifestation that may become malignant, but suggest that pericarditis and arthritis may, perhaps, do so. In rheumatic valvulitis diplococci were not found in the necrotic tissue, but were numerous in that of malignant endocarditis. A very interesting experiment was the production of rheumatic fever in a rabbit by inoculating it with the diplococcus of rheumatic fever, and some months later malignant endocarditis, by reinoculating with the same organism. This looks as if damaged tissues were less able to resist the attack of the organism. Drs. Poynton and Paine also gave some results of inoculations with the streptococcus pyogenes and dealt with some observations upon septic, rheumatic, and rheumatoid processes. The paper was illustrated with specimens, drawings, and lantern slides.

The discussion on the paper was adjourned to 22d ult., when Drs. W. Ewart and A. S. Morley communicated a paper tending to show the possibility of recovery from the active stage of malignant endocarditis. Cases of recovery have been reported, but generally evidence of the extent of the disease is lacking. Three fatal cases were related by Drs. Ewart and Morley showing extensive changes in the heart, with some appearance of retrogression in the older lesions. Protargol had been employed, chiefly by inunction, and the improvement which had occurred was thought encouraging as to the discovery of some remedy. Dr. Ewart thinks intravenous injections of antiseptics should be tried.

Dr. Sansom had had two cases discharged in fair condition, one of which ultimately led to a necropsy and in which cicatricial changes were found on the valves. He had not been favorably impressed with antistreptococcic serum. He agreed with Drs. Poynton and Paine that septic was not a proper term for these cases.

Dr. Lees said that the masterly researches of Drs. Poynton and Paine at least established that one cause of malignant endocarditis was the rheumatic poison. Their researches were far reaching. He thought one cause of rheumatoid arthritis might very likely be the diplococcus rheumaticus.

Dr. Newton Pitt said that this last paper of Drs. Poynton and Paine was the most conclusive of all and carried conviction to his mind. Clinically, it was impossible to distinguish cases due to the diplococcus from those due to streptococci or other infections, nor could they be distinguished after death. The infarcts might be numerous, but not, as a rule, suppurative, though he held that some are. But he agreed that antistreptococcic serum is useless and suggested that Drs. Poynton and Paine might succeed in preparing an antitoxin.

Dr. Parkes Weber asked whether Drs. Poynton and Paine had met with large white kidney in their experiments, as he had seen it in a case of endocarditis complicating renal disease, and was inclined to regard it as a result of malignant nephritis due to various microbes. It was an old observation that some infarcts might suppurate, others not.

Dr. Walker, with Dr. Beatson, had investigated four cases at Guys Hospital, and they confirmed the researches of Drs. Poynton and Paine.

Dr. J. H. Drysdale said the diplococcus had many streptococcal characters, and we might anticipate that now and then it would become malignant. Possibly rheumatism was not due to a specific organism.

Dr. Blake asked about lumbago, etc.

Dr. Poynton, in reply, admitted that some abscess formations in emboli might be due to secondary infections, but we had no proof of it. He had met with large white kidney in a number of the cases. If there were several microbic causes each must admit of proof. In lumbago, etc., there were no necropsies.

Dr. Paine also replied. He said the chief difficulty in experimenting was the large doses required. The diplococcus rheumaticus was more nearly related to the pneumococcus than to the streptococcus pyogenes.

Dr. G. F. Still, whose contributions to pediatrics cannot have escaped your notice, delivered the Goulstonian Lectures this year, taking for his subject some abnormal psychical conditions in children. His chief object, as stated by himself, was to investigate the occurrence in children of morbid mental states, in which only, or chiefly, the moral control is affected, and to determine, as far as possible, under what conditions these morbid defects of moral control arise. Some extremely interesting instances of failure of control were given, and the whole subject treated from a broad point of view. Beyond what the lecturer could bring before his audience arise many social and educational problems that call for earnest consideration. Beyond them again rise thoughts as to what may have been the condition of these morally-defectives in the past and what their sufferings.

The annual meeting of the Medical Missionary Association was held on the 18th inst., when Deputy-Inspector General Saunders, M.D., C.B., presiding, gave interesting reminiscences of the work in which he has long been engaged. The secretary, another veteran in the cause, Dr. T. L. Maxwell, said there was still a want of candidates. There are some 320 qualified medical missionaries from this country at work. It is calculated that nearly two and a half millions of patients are seen annually by medical missionaries, more than 80,000 being in-patients in hospitals established by these self-denying members of the profession.

The Jenner Institute of Preventive medicine has secured the services of Major Ronald Ross, F.R.S., to direct a department for the study of animal parasites in reference to pathology and epidemiology.

Smallpox continues in the way anticipated. The number of cases has fallen, and we may expect this decrease to continue as summer advances, but there is, of course, the fear of recrudescence in autumn. It has been suggested that the summer holidays given to poor children may cause it to be spread in different parts. But, with reasonable precautions, this should not be the case. No unvaccinated child should be allowed to join the excursions, and the committees should announce that as a hint to anti-vacs.

A VISIT TO JAPAN FOR HEALTH OR PLEASURE.

(From Our Special Correspondent.)

We left Yokohama, Japan, on February 22 on the North German Lloyd liner *Sachsen*, and arrived in London on April 11, having called at Kobe, Nagasaki, Shanghai, Hongkong, Singapore, Penang, Aden, Suez, Port Said, Naples, Genoa, Gibraltar, and Southampton, after a very pleasant voyage of forty-eight days, including eight full days' stoppage at ports by the way. It is with the purpose of calling attention to this very interesting portion of the round-the-world route, and its desirability as a health trip for medical men who are seeking relaxation from the cares of professional practice or for patients sent abroad for similar reasons, that this letter is written. It is not generally known, perhaps, that for about $800 for first class, and $450 for second-class one can really take a round-the-world trip in eighty days, stopping here and there a day, and not become too greatly over-tired by the journey. To busy practitioners, to whom a longer vacation would be an impossibility by reason of lack of time and the greatness of the cost, I would strongly recommend taking a second-class ticket through to Yokohama, via any of the northern lines of railway, and crossing either from Tacoma, Seattle, or Vancouver, to Yokohama. There is no second class, I understand, on the Pacific Mail or Oriental & Occidental lines from San Francisco, but there is a fairly good second-class accommodation to be had on the Japanese Yuzenkaisha line from Tacoma, and by "intermediate" on the Canadian Pacific from Vancouver. The new boats of the Northern Pacific Railroad may also furnish good second class. From Yokohama the North German Lloyd furnish unequalled second-class accommodation to Southampton, where other fine boats of the same company's trans-Atlantic line will carry the passenger on to New York or other American ports.

The best time of the year to be in Japan is in the spring or autumn, and the same applies to the sea journey between Japan and Europe. If, therefore, the traveler proposes to be in Japan in the autumn, and can spare some months there, it would be best to go either direct from the United States, timing it so as to reach Yokohama as early in November as convenient, and remaining there during the chrysanthemum shows and other autumn and winter festivities—going forward by the North German Lloyd or some other line as late in the winter as possible. The better plan would probably be to reverse the order of the journey and leave the United States in February, via Southampton and Gibraltar or London, Paris, Genoa and the Suez Canal, reaching Japan in April, in time for the cherry blossoms. The expenses of travel on shore can be very much economized by stopping at private hotels or pensions, and medical men visiting Japan should provide themselves with introductions to the "Welcome Society" and the *Sei I Kwai*, or Society for the Advancement of Medical Science in Japan, of which Kanehuo Takaki, F.R.C.S., and Baron Saneyoshi, Medical Chief of the Navy Medical Bureau, are president and vice-president respectively. Letters to some of the English or American medical practitioners of Tokyo and Yokohama or Kobe should also be procured. Armed with such letters, opportunities of visiting medical institutions, such as the Charity, Red Cross and University hospitals, Institute for Infectious Diseases, etc., as well as of learning the ways of otherwise spending the time at disposal to best advantage, will be obtained. Visits to Kamakura, Hakone district, Nikko, Kyoto,, Nara, Kobe, points of interest on the inland sea, and Nagasaki will all claim time and reward the traveler's perseverance. If the tourist finds that he is unable to make a round-the-world trip, a visit to Japan alone will well repay the loss of time and the expense, and may be accomplished comfortably in from forty to sixty days from New York, and might be undertaken early in the autumn or spring. Midsummer is usually rather hot, and traveling not so pleasant or comfortable, but if the convenience of the tourist does not permit his coming at any other time, his trip would still prove most enjoyable, the principal drawbacks being the heat, occasional epidemics of dysentery and cholera, less often the plague itself. The months of June and October are usually the most rainy, The clearest, bracing weather is from the beginning of November to the middle of January; greatest cold, with storms, from middle of January to end of February; uncertain weather, mostly cold, in March, and variable weather, with showers, in April and May. Sometimes it is quite hot in May, and hot, damp, sticky weather, with rains, prevails in June. Hot, clear weather (80° to 90°), with occasional storms from the middle of July to the middle of September; typhoons in September, and sometimes earlier. The ascent of Fugiyama, 13,000 feet high, is usually only to be made in August, although tourists do sometimes climb it the month before and after. Otherwise, most of the principal points of interest can be visited at any time of the year.

The remainder of the voyage from Japan to America, via the Suez Canal, is full of interest. We see Shanghai, with its native and foreign cities, Hongkong and Canton, in southern China, Singapore and Penang, with their native towns and the public gardens, giving one some idea of the customs and appearance of the Malays of the islands and mainland, and Colombo, of the mixed races of India, while at Aden the Arab and Africans, and in Egypt the gathering together of the peoples of many European, Asiatic and African lands. Beautiful glimpses of Italian scenery, through the streets of Messina, and up the mainland coasts, with little trips ashore and visits to Pompeii and Herculaneum, and the wonderful museum at Naples; the wonderful Campo Santo, the beautiful gardens, gorgeous churches and public buildings of Genoa, passing views of the Italian and French Riviera, Sardinia, Majorca and Minorca, famous Gibraltar and the coasts of Spain and Portugal. We also got some variety by way of being "rocked in the cradle of the deep" in the Gulf of Lyons, the Bay of Biscay and the English Channel, unless we escape the possibilities of these experiences and go overland through Switzerland and France with only a few hours' discomfort in the English Channel.

The writer is completing his fifth trip round the world during the past twenty-five years, and has found it none the less enjoyable and instructive, and, although not taken by him for the mere purpose of pleasure or rest, but as part of a leave of absence at home, he has found it both pleasurable and exceedingly restful when taken at suitable seasons of the year. This last voyage, for instance, having a record of but three or four stormy days in forty-eight.

THE FUTURE OF THE AMERICAN NEGRO.

To the Editor of the Medical Record.

Sir:—Your editorial in the Medical Record of April 5, commenting on the views of Dr. Seale Harris of Alabama, relative to the health of the American negro, seems to me not to treat the negro side of the case fairly. The misapplication of facts and the sentiment expressed by Dr. Harris show too plainly that he has allowed race prejudice to warp his judgment. Dr. Harris claims that the negro has retrograded physically since the war, resting his belief on the fact that the negro suffers from more diseases now than he did before the war. Why is that? I claim that it is due to a change of conditions and not to physical deterioration. In the days of slavery, a negro's chief occupation was farming, and farming is one of the most healthy pursuits man can follow. The farmer gets plenty of fresh air and plain food. But since emancipation the negro has entered nearly every occupation followed by the white man. Is it strange, then, that the diseases incident to such occupations affect the negro? How does it argue deterioration? The negro was not affected with these diseases in slavery, because his occupation as a slave did not expose him to them. It is true that the negro has become a great sufferer from tuberculosis, a disease from which he was practically immune in the days of slavery. But it is because so many have given up farming for city surroundings and indoor occupations. In other words, the negro is more exposed to disease now than before the civil war, and hence the increase in disease among his race. That the negro is deteriorating physically because he is becoming less prolific is poor reasoning. It is an established fact that as man rises in the scale of civilization and intelligence he becomes less prolific, and the negro is no exception to this rule. That the negro has made a wonderful advance in civilization and intelligence no fair-minded person can deny. It is not a retrograde sign that the intelligent negro wife and mother, surrounded by the influences of a civilized home, should have a family of only three or four children. The slave masters used to use the negro women as "breeders," and it was common then for the negro women to have from ten to twenty children.

The fact that the death rate before the war was less among the negroes than the whites is accounted for by the fact that the slaves labored on the farms and lived mainly in the country regions, while the whites lived high and followed an indolent life. Naturally the white death rate was higher. But now the whites labor more on the farms, and otherwise, and the negroes labor less on the farms and have flocked to the cities. Hence, the change in the former death rate. In the country sections there is very little difference in the death rate of the two races; but in the cities of the South the death rate among the negroes is alarming, and, as stated by Dr. Harris, much higher than among the whites. But the cause lies not in physical deterioration, but due largely to the rule of the race which Dr. Harris represents. The whites control the cities absolutely yet it is a notorious fact that the municipal authorities of Southern cities give no attention whatever to the hygienic improvement of the sections in which the negroes live. The negroes have flocked to the cities because of the greater advantages there. Yet, they are forced to live in the most unhealthy portion of the city. The sewerage system is poor, and in many cities the negro sections have no sewers at all. The streets of the negro sections are allowed to remain filthy and dingy. Houses constructed for negro occupation are done so with utter disregard for proper ventilation. The negro sections are seldom provided with parks, and in many cities the police will arrest a negro if caught in the public parks. The hospital service for the treatment of poor negroes is very inadequate. Is there any wonder, then, that the negro is a great sufferer from tuberculosis, typhoid fever and malaria?

American authorities, by hygienic improvements, changed Havana from a pest hole to a flourishing and healthy city. The white authorities can use the same to reduce the death rate among the negroes in Southern cities. Of course, the mass of the Southern negroes need to be educated in the laws of hygiene, because they have not had an opportunity. But the educated and intelligent negro is doing all he can to teach his race in this respect. Proper appreciation and conception of hygiene require intelligence, despite the fact that Dr. Harris deplores the money spent for his mental development. Perhaps, he would have the ignorant negro possess the same intelligence as the educated white man?

Despite all the causes that militate against the negro, there is still a favorable increase in population, according to the census of 1900. Despite "dirt, disease and the devil," with "mob law" thrown in for good measure, the negro population increased from eight million in 1890, to about ten million in 1900. That does not look like extinction.

George E. Cannon, M.D.

Jersey City, April 19.

Progress of Medical Science.

The Boston Medical and Surgical Journal, May 15, 1902.

Traumatic Asphyxia.—H. H. A. Beach and Farrar Cobb report a case of this rare affection, which is characterized by a peculiar and striking discoloration caused by forcible compression of the thorax for some length of time, so that breathing cannot take place. The man was caught and held by an elevator for fully three minutes. His face turned black and his eyes protruded and he bled from the nose before he was released. The skin of the face seemed to be dotted with countless spots from black to reddish black or blue in color, very close together, and between these spots lines or areas of normal skin. The skin was examined microscopically, but appeared to be normal. This is important negative evidence in favor of stasis as the cause of the color; certainly had there been subcutaneous hemorrhage the sections would have shown it.

Amaurosis (Atrophy of the Optic Nerve), and Its Treatment by the Subcutaneous Injection of Strychnine.—Hasket Derby, from his experiences, reaches the following conclusions: (1) Strychnine is a stimulant to the optic nerve. Even in normal eyes it slightly increases the acuteness of vision and widens the visual field. These effects are temporary. (2) In certain cases of optic nerve atrophy its local subcutaneous injection has, to say the least, coincided with an arrest in the progress of the disease, and has been followed by a somewhat increased acuteness of vision. Whether these effects are temporary or permanent, time and fuller statistics will show; (3) In a progressive case of this disease it is clearly our duty to state the above facts to the patient, and allow him to take the treatment if he is so inclined; (4) The strychnine should always be administered in the temple, and by subcutaneous injection.

Angina Cruris (Intermittent Claudication.)—G. L. Walton reports the case of a man who complained of attacks of severe pain in the right calf. He could walk but a very short distance before being seized by a pain which prevented further motion. The attacks last about half a minute, and the blood pressure taken at the onset of one of the attacks showed a rise of 50 mm. of mercury. Atheroma has been regarded as the underlying cause of this affection, also gout, the misuse of tobacco, exposure to cold, etc. Many cases have now been reported between the ages of twenty and forty, and a congenital tendency to angiosclerosis is now deemed a sufficient cause. The arterial obliteration alone is not sufficient to explain the attacks of pain, which are probably due to superimposed vaso-motor spasm, to which a neuropathic disposition renders the patient liable, and it seems probable that a third factor, namely a sudden increase of blood pressure, is essential to the spasm.

Diseases of the Ear of Interest to Insurance Examiners.—Philip Hammond holds that the existence of a chronic discharge from the ear which persistently baffles all treatment should be considered as very unfavorable; a discharge which stops absolutely under treatment, leaving an open perforation, may be accepted conditionally, and a suppurative ear which heals by forming a new cicatricial drum may be accepted without reservation. Among other causes to be included in the dangerous list are suspicious nodules or tumors of the auricle in elderly persons, or ulcerated areas, which may be due to the breaking down of an epithelioma. Lupus is also to be carefully considered. Any stenosis of the external canal due to the results of old traumatism or abscess is apt to give rise to trouble in case of another outbreak in the middle ear. The presence of an exostosis is dangerous in the same way. Modern surgery has proved that many cases which were formerly considered hopeless can be cured. In a general way, it can be said that those diseases of the ear which should cause the unconditional rejection of the applicant consist of local manifestations of grave constitutional disorders. Active suppurations should be rejected with the reservation that they may be accepted only when absolutely cured.

Journal of the American Medical Association, May 17, 1902.

Grave Abdominal Injuries without External Evidences of Traumatism.—R. Harvey Reed reports several such cases, and states that from the literature of the subject and from his own experience it is his conviction that it is the surgeon's duty to make an exploratory incision in all cases where there is grave doubt as to the real nature of the injury, and particularly so when the constitutional symptoms point to a condition more serious than is indicated by either the subjective or objective symptoms, provided the physical condition of the patient is such as to warrant an operative procedure.

A Preliminary Report on the Transmission of Pathogenic Germs by the Common House-Fly.—J. Manning has carried on a series of experiments with culture tubes inoculated with various pathogenic organisms taken from patients, flies being confined with the materies morbi and then being allowed to infect the tubes. He finds that molds grow so rapidly on many of the fly-infected tubes that only a few are presentable for inspection, suggesting the possibility that flies are often fungus-ridden, whether transmitting pathogenic germs or not. During the experimentation forty-four culture tubes were subjected to fly infection; of this number forty-one tubes showed colonization at the end of forty-eight hours, three tubes remaining apparently sterile. The following germs were transmitted by flies, and isolated, pure cultures being obtained: Pathogenic germs—bacillus pyocyaneus, staphylococci pyogenes aureus, bacillus typhi abdominalis, bacillus coli communis. Non-pathogenic—bacillus prodigiosus, sarcinæ aurantia, sarcinæ alba, molds and fungi.

New York Medical Journal, May 17, 1902.

Hypnotism, A Useful Aid in the Treatment of the Morphine Habit.—S. A. Agatston reports the case of a woman of thirty-eight years who was accustomed to take 25 grains of the drug each twenty-four hours. This was gradually reduced within two weeks to half a grain and then within another week to zero. The patient suffered intensely with the usual symptoms, which all the remedies in common use failed to relieve. The author then tried suggestion, instructing the patient to sleep for eight hours, awaking at a certain hour. This plan persisted in each night ultimately led to a perfect cure.

Subcutaneous Injection of Paraffin in the Correction of Nasal Deformities.—Harmon Smith relates his experiences with this mode of treatment, which consists in the injection into the depressed area of the sunken nose of injections of paraffin. The latter should have a melting point of 115° F. An ordinary syringe is filled with the material and kept ready in sterile water at 120° F. The area to be filled is cocainized after perliminary sterilization and the paraffin slowly injected under considerable pressure. It remains plastic for about half a minute during which time the nose is moulded into a proper shape. The result is such as to present a normally shaped organ. It has been found that the material is well born and remains inert in the tissues. It becomes surrounded with connective tissues and the initial swelling about the area of injection speedily subsides. Experience to date with this method is most promising and it bids fair to become a valuable procedure in this class of deformities.

Medical News, May 17, 1902.

Sclerotomy, Anterior and Posterior, in Glaucoma.—Although David Webster has abandoned the operation of anterior sclerotomy, he thinks that it might be advantageously resorted to in acute or subacute glaucoma supervening upon nephritic retinitis, but in most cases of glaucoma iridectomy is the better operation. He reports a case of posterior sclerotomy. The patient was eighty-nine years old, and was suffering from chronic glaucoma supervening upon retinal hemorrhages and hemorrhages into the vitreous. Vision was reduced to the perception of light. The pupil was slightly dilated and sluggish, the anterior chamber rather shallow, the tension a little increased, and although the vitreous was turbid, the optic disk was seen to be cupped and atrophic. There was no pain and no redness. Moderate use of the other eye was advised; and a 2 per cent. solution of pilocarpine, in case of pain, was ordered to be used. Two weeks later the patient, after using the eye to read fine print, nearly all day, began to suffer pain. Iridectomy would have required general anæsthesia, so posterior sclerotomy was decided upon. The eyeball was punctured just back of the ciliary region and the incision extended, so that it was about three times as long as a Graefe cataract knife is wide. A few drops of fluid escaped. A bandage was applied and the pain ceased. The eye was washed and rebandaged daily, but no mydriatic or myotic was used. The bandage was used for seventeen days. The result was most gratifying.

Orthopedic Operations for Intractable Cerebrospinal Cord Lesions, with Report of Two Cases.—Homer Gibney advocates operation for cases of unyielding, stubborn, and intractable deformities of cerebrospinal origin, and after correction or overcorrection, the application of suitable apparatus. The first case he reports was a girl of fourteen years. Her gait was ataxic, the spine presenting slight lateral deviation. The patellar reflex was absent. Both feet were held in moderate cavus, the right most marked. The plantar reflex was accentuated. The great toes were flexed at distal phalanx. A long incision was made over the tendo Achillis of the left foot, and the tendon was exposed and lengthened. The edges of sheath, fascia, and skin were sutured. The right tendon was divided subcutaneously, the plantar fascia was severed, and both feet were put up in plaster of Paris at 85°. Locomotion was much improved. The second patient was a man of twenty-six years. His spine was slightly deviated to the right. The patellar reflexes were absent. The left foot was held in marked cavus, with the great toe slighly flexed, trigger shape. The right heel came down well. The left tendo Achillis was divided subcutaneously; the contracted plantar fascia was severed; the great toe was stretched, and the whole foot was put up in overcorrected position. Double uprights, with stop-joint at the ankle, were applied in both of these cases. The second patient was enabled to walk with the foot square on the ground, and far more easily than before the operation.

American Medicine, May 17, 1902.

A New Sign in Thoracic Aneurysm (?).—Henry Lee Smith describes this sign, which he has found in each one of the four cases of well-marked thoracic aneurysm which he has recently examined. He thinks there is probability of its constant presence in these cases. The sign is brought out by combined palpation and percussion. The cricoid cartilage is grasped as in tracheal tugging, an assistant percussing the chest. When normal parts are percussed, the palpating hand feels a distant and feeble jar (proximal ends of the clavicles excepted), but so soon as the neurysmal area is reached, a shock, which is both direct and resilient, is felt, and somewhat suggestive of the sensation experienced when a rubber bag filled with water is simultaneously palpated and percussed. It is well to note if the sign is present when the patient is changed from the erect to the recumbent and lateral positions, and, if possible, the location of the aneurysm itself.

Raynaud's Disease.—Emil King defines this disease as a vasomotor neurosis, dependent on an exaggeration of the excitomotor powers of the central nervous system, causing angiospasm in localized areas in various parts of the body and characterized by three grades of intensity, local syncope, local asphyxia or cyanosis, and local gangrene. Both sexes and all ages may be affected, but it is most often seen in females and young adults. Practically, nothing is known of its etiology. A neurotic temperament and family history seem to act as predisposing factors, and, in addition, the usual causes of arterial degeneration and sclerosis of the central nervous system, syphilis, alcoholism, rheumatism, and unfavorable hygienic conditions. Hysteria, and chronic constipation with autointoxication, may be factors in its causation. In a large proportion of cases the disease appears without premonitory symptoms. It usually affects in order: Fingers, toes, cutaneous areas of the legs and body, the tip of the nose, and the ears. The internal organs probably do not escape. The prognosis is favorable so far as life is concerned. In the young and otherwise healthy patient it is apt to run a mild course and recovery may be permanent. Nothing definite is known of the pathology of the disease. The treatment is very unsatisfactory, and still remains empirical. It depends largely on the physical condition of the patient. The local treatment consists of maintaining an equable temperature in the affected part. The gangrene should be treated in the usual manner. For pain, the usual sedatives are employed.

Vaccination from the Standpoint of the Surgeon.—The following method to obtain a noninfected vaccine sore is described by Ernest J. Mellish: Scrub the part to be inoculated, and an area around it, with alcohol, and allow it to dry throughly before applying the lymph, or scarifying. After the point where the inoculation has been made has become dry, or nearly so, apply a rather thick pledget of sterile cotton; cover it with gauze or muslin, and fasten it in place with narrow strips of adhesive plaster, carried nearly around the arm above and below the scarification. Generally, at the return visit, it can be determined, by merely limiting one side of the dressing, whether the vaccination is taking or not. If it is, and the dressing is dry, no change is necessary. Even if a bit of the cotton has become incorporated with the scab, if the wound is aseptic, it may be left till thoroughly dry, and then the surrounding cotton cut away. Never vaccinate the lower extremities. Serious results sometimes follow. Instead, the wound may be made on or near the shoulder. No physician should vaccinate a person, except in an emergency, unless he is willing to follow the case carefully. Definite instructions should be given about its management if the individual cannot return. Glycerinated lymph is almost unanimously considered efficient in its effects as a protection against smallpox. Only that which is produced by a reliable firm should be used. Everything must be sacrificed to quality. Probably nearly all cases of tetanus following vaccination in recent years became infected after the operation and not at the time of it. No argument is required by one who has studied the facts as to the question of vaccination protecting against smallpox.

The Lancet, May 3, 1902.

The Diagnosis and Treatment of Various Forms of Goiter.—James Berry divides goiters into the following classes: parenchymatous (bilateral), encapsulated (solid and cystic), exophthalmic, and those due to malignant disease. His personal experience is based on 155 operative cases. Among the earlier operations, or, to be strictly correct, among the first forty-six, there were four cases of death. The only death in the last 109 cases was that of a woman who was admitted to the hospital with much cyanosis, a large and partly substernal goiter, and signs of an intrathoracic tumor of uncertain nature. Berry performed an exploratory operation and removed the substernal portion of the goiter. The wound ran a normal aseptic course, but the dyspnœa and cyanosis were not relieved. When the patient died, rather more than three weeks after the operation, it was found that the dyspnœa was due to a sarcomatous tumor of the root of the lung and mediastinum secondary to a small primary growth of the abdomen. This death is also the only one that has occurred in his cases after any enucleation operation, the total number of which is 100.

Note on the Relief of a Distended Joint by the Establishment of Subcutaneous Leakage.—T. Pridgin Teale reports two cases. In the first the preliminary steps of the operation for drainage showed that the fluid knee-joint was synovial in character. Teale, therefore, maneuvered his knife so as to make an opening in the capsule about half an inch in length, in order that the fluid might leak into the surrounding extraarticular tissues, where it was likely to be absorbed. In order to render this process as thorough and rapid as possible, he made three or four other punctures into separate regions of the synovial cavity, taking care that the openings in the skin were not larger than the width of the narrow blade, whilst the capsular openings were about half an inch in length. The result proved to be even better than he dared to hope. The pain ceased, the effusion disappeared, and the joint rapidly recovered. In the second case he made a subcutaneous incision through the capsule of the right hip-joint, so as to establish a leakage, and at the same time divided the tensor vaginæ femoris and the abductor longus tendon, which were tense. The immediate result seemed to be satisfactory. Later the case relapsed and an abscess formed in front of the hip-joint. The head and neck of the bone were, therefore, excised, the head being eroded. In this case there was a temporary arrest of the synovial distress, but the treatment eventually failed, probably because the focus of the disease was beneath the articular surface of the femur.

Scurvy Developing in a Rickety Boy Aged Five and a Half Years.—The case is reported by G. Carpenter, who believes that while certain dietetic errors may predispose to scurvy, there is a personal factor which must not be overlooked even in infants. Infants at the breast have developed scurvy, though this is not a common occurrence. The disease has been observed in new-born infants. Yet fresh breast milk is deemed to be eminently anti-scorbutic and it is certainly free from the ptomaines of decomposition, though in other respects it may be quite unsuitable as a food for the purpose of rearing a healthy child. Undoubtedly many articles of diet which have been administered over long periods of time are capable of producing scurvy in some infants and, equally, undoubtedly, they will not do so in the majority of others. Infantile dietetic errors are the rule, but it is only exceptionally that a case of scurvy comes under observation. It would appear that in infantile scurvy we can go no further at present than to say that the fault lies mainly in the diet, but not from a ptomaine point of view, and the more the food departs from what is natural and the more prolonged is the use of such a faulty food, the more likely is it to produce scurvy. But, for reasons already given, there must be a personal factor in these cases. The diet prescribed may not be appropriate for the particular child for whom it has been designed; certain foods are specially obnoxious to certain children, and of these harmful foods the proprietary foods hold the pride of place.

Some Statistics Regarding the Effect of Inoculation against Typhoid Fever in South Africa.—A. Crombie gives three tables made up from data obtained from soldiers invalided home from South Africa. From these tables the following facts are obtained: Among the forty-six inoculated once there were seven cases in the third month after disembarkation, giving a percentage of 15.2. By the fifth month there had been eleven cases (including seven in the third month, one in the fourth and three in the fifth), giving a progressive percentage of 23.9. In the last column is shown the difference between the incidence of the disease among the not-inoculated and the inoculated. This column shows that the not-inoculated suffered more during the second, third, fourth, and fifth months than the inoculated did; and if those inoculated twice were excluded from the table the advantage would remain with the once inoculated up to and including the sixth month. Subsequently to that time the advantage lies with the not-inoculated, an advantage which at the end of the first year and subsequently amounts to 10 per cent. The following curious facts were also noted: A medical officer found six months after inoculation that his blood gave a well-marked agglutinative reaction. A fortnight afterward he was in bed suffering from enteric fever, showing, as is well known, that the presence of agglutinins is no guarantee of that of alexins. A patient was inoculated twice in February and twice in June, 1897; he was again inoculated twice in February, 1900. In October, 1900, he had an attack of enteric fever in South Africa, followed by a relapse and thrombosis. In May, 1901, he had a second attack of enteric fever, again followed by thrombosis. When his blood was examined in London at the end of 1901 it gave no agglutinative reaction, nor had it any effect on the motility of the bacillus typhosus in six hours. In three or four cases returned in South Africa as simple continued fever a positive Widal reaction was found.

The Lancet, May 10, 1902.

An Interesting Phenomenon Occurring in Tachycardia.—H. D. Everington reports the case of a married woman of thirty-six years with an acute articular rheumatism. During the attack there was an extremely rapid heart action, the beats running at times between 220 and 240 per minute. No evidence of organic disease or of dilatation could be found. If the patient took several deep breaths the rate would drop nearly 100 per minute. Several similar instances are recorded of the effect of deep inspirations in tachycardia, but the author says that as yet no satisfactory explanation of the fact has ever been offered.

Case of Poisoning by Morphine Injection Treated by Infusion of Saline Solution—The patient of E. F. Willoughby was a woman who had taken eight grains of morphine by injection under the skin, in three doses, less than half an hour before she was first seen. Ten minutes later she was in a condition of profound narcosis. Strychnine, atropine, ether, galvanism, and artificial respiration were all tried without avail. A liter of salt solution was infused by gravitation into the subcutaneous tissue of the flank, the effect was almost immediate and very striking. Within twenty minutes the duskiness and coldness of the skin had given place to a natural color and warmth, and the patient had so far recovered sensibility and consciousness as to struggle violently against the mechanical and electrical stimulation employed to keep her awake. Recovery was without further incident.

The Quiescent or Latent Period in the Course of Grave Abdominal Inflammations.—A. H. Tubby calls attention to the familiar fact that in many abdominal cases there is after the acute onset a subsidence of symptoms in which the pain goes down, the vomiting stops, the temperature falls to normal, and the patient feels very comfortable. But subsequent experience shows that this change in the symptoms is by no means significant of real improvement. Sometimes this period is a deceitful and treacherous calm, and as likely as not marks the onset of grave complications which terminate fatally. It is this interval of apparent remission in the course of the disease which he terms the quiescent or latent period—quiescent in so far as the disappearance of some of the symptoms is concerned, and latent in that it precedes an aggravation of trouble, acute peritonitis, and a fatal issue. From his personal experience he is inclined to believe that the quiescent or latent period is from time to time a prominent feature in the following group of cases: (1) Injury to the intestines with or without rupture; (2) Perforation of the intestines by ulceration; (3) Injury to, and bruising of, the peritoneal connexions of the viscera, with interference with their blood-supply; (4) Acute diseases of the genital organs, especially of the Fallopian tubes; (5) Acute appendicitis, either ulcerative, perforating, or gangrenous, and this disease, undoubtedly, furnishes the greatest number of cases in this special category.

The British Medical Journal, May 3, 1902.

Ping-Pong Teno-Synovitis.—F. Graham Crookshank reports this case. His patient was a man of heavy build, thirty years of age. There was considerable œdema of the lower third of the left leg, obscuring the anterior border of the tibia, and acute pain. The swelling was tender and red. The patient was put to bed, and examination showed acute tenc-synovitis in connection mainly with the tibialis anticus. The patient had been spending much time at ping-pong, which necessitates many sudden alterations in position, while the body-weight is supported chiefly on the anterior pier of the main pedal arch. The strain on the tibialis anticus must be severe. Until a costume and footgear appropriate to the game are worn, these cases will probably not be uncommon.

An Examination of the Fish Hypothesis of Leprosy as Applied to Kashmir.—Ernest F. Neve states that it has been shown that thousands of people have eaten fish in various forms without developing leprosy, which is rarest in the districts of greatest fish consumption. The question of the spread of leprosy is one of great importance in those countries in which the disease is endemic. If acceptance of the fish hypothesis leads us to deal with the matter by aiming alone at the inhibition of unwholesome fish food, then it appears a mischievous theory. If the disease is to be stamped out, the most important measures to be taken are: first, to separate healthy children from their leprous parents as soon as possible; to withdraw lepers from the general community as completely as possible; to use such proper sanitary precautions as shall prevent possible infection or contagion; such, for instance, as disinfecting dirty clothing by heat before washing, forbidding expectoration on floors or ground; exercising careful supervision over the free ventilation, exposure to sunlight and general cleanliness of the buildings, inside and out, and of their surroundings, and of the disposal of dangerous refuse. It is important to regulate the contact of healthy attendants with lepers, bearing in mind the dangers from their clothing and discharges. The disease should be treated as no less infectious than tuberculosis, to which it presents not a few points of resemblance.

A Case of Chloroma.—G. H. Melville Dunlop reports this case, which he believes to be the first in which a diagnosis was made during life. Chloroma is an exceedingly rare condition. This patient was a boy of five years, and was admitted to the hospital complaining of great weakness and "swelling of the face." The complexion was very pale, of a waxy yellow tint. A large number of petechial hemorrhages were scattered over various parts of the body. Both eyeballs protruded. The child was deaf. Later, a pale greenish yellow tumor, of a jelly-like consistence, developed at the inner canthus of the right eye, gradually advancing over the eyeball. The left eye also became similarly affected, till, finally, both eyeballs were covered by the growths. There were tumors in both temporal regions. The boy died about six weeks after admission. These tumors have been variously described as green cancer, pigmented myxosarcoma, chloromyxosarcoma, fibroplastic tumors, and amorphous fibrous tumors. The color varies from a yellowish green to a bright grass green. The cause of the color is not settled. It is supposed that they originate from the periosteum of the head and face, and they are undoubtedly metastases. Their consistence varies. They consist of large, round or oval-shaped cells, which are either embedded in an intercellular amorphous material, or in a delicate network; while at other times the tumor is interspersed by coarse bundles of conective tissue. This is chiefly a disease of children. Boys seem more liable to it than girls. There is a close resemblance between it and leukæmia. Diagnosis would be impossible before the appearance of the tumors. The termination is invariably fatal from exhaustion.

The Signs on the Skin of Certain Common Diseases.—James Galloway first speaks of the skin eruptions in renal disease. These are of various forms of evanescent character and often commencing as disorders of the skin appendages. Most of them are of no serious importance. There is another uncommon type of lesion, which reproduces in character the various types of erythema multiforme with exudation. In diabetes there is the general condition which predisposes, and the proximate cause which operates in nearly all cases of skin disorder. The skin of the glycosuric patient is very easily infected by the pyogenic microorganisms. The writer speaks especially of two conditions: Seborrhœic dermatitis and dermatitis of the genitalia with pruritis. The first lesion is peculiarly common to those patients suffering from the dietetic or so-called "gouty" form of glycosuria. They are usually middle-aged, and often too stout. Warm medicated baths are of great service. In all cases of pruritus of the genitalis, and of unexplained irritation or inflammation near the orifice of the urinary meatus, careful examination of the urine should be made. The treatment is often satisfactory. It is most important to control the general the general disease by favorably altering the metabolism and by appropriate diet. The phenazone group of drugs and chloral hydrate are of occasional service. The writer then speaks of lesions of the skin in persons with "low tension" circulation. These persons suffer severely from chilblains, which may ulcerate. Blotched or reticulated hyperæmia of dependent parts is another condition which occurs. The nutrition should be carefully regulated. This one line of treatment often brings about surprising changes. Warm baths should be frequently taken, and warm clothing be worn. Tonics are often indicated.

The British Medical Journal, May 10, 1902.

Case of Prolonged Lactation.—H. R. Clarke and R. S. Nichol report the case of a woman forty-seven years old who was nursing a child five years and two months old. Up to the time that she was seen, the child had been fed at the mother's breast three or four times every day. The mother "always had plenty of milk." It contained nearly as much fat as a specimen of fresh cow's milk with which it was compared. The child was weaned, and after seven days the secretion of milk ceased. During the period of lactation the mother had menstruated only twice.

The Coagulating Power of the Blood in Plague.—Alice M. Corthorn collected, in capsules, blood from thirty-two patients in different stages of plague. In each case the blood was drawn from the finger, sealed in the capsule, and kept in the erect position. Twelve of these patients died within forty-eight hours of the examination, and of these, ten showed absolutely no coagulation at all. The capsules were kept for varying periods up to three weeks, and at no time was a clot observed in them. In some cases, including two of the fatal ones, and several which finally recovered, the clot formation was imperfect. The writer adds that it would be interesting to note how far blood taken from patients in other acute fevers shows this absence of coagulation and the bearing of the sign, when present, on the prognosis and pathology of the disease.

Case of Fatal Anæmia Presenting Some Unusual Blood Changes.—O. K. Williamson and E. W. Martin report this case, which presents some very interesting features. The blood picture, as regards the red blood-corpuscles, is practically that of pernicious anæmia, the diminution in the number of red cells being unusually great even for this disease, being less than one-tenth of the normal number, there being marked poikilocytosis and numerous nucleated cells, the coloring matter, however, being diminished only in proportion to the diminution in number of the red blood-corpuscles. On the other hand, the white corpuscles exhibited, typically, the condition found in lymphatic leukæmia, their number being about four or five times the normal, and consisting of over 99 per cent. of lymphocytes, instead of the normal number of about thirty, the neutrophiles being diminished to about ½ per cent., the normal number being about 70 per cent., and this although the patient was suffering from lobar pneumonia.

On Treatment of Hæmophilia with Calcium Chloride.—C. Edward Wallis describes the history of this case. The patient was a woman of twenty-five years, giving the typical history of hæmophilia. Two months before coming to the writer for advice concerning her teeth, she had had a tooth extracted, with a resulting hemorrhage lasting thirty-six hours. The family history was negative. The girl herself looked very unhealthy. She was more or less a chronic dyspeptic. Her teeth were in a hopeless condition. She was ordered, as a preparatory measure to clearing the mouth, a course of calcium chloride internally. She was to take a mixture containing 10 grains of this salt thrice daily for a week. At the end of this time one tooth was extracted. As long as this treatment was kept up, the results of extraction, which was gradually accomplished, were satisfactory. Leaving the town for a week, she neglected to take the salt, and on the extraction of the next tooth, the hemorrhage, although not alarming, was greater than after any of the other extractions since the treatment had been followed. The dose was then increased to 15 grains, and the results were again most satisfactory. The writer treated another case of hæmophilia in the same manner, with equally gratifying results.

Deutsche medicinische Wochenschrift, April 24, 1902.

The Genesis of Pulmonary Tuberculosis.—H. Ribbert, while not denying that pulmonary tuberculosis often arises directly from the inhalation of tubercle bacilli, maintains that its hæmatogenous origin is more general than is usually supposed. That pulmonary tuberculosis is frequently secondary is amply demonstrated by the large number of phthisical patients, showing the presence of other tuberculous deposits the age of which exceeds that of the pulmonary process. In such instances the primary seat of the tuberculosis is usually the bronchial glands. The age of a tuberculous process must be judged entirely by a histological examination. The mode of infection of the bronchial glands in these cases is of interest. While in certain cases this may take place by extension through the lymphatic system, observation has shown that such is rare. Many facts go to show that the bronchial glands are frequently infected directly from the lungs, no tuberculous lesions being developed at the site of entry of the bacilli. Here the microorganisms are absorbed by the lymphatics directly from the lungs and find lodgement in the bronchial glands, from whence a secondary pulmonary tuberculosis subsequently develops, which is consequently hæmatogenous in origin. Such a hæmatogenous tuberculosis develops by preference at the pulmonary apices and cannot be anatomically differentiated from a tuberculosis directly due to the inhalation of tubercle bacilli.

Berliner klinische Wochenschrift, April 28, 1902.

Treatment of Pharyngitis Granulosa and Lateralis.—Max Halle says that cases of granular pharyngitis which show no destruction of tissue require simply general treatment. Such cases, however, are rare, and in the majority of instances local treatment is necessary. In mild cases the local application of Mandl's solution or any of the astringents is often followed by good results. When these measures are without avail, the use of escharotics, such as chronic acid, trichloracetic acid, or various silver preparations, is indicated; light cauterization with the galvanocautery may also be advantageously employed. When marked pathological changes are present more radical measures are necessary and often times a considerable amount of tissue must be removed. For this purpose the author has devised an instrument known as "throat scissors;" these are made of several shapes, each of which finds use according to the location of the tissue which is to be removed. The employment of these scissors is much to be preferred to *severe* galvanocauterization. Very little pain or reaction follows their use, and the throat wounds heal much more quickly than after galvanocauterization.

Polyneuritis Following Malaria.—A. M. Luzzatto reports the case of a laborer, thirty-one years of age, who gave a history of malarial attacks continuing from October to December, 1900. In January, 1901, the patient developed symptoms of a polyneuritis, and first came under the observations of the author. The spleen was somewhat enlarged, but a search for the malarial organism was negative. The polyneuritis increased in severity and ran a characteristic clinical course, marked muscular atrophy being present. Death occurred on March 3, 1901, from a complicating lobar pneumonia. At autopsy lesions characteristic of a chronic malaria were found in the spleen, liver, and nervous system, but no malarial organisms could be demonstrated. The diagnosis of malaria is certain on the basis of the history and pathological lesions. In the absence of any other cause it seems certain that the malaria stands in direct etiological relation to the polyneuritis. The lesions of the latter were parenchymatous in nature, but not so far advanced as those present in some other cases of malarial polyneuritis which have been reported by Sacquepee and Dopter. This is to be accounted for by the early fatal ending of the present case. Lesions were also present in the anterior horns of the cord, but they were in all probability secondary to those of the peripheral nerves, since they were much, less extensive than the changes found in the latter structures.

Münchener medicinische Wochenschrift, April 29, 1902.

A Peculiar Varicella Eruption.—Rudolf v. Hoesslin reports a case of chickenpox in which a peculiar necrosis was present in many of the cutaneous lesions. This necrosis chiefly involved the center of the vesicles, which were surrounded by an extensive zone of inflammation. About twenty such lesions were present, the remaining vesicles being typical of this disease. The general symptoms were not influenced by this peculiar eruption. The necrotic lesions healed much more slowly than the typical varicella eruption. The cause of the necrosis is doubtful, but it was, probably, due to a mixed cutaneous bacterial infection.

Recurrent Herpes of the Male Urethra.—Bettmann reports a case of recurrent herpes of the male urethra, which occurred in a patient who had contracted syphilis a year and a half previously. The first manifestation of the herpes was a urethral discharge. Slight burning was present on urination. A search for the gonococcus was negative. In three days the symptoms entirely vanished without treatment. Similar attacks recurred at from three to six weeks interval. Some of the attacks were accompanied by a typical herpes præputialis. Endoscopic examination during the attacks showed characteristic herpes lesions in the urethra as described by Fournier. The local use of mercury aggravated the attacks and plainly irritated the herpetic lesions. In consideration of these facts, it is certain that the diagnosis of recurrent herpes was sound.

Treatment of Lead Colic with Atropine.—Adolf Weber reports the treatment of several cases of lead colic by atropine. The symptoms rapidly subsided under doses of gr. ¼ (.015) every four or six hours. In all the cases opium had been previously administered, but without beneficial result. Smaller doses of atropine were at first given, but these were unsuccessful. This, as well as the toleration of the large doses of atropine, is to be accounted for by the opium which had at first been given. The origin of the poisoning in these cases is interesting. In the first group the symptoms were caused by drinking water, which had been conveyed through lead pipes. In the second group the source of the lead was traced to flour which had been used by several families for baking purposes. In all of the families which used this particuliar lot of flour, cases of lead poisoning developed.

The Significance of Small Variations of Atmospheric Pressure for the Human Organism.—O. Rosenbach thinks that the human organism is remarkably susceptible to small variations in the atmospheric pressure. This may be demonstrated by the use of the variometer of v. Hefner-Alteneck. This instrument registers variations in the atmospheric pressure which are exceedingly small and to which the barometer is not sensible. Such variations are constantly occurring in the interior of dwellings, although they are more marked under some meteorological conditions than under others. It is certain that the skin is sensible to these variations in atmospheric pressure, and that the relations of the peripheral and internal circulation may be perceptibly influenced thereby. Certain individuals are especially susceptible in this respect. It is thought that the great tendency of some persons to contract "colds" may be thus accounted for.

French and Italian Journals.

A Case of Peritonitis Propagated Without Perforation During the Course of Typhoid Fever.—M. Vernon and M. Busquet report the case of a young soldier who died of peritonitis, complicating typhoid fever. At the autopsy not the smallest perforation of the intestines could be found. Eberth's bacillus was found in the peritoneal fluid, but its mode of entrance is difficult to explain. Experiments on a rabbit seem to prove that the bacillus is able to penetrate directly through intestinal walls that to all appearance, are perfectly normal.—*Revue de Médecine*, April 1902.

The Supposed Descent of the Heart in the Erect Position.—Augusto Plessi, having made many examinations with a view to determining whether the heart really changes position when the supine is exchanged for the erect position, has come to the conclusion that the displacement is an apparent one merely. The cause of the apparent lowering is found in the fact that the thoracic cage is really raised in the changed position. Should any lesion be present which causes adhesion of any part of the heart to the anterior wall of the thorax, the apparent lowering of the heart would not occur; therefore, the absence of this phenomenon might suggest total synechia of the pericardium, anterior mediastinitis, pleuropericarditis, etc. The author advises further clinical study of the subject.—*Rivista Critica di Clinica Medica, April* 26, 1902.

The Existence in Horses of a Disease of the Bones Analogous to Paget's Disease.—L. Dor, having had occasion to examine some diseased bones of a horse which had suffered from "bran disease" (so called because it is supposed to be caused by the bran which is substituted for oats in the horse's dietary), was struck with the resemblance of the lesions to those of Paget's disease. In both affections there are hypertrophic osseous lesions scattered over the whole skeleton, but especially on the long bones, these lesions being macroscopically and microscopically similar. In Paget's disease the morbid process is localized on the maxillary bones, in bran disease on the cranium, and in Paget's it appears at a slightly earlier age and is of more rapid development. That the two diseases are identical the author does not venture to affirm, but he considers the question of sufficient interest to merit further study.—*Revue de Chirurgie*. April 10, 1902.

Human Odors.—Charles Féré calls attention to the fact that the skin possesses a certain odor which varies according to the individual, the age, and the race. The nervous system seems to exert much influence over the odor of the cutaneous secretions. Hammond cites the case of a woman who always gave out an odor of pineapple when she was in a temper, and another who smelt of violets when suffering from an hysterical attack. The special point to which the writer desires to call attention, is that certain odors are inherited, or may even extend to side branches of the same family. Dogs are always able to recognize this odor even when it is so subtle as to escape the observation of man. The author cites interesting cases of emotions produced by odors reminiscent of certain events, and a case of total disappearance of all cutaneous odor with every beginning of pregnancy. In relation to the latter occurrence, he states that Morren found that aromatic orchids lost their perfume a half hour after the artificial application of pollen, while non-fertilized flowers retained their perfume for a much longer time.—*Revue de Médecine*, April, 1902.

A Case of Trigger-Finger.—Arturo Clari reports a case of this very rare affection. It consists in a peculiar condition of some finger, which is to all appearance normal, but which cannot be freely flexed nor extended. The motion stops at a certain point, and can go no further without special effort or external aid—the last part of the movement is then accomplished with a sudden jerk like the snap of a trigger. Many theories have been held in regard to the causation of this affection, but the generally accepted view at the present time is that there is some lesion of the tendon or of its sheath, or both. Rheumatism, traumatism, and work causing especial strain or long continued fatigue of a certain finger, are the irritating causes. Sometimes the morbid process is cured spontaneously, in other cases it resists all treatment by massage, electricity, the tincture of iodine, etc., and surgical intervention becomes necessary. This consists of incision or excision of the affected part of the tendinous sheath; after the operation the finger is not long immobilized and massage is early applied. Recovery is usually complete.—*La Riforma Medica, April* 17, 1902.

The Edinburg Medical Journal, April, 1902.

Chylous Ascites due to Peritoneal Carcinoma.—A patient of R. Murray Leslie, a woman of fifty-two years, suffered from chylous ascites. At autopsy a large carcinomatous mass was found involving the whole of the omentum, and extending between the coils of the intestine, which were inextricably matted together. The malignant mass was closely adherent to the right lobe of the liver, where it was continuous with a rounded cancerous growth just to the right of the portal fissure and involving the gall-bladder. The thoracic duct was normal. The chylous ascites was probably due to the blocking of the smaller lacteals close to the mesenteric attachment of the bowel by the infiltrating growth. Compression of the root of the mesentery by the carcinomatous mesenteric glands may also have been a causal factor

Some Observations on the Pathogeny and Treatment of Pes Cavus, etc.—J. Jackson Clarke describes a case in which the plantar fascia and the shorter plantar muscles were divided subcutaneously at the first operation, and a malleable splint applied to the front of each leg and foot, and a metal plate to each sole, and bandaged on. A fortnight later the tendo Achilles, and the tendons of the tibialis muscles were cut subcutaneously above the ankle. The foot was then brought to a right angle and the same splint applied as before. At the end of six weeks the patient was allowed to walk, and both his boots were fitted with inside irons that would not allow the ankle to move in the direction of plantar flexion beyond a right angle, and with an instep as well as a T-strap. The patient can now walk about in comfort. An illustration shows the great improvement in the condition of the feet.

Contracted Bladder Treated by Gradual Fluid Dilatation.—A. W. Mayo Robson describes the case of a woman whose bladder was contracted to about the size of a walnut, and was lined with phosphatic concretions. These were scraped away, after which the bladder was found to have a capacity of only half an ounce. After the operation the bladder was washed out daily with boracic lotion, on each occasion the urethra being compressed around the nozzle of the syringe, moderate force being used in order to increase the vesical capacity. After a few days the incontinence ceased, and the patient was told to hold her urine as long as possible. She could at first hold it for only half an hour, but in three months she could hold 8 oz. of urine without discomfort; her general health was good and the urine normal. In order to keep the urine aseptic while undertaking any operation on the ordinary passages, the author usually orders the patient to take boracic acid or salol internally. This practice does much to abolish post-operative urinary fever.

Latent Pneumonia.—Harvey Littlejohn concludes that pneumonia may be completely latent during its whole course, the form most liable to latency being basal lobar pneumonia. Alcoholic apical pneumonia is rarely latent during its whole course. The disease may be latent even though the whole of one lung or a considerable portion of both lungs is affected. This condition is practically confined to persons addicted to excessive alcoholic intemperance. The explanation of latency is to be found in the quantity of alcohol consumed after the onset of the disease, which makes the ordinary signs and symptoms by dulling sensibility, and also exerts a stimulating effect, thus enabling the person to go about until he suddenly collapses and dies. In medico-legal cases the discovery of latent pneumonia may satisfactorily explain the death of an individual, and thus allay all suspicion connected with the case. On the other hand the existence of pneumonia, even in an advanced stage, will not preclude the possibility of an individual having died from other causes, natural or violent, and of his having been at the time of receiving an injury in a state of apparent good health.

Diagnosis of Locomotor Ataxia.—E. J. Brown states that locomotor ataxia is one of the most common of the chronic nerve diseases. It is often unrecognized for years, although the most easily recognized of all cerebrospinal nerve lesions. To avoid overlooking this disease, examine every patient with symptoms of whatever nature for the knee-jerk and the pupil reaction; if both exists the patient has no tabes. Examine further for evidence of tabes in any patient showing the following symptoms: difficulty in walking, especially in the dark. Gradual failure of vision or a transient squint. Lancinating pains, or neuralgic pains in legs, sciatica, chronic rheumatism. Sudden attacks of gastric pain, or causeless vomiting, or "bilious attacks" frequently repeated. Difficult or urgent urination ("bladder disease"), incontinence of urine or fæces, numbness of anal region. Diminution or failure of sexual power. A sluggish ulcer on foot or leg. A large painless swelling of a joint. Spontaneous fracture of a long bone or a fracture from some trivial cause. Numbness of one or both little fingers or of ulnar sides of forearm.—*Medical Fortnightly*.

Society Reports.

THE AMERICAN THERAPEUTIC SOCIETY.

Third Annual Meeting, Held in New York City, May 13, 14 and 15, 1902.

REYNOLD W. WILCOX, M.D., OF NEW YORK, PRESIDENT.

FIRST DAY—TUESDAY, MAY 13.

THE meeting was called to order by the president, Dr. R. W. WILCOX of New York, in the New York Academy of Medicine.

An address of welcome was given by Dr. THOMAS E. SATTERTHWAITE.

President's Address.—Dr. REYNOLD W. WILCOX of New York delivered this address, and in it reviewed the progress of therapeutics for the past twelve months.

Valvular Diseases of the Heart.—The following symposium on this subject was presented:

Etiology and Symptomatology.—Dr. THOMAS E. SATTERTHWAITE of New York read this paper. He said that mitral disease was the most common form of valvular affection. Many young men training for athletic contests develop mitral insufficiency. It was often a temporary condition, which would mend with rest. The diagnosis of mitral insufficiency was comparatively easy, there being three cardinal signs, viz.: (1) The murmur at the apex, conveyed to the left; (2) The accentuation of the pulmonic sound, and (3) Increased dulness transversely.

Mitral stenosis and insufficiency very frequently coexist. The diagnosis of the former was beset with difficulties; indeed, in 70 per cent. of his own cases the murmur was not heard at all. Certainly, in 15 per cent. a presystolic murmur would be heard, and in 25 per cent. additional some other murmur would be heard in the diastolic interval. The maximum intensity was usually found at the fourth space on the left side. The bruit of mitral stenosis was of short duration, was not transmitted to a distance, and in, perhaps, half of the cases ran up into the first sound. According to his own experience, a thrill was observed in from 10 to 25 per cent.

Aortic disease was less common than mitral, and insufficiency of the aortic valve was the more common. When the condition was well established the apex would be found depressed and to the left. A diastolic murmur was heard clearly in the second left interspace and was propagated downward toward the apex, so that sometimes its area of greatest intensity was near the base of the ensiform cartilage. In his cases aortic insufficiency had been recognized during life in 62 per cent. There was, however, great difficulty in distinguishing between aortic insufficiency and aortic aneurysm.

Acute aortic obstruction was comparatively common in connection with valvular disease, but as a single lesion it was very rare. He had been unable to find more than one dozen well-authenticated cases of this kind in the literature.

Well pronounced tricuspid affections were comparatively rare. Tricuspid insufficiency was not often met with during life, owing to the difficulty of detecting the murmur, and also to the fact that the tricuspid valve was thought to be of secondary importance. The most distinctive sign was the systolic murmur heard over the lower half of the sternum, and with great intensity usually at the fourth left interspace close to the sternum. The murmur also extended to the right of the sternum, sometimes even toward the right axilla. Epigastric pulsation, when present, was important. The second sound of the heart was often very weak in these cases. Tricuspid stenosis was very uncommon. A point of considerable diagnostic importance was that it was a woman's disease *par excellence*. Out of 164 cases on record the diagnosis had apparently only been made in six instances.

Of all the cardiac valves the pulmonary was the least often affected, and exceptionally it was a single affection. The apex of the heart was displaced to the left in about 20 per cent. of the cases, and in about 25 per cent. a double murmur was audible, which was intensified on inspiration. Pulmonary obstruction was rarely acquired, though congenital obstruction was comparatively common. In the congenital form there was usually stenosis and a lack of physical and mental development.

Treatment.—Dr. T. L. COLEY of Philadelphia took up this topic. He said that important questions to settle at the outset were with regard to the age of the patient, whether the condition was congenital or acquired, the nature of the affection causing the cardiac disease, the condition of the pericardium and endocardium as well as of the myocardium. The same general principles must govern the treatment of all forms of valvular disease of the heart. The examination of the blood often afforded useful hints. The indications for the use of digitalis were much more restricted now than formerly. He considered the present routine use of strychnine most unfortunate, because this drug should be reserved for emergencies. Moreover, while strychnine is a muscle tonic when given in small doses for a short time, tolerance was soon established. The prime indication in the treatment of heart disease was for prolonged rest. Next in importance to this came attention to the diet and assimilation. The modern treatment of heart disease by exercise was based on the idea of producing compensatory hypertrophy, and it was an excellent method, provided there was no marked fatty degeneration; if, however, the myocardium was extensively degenerated this treatment was fraught with danger.

Dr. WILLIAM HENRY PORTER of New York thought the treatment of valvular disease of the heart resolved itself into the recognition of the fact that one had to deal with an organ which is mechanically defective, and that the main thing to be accomplished was to cause an augmented nutritive activity of the muscle tissue. In this way the mechanical defect could be very largely overcome. To accomplish this, one should bear in mind that the work of the heart should be diminished by prolonged rest. He rarely, if ever, used the digitalis series in the treatment of cardiac disease, for the reason that he believed this drug cut off the nutrition of the heart and called upon the muscle fibers of the heart to do more work. When high blood tension was produced the blood was driven through the capillaries so rapidly that there was not sufficient time for the proper molecular interchange between the blood and the muscle fibers of the heart; in other words, these muscle fibers were progressively starved under the administration of digitalis. The only condition in which he used digitalis was when there was a decided overcharging of the veins and a decided underfilling of the arterioles. When this condition was present the use of digitalis would shift the blood from the venous to the arterial side. The remedies which he depended upon most were strychnine, caffein and camphor. Strychnine stimulated the motor impulses emanating from the spinal centers and brought the whole circulatory apparatus into a more nearly physiological condition. He had used strychnine in pretty large doses, and had continued it for years with only good effects; he had yet to see any ill effects from the use of this drug. He reserved caffein and camphor for emergencies. They could, indeed, be used very freely. These remedies were the best he had ever employed in heart disease for producing a physiological hypertrophy of the heart and maintaining a proper state of nutrition.

Dr. ALBERT C. BARNES of Philadelphia said that about seven years ago he had reported a series of observations made by him on the diagnosis of diseases of the heart. In the published description of this research the point was made that the diagnosis of heart disease was not dependent upon any one physical sign, but rather upon a recognition of the condition of the heart muscle, the pulse and the general health. Many presystolic murmurs at the aortic orifice had been proved to be the result of vibratory conditions of the vessels and were not indicative of disease of this valve. Some patients could be made to develop a presystolic murmur by exertion. He wished to differ very decidedly with Dr. Porter on the selection of cardiac remedies. He was at a loss to understand why Dr. Porter used caffein in preference to digitalis. It had been demonstrated that, so far as their action on the heart was concerned, caffein and digitalis are the same. One of the chief actions of caffein was upon the cerebrum, while its secondary effect was upon the vasomotor centers and resulted in an increase in the blood pressure. Regarding the rapid removal of dropsy, the speaker said that he had conducted, in 1900, some experiments on animals to determine the nature of diuresis. It had long been known that theobromin was, probably, the purest diuretic at our disposal, but it is insoluble and irritating. Combined with sodium salicylate, it had been used quite extensively. About two years ago he had made a series of double salts of theobromin with various acids, and had found that the citrate, acetate and tartrate were soluble salts possessing powerful diuretic action.

Prognosis.—Dr. LEONARD WEBER of New York read this paper. According to his experience, the prognosis in valvular disease depended principally upon the local and general conditions. It was well not to ignore some of the subjective symptoms, such as pain, shortness of breath, dry cough and palpitation. One could learn from palpation how much hypertrophy and dilatation were present, and which side of the heart was affected. A valuable and practical method of differentiating between functional and serious organic disease was the effect upon the pulse in walking rapidly around the physician's office. Such exercise would, of course, greatly accelerate the pulse, but if the pulse-rate returned to the normal in the course of a very few minutes one could be sure that there was no serious disease of the heart. A very important prognostic sign, dependent upon back pressure, was a painful enlargement of the liver, particularly the left lobe. He had never known a patient with advanced mitral stenosis to live very long after beginning to spit up blood. With the increase of the bulk of the heart muscle there was invariably a lengthening of the first sound of the heart. When the first sound became short and the second sound accentuated, one knew that the heart muscle was failing. If after exercise the heart became arhythmic and did not return to the normal within a few minutes, one might be sure that there was something wrong with the heart muscle; the mere rapidity of the pulse was a secondary matter. His experience had taught him that well established chronic mitral regurgitation gave the worst prognosis as to life, and next to this came mitral stenosis, when it was progressive. The typical presystolic murmur could be closely simulated by pronouncing the word "abrupt," and in doing so rolling the "r". When back pressure symptoms were present in mitral stenosis, the prognosis was just as bad as in mitral regurgitation. A moderate degree of aortic stenosis, provided it was not associated with pulmonary disease, was indicative of a fairly good prognosis. He had not been able to satisfy himself that aortic incompetency gave a bad prognosis. If there were no complications in the coronary or peripheral arteries, the prognosis was by no means so bad as in mitral regurgitation and stenosis. In practice, the difficulty lay not so much in estimating the prognosis in these valvular lesions separately as in striking a balance in the combined lesions. Time and observation would often clear up an obscure case.

Dr. OLIVER T. OSBORNE of New Haven said that he was in a position to see a good many murmurs developing in college students who had undertaken athletic sports for which they were not fitted. As a rule, these murmurs would disappear under appropriate rest and building up of the health. Persons with complete cardiac compensation should be told the nature of their ailment, and advised to regulate their habits of life and diet accordingly. In his opinion digitalis was the queen of all cardiac tonics where there was lack of compensation. If the myocardium was diseased, digitalis should certainly not be pushed; if, on the other hand, there was endarteritis or aortic lesions increasing the tension in the arteries, digitalis was certainly contraindicated. In other cases if the heart were made to contract a little more forcibly the nutrition of the heart muscle would be improved just as it was by appropriate exercise. Digitalis had been so much abused that some physicians were discarding it altogether. This remedy was eliminated so slowly that probably its best action would be evoked by giving it only twice in the twenty-four hours, and in many cases it was well to combine it with nitroglycerin. During acute cardiac dyspnœa nothing would do any good which was introduced into the stomach. A most excellent cardiac stimulant was a saturated solution of camphor in olive oil. It acted quickly and very effectively, and he had never known its subcutaneous use to cause abscess.

The Capillary Area.—DR. ELI H. LONG of Buffalo was the author of this paper. He said that the regulating function of the arterioles was most important at all ages, but its conservation as age advanced was not surpassed by any other matter claiming our skill. A person showing the least danger of failure in cell nutrition should have his diet and mental work restricted; he should have an abundance of rest and recreation, and the excretory functions should be kept active. The daily cold bath acted as a valuable tonic to the body metabolism. In the advanced stages the vasodilators were useful, though they could not be looked upon as tonics. Here the carbonated baths proved beneficial.

Dr. SATTERTHWAITE thought the treatment of cardiac disease might be epitomized in the statement that our efforts must be directed toward the treatment of the capillary circulation. In his opinion digitalis was a dangerous drug to use in cases of fatty heart and in rheumatic conditions of the heart. He believed that strychnia should not be given continuously for more than two weeks at a time, but it could then be followed by arsenic with almost equally good results. It was most important to remember that digitalis requires hours to produce its effect, and that, therefore, it was a waste of precious time to use it in emergency cases. The Schott treatment was not suited for cases of arteriosclerosis because of the exercises. The baths themselves were not dangerous, but they should not be given when there was much sugar or albumin in the urine.

The Proper Introduction of Therapeutic Agents to Science and Commerce.—Dr. F. E. STEWART of East Orange, N. J., read a very suggestive paper on this topic, purporting to be a conversation between a drug manufacturer, an ethical physician, a pharmacist and a lawyer. The point made by the lawyer was that all products were the property of the public unless the government saw fit to protect them for a limited period by a patent. The paper was a very strong argument in favor of the pharmacopœia, and a plea for its hearty and more general support by physicians and pharmacists. The medical profession has been so negligent in this matter that it had become a stepping-stone for the introduction of many new nostrums.

Proposition for a National Bureau of Materia Medica.—Dr. A. C. BARNES said that Dr. Stewart had done an excellent service in advocating a national bureau of materia medica, which would supply the profession with reliable information, and would rid physicians of much annoyance now inflicted by the nostrum venders.

SECOND DAY—WEDNESDAY, MAY 14.

Therapeutics of Chromium Sulphate (Green Chromic Sulphate).—Dr. LOUIS KOLIPINSKI of Washington, D. C., was the author of this paper. He said that, from its chemical constitution, chromium should possess therapeutic properties similar to those of zinc and manganese. His experiments in this line had been with the green chromium sulphate. The dose was one to four grains, three times a day, and it was best administered as a tablet triturate. It was useful in that form of cirrhosis of the breast found in aged single women, and also in the sexual impotence of males. It exerted a distinct controlling influence over the flushing and other nervous phenomena associated with both the natural and the artificially induced menopause. The author also thought he had found this remedy useful in a great variety of nervous diseases.

Treatment of Pulmonary Tuberculosis.—A symposium on this subject was presented as follows:

Climatic.—Dr. George Edward Tyler of Denver, Colo., discussed this topic. He said that the essential features of the climatic or fresh-air treatment of this disease were pure air, little humidity, abundant sunshine low wind velocity and low atmospheric pressure. Other things being equal, that climate was the best which had the largest amount of sunshine. The reason for the beneficial effect of high altitude was not yet clear, yet the clinical fact was indisputable. That temperature should be chosen in which the patient found out-door life the most comfortable, though after the patient had become to a certain extent hardened by exposure a cool climate was desirable. The author had prepared a table embodying a study of the statistics obtained from sixteen stations of the U. S. Weather Bureau, situated in widely distant parts of this country. Attention was especially directed to the fact that there was no direct relation between relative humidity and precipitation. From the statistics presented it was shown that the Rocky Mountain range possessed the least density of population, slight humidity, low precipitation, little wind, and almost an entire absence of fog and a large amount of sunshine. The neurasthenic and the excitable do not do well in such a stimulating atmosphere. Persons with active cavities were nearly always positively harmed by residence in high altitudes, and the same was true of those having valvular heart disease. Cases showing the very slightest physical signs and tubercle bacilli, but no elastic tissue, were usually benefited and often cured by a proper selection of climate. Hemorrhage was not a contraindication to high altitudes, unless it meant the presence of a large active cavity, yet it was his conviction that pulmonary hemorrhage was more often fatal in those living in high altitudes. The question of homesickness should receive careful consideration before sending a person away from home, and the same was true of the financial condition of the patient. While consumption was a disease of the poor, it should be remembered that none but the rich could afford it.

Medical.—Dr. Jesse Shoup of Washington, D. C., discussed this subject. He said that the different general blood tonics of service in this disease were iron, arsenic, strychnine, phosphorus and the vegetable tonics. Of the bactericidal class, creosote was, perhaps, the most important, and there could be no doubt that under its judicious administration the fever, cough and expectoration diminish. It was too disagreeable and painful when given by inunction. He had found guaiacol carbonate and the valerianate of guaiacol useful. Dr. S. Solis Cohen was an ardent advocate of the internal administraton of ichthyol, and others had reported favorably upon it, but, personally, he had found its administration exceedingly disagreeable to the patient, and its efficacy founded apparently on the contained sulphur. A third group of medicines was those which stimulate phagocytosis. Intravenous injections of cinnamic acid in glycerine emulsion had been given, and it had also been used subcutaneously, but it had been found a painful and very troublesome method of treatment. Recently, Dr. Shoup said, he had observed beneficial results from the use of 1-10 of a grain of arsenious acid twice daily, and 3-10 of a grain of cinnamic acid in early cases, and in chronic ones free from mixed infection, but in the acute cases this medication seemed to aggravate the disease. Klebs considered tuberculin T. R. almost a specific, and the speaker was of the opinion that it was a valuable adjunct to other treatment in suitable cases. For indigestion and gastric distress he had found nothing better than dilute hydrochloric acid with strychnine and thymol or menthol. Fever was best treated by rest and cold sponging. Night sweats were best treated by cold baths or sponging with cold water or alcohol and menthol, though in some instances the internal use of atropine was demanded. For the relief of the cough codein was very useful, or a tablet composed of cocaine, menthol and codein. His treatment of hemorrhages consisted in absolute rest and quiet, the local use of ice and the internal or hypodermic administration of morphine and hydrastin. It was of the greatest importance that the physician should see his patients at short intervals, preferably every day.

Dietetic.—Dr. William Henry Porter read this paper. He said that it had been demonstrated that the animal class of foodstuffs were easily digested and furnished the highest percentage of nutritive pabulum with the least exertion of the digestive organs. If the requisite amount of albumin were obtained by a proper arrangement of vegetable diet, a large excess of starch and sugar and a deficiency of fat would result. These ingredients were very much more evenly balanced in the animal foodstuffs, but there was a deficiency of the iron-bearing compounds or nucleoalbumin. The two classes of foodstuffs should, therefore, be mixed, the animal predominating. In addition to easy digestibility one must secure the requisite production of heat and energy. The over-production of heat was less detrimental than the overtaxing of the oxygenating capacity of the system. The true cause of imperfect oxidation appeared to be the ingestion of a larger amount of the albumins, sugars and fats than the system could utilize. The author's dietary, based on the foregoing facts, is as follows: 198 grm. wheat bread, 102 grm. eggs, 680 grm. of milk and 512 grm. of meat; a total of 1,492 grm. or 52 ounces, which is divided up into three meals. In tuberculosis it was almost impossible for the system to digest, absorb and utilize the necessary amount of food, yet the overcharging of the system with fats and alcoholic preparations only aggravated the condition. The author was of the opinion that a predisposition to tuberculosis was inherited; that the disease, after being acquired, could be fed out of the system in the manner indicated, and that the more general adoption of a meat diet by the American people in the past decade was responsible for the decrease in pulmonary tuberculosis.

Dr. Olin Leech of Washington, D. C., also made some remarks on this subject. He said that in the matter of feeding each case was a law unto itself, although the same general diet must be the starting point for all. Change of air with enforced rest, such as was secured by an ocean voyage, often increased the appetite most satisfactorily. The early nausea and vomiting was often relieved by the aerated waters or by the use of creosote and lime water, and in the more severe cases, a useful tablet was one composed of two grains each of bismuth subnitrate and oxalate of cerium and $\frac{1}{12}$ of a grain of the muriate of cocaine. A tuberculous patient should have plenty of good, juicy red meat, lightly broiled or scraped, fresh fish, eggs, milk, buttermilk, kumyss, coffee in moderation and an abundance of fresh water. Spinach, asparagus, cresses, lettuce, celery with mayonnaise dressing or pure Lucca olive oil on the salads were allowable, the salads being particularly useful as appetizers. Farina, sago, tapioca, custard and thoroughly ripe fruits might be allowed. Salt fish, pork, hashes and gravies must be avoided.

Physical.—Dr. Egbert Le Fevre of New York discussed this phase of the subject, more particularly the theories that had been promulgated to explain the vulnerability of the apex of the lung to tuberculosis. He advised that the development of the upper portion of the chest in children be watched by the physician, and, if necessary, that respiratory exercises be prescribed. In the second stage, by well-directed respiratory exercises, the arrest of the disease could be aided. He thought the pneumatic cabinet had a sphere of usefulness, but a limited one, and that its use required great judgment.

Dr. T. L. Coley of Philadelphia spoke of the comparatively new formalin treatment of pulmonary tuberculosis, which was based on the view that the whole danger from this disease was from secondary infection. Good reports had come from Italy, but the method, which consisted in the constant wearing of a mask wetted with formalin, was hardly applicable to hospital practice in this country.

Dr. A. C. Barnes of Philadelphia objected to Dr. Porter's paper, on the ground that it was largely theoretical. It was founded on the basis of nitrogen as a food element, whereas it was known that such was no criterion of dietetic value.

Dr. Eli H. Long of Buffalo spoke in favor of the inhalation treatment of early cases of pulmonary tuberculosis. He had used with much satisfaction such antiseptics as carbolic acid, tincture of iodine and the compound tincture of benzoin inhaled frequently in conjunction with steam.

Dr. Noble P. Barnes of Washington, D. C., said that it had been demonstrated, experimentally, that infection with tuberculosis could take place through the sperm and also through the ovum and placenta, although ordinarily a predisposition alone was transmitted by inheritance.

Dr. Robert Reyburn of Washington, D. C., said that an important means of preventing tuberculosis in children was by proper attention to the nose, pharynx and tonsils. His observations had led him to believe that tuberculin was a very dangerous agent. The fact that in three-fourths of the autopsies on old persons old and healed tuberculous processes are found showed the probable danger of lighting up anew such a process by the use of tuberculin.

A Contribution to the Therapeutics of Iron and Silver.—Dr. Albert C. Barnes of Philadelphia read this paper, which was the result of a research in this field. (See page 814.)

The Causes, Prevention and Treatment of Puerperal Eclampsia.—Dr. Robert Reyburn of Washington, D. C., read this paper. He considered the cause to be a retention of waste materials, arising from deficient metabolism, particularly of nitrogenous food, lack of exercise, and inactivity of the skin. The principles of prophylaxis were obvious. The curative treatment at full term was rapid emptying of the uterus, and, if necessary, venesection. In the earlier months he would advise trying every method of favoring elimination before resorting to the induction of premature labor.

Dr. Matthew D. Mann of Buffalo urged the use of veratrum viride hypodermically in doses sufficient to keep the pulse down to 60. Venesection, followed by the intravenous injection of saline solution, was often most valuable. In the cases coming on after labor he gave large doses of chloral and bromide per rectum.

Advances in Special Therapeutics.—A series of papers was presented under this heading.

Opthalmology.—Dr. D. B. St. John Roosa discussed this subject. He said that the more modern substitutes for cocaine had not shown any superiority over that drug. Protargol, in 20-per-cent. solution, had proved valuable in purulent conjunctivitis. The mechanical and surgical treatment of trachoma still maintained its supremacy. An operation still under trial was resection of the cervical sympathetic ganglia for glaucoma.

Gynecology.—Dr. Matthew D. Mann of Buffalo read this paper. He spoke of the decline of intraspinal cocainization and the growing popularity of anæsthesia by the combined use of nitrous oxide gas and ether. Thyroid extract had been found useful in certain fibroid tumors of the uterus; mammary extract was still on trial; adrenalin was useful in a few cases, while ovarian extract appeared to be wholly unreliable. Transplantation of the ovary had been shown to be possible, and that pregnancy occurred in a few instances. Present opinion was strongly against the vaginal removal of the uterus in cases of carcinoma, except in very early and circumscribed growths. There had been no material improvement in the technique of operations upon uterine fibroids. Increasing experience showed that these tumors were not so innocuous as was formerly supposed.

Surgery.—Dr. William H. Carmalt of New Haven presented this topic. While fully appreciating the many disadvantages of local anæsthesia, the speaker pointed out the usefulness of this method in a certain class of cases. He recommended the infiltration method with the prior injection of morphine and atropine. The occurrence of eight deaths in two thousand cases of intraspinal cocainization had made all conservative surgeons disinclined to practice this method farther. The use of Coley's toxins in inoperable cases of sarcoma was justified by the statistics, and it should be remembered that even where they failed to cure they often markedly inhibited the growth. Tetanus antitoxin was thought to be worthy of trial, considering the formidable nature of this affection. Reference was also made to operation in cases of hepatic cirrhosis and to the operation of decortication of the kidney for chronic Bright's disease.

Obstetrics.—Dr. Charles Jewett of Brooklyn considered in this paper only the subject of eclampsia. He thought that American obstetricians would do well to make more extensive trial of moderate doses of morphine in puerperal eclampsia. Post-mammary injection of saline solution, with or without the addition of sodium acetate for its diuretic action, was a useful adjunct. With regard to Cæsarian section for placenta prævia, the author showed by statistics that there was little to recommend this operation, and that, while it might be justified in exceptional cases, it was not to be looked upon as an ideal method of treatment.

Laryngology.—Dr. Charles H. Knight of New York read this paper. He referred first to the recent practice of obliterating nasal deformity by injections of paraffin. The use of adrenalin and cocaine in nasal surgery, he thought, possessed advantages which far outweighed the disadvantages. The proof that chloroform was especially dangerous in children having adenoids was overwhelming; nevertheless, he was in favor of using some other anæsthetic in adenoid operations. The operation of curetting in laryngeal tuberculosis should be reserved for superficial or circumscribed laryngeal disease occurring without an active tuberculous process in the lungs. The most satisfactory sedative for these cases was orthoform, conveniently administered in the form of a lozenge.

Orthopedics.—Dr. Newton M. Shaffer gave a brief sketch of the establishment of this specialty, and outlined what he hoped and believed would be its future.

Genitourinary Surgery.—Dr. Eugene Fuller presented, under this heading, a report of a case of hæmophilia with severe hæmaturia. The child was a Hebrew, and three or four of its brothers had died of hemorrhage following ritual circumcision. The usual treatment for the hæmaturia in this boy having had no effect, and the child being so weak from loss of blood that he could not raise himself in bed, he was put upon thyroid extract, five grains, three times a day. Improvement was noted almost from the very first, and he returned to the clinic two weeks later practically well. The speaker also dwelt upon the modern treatment of gonorrhœa, the value of antiseptics, and the great disadvantage, not to say danger, of using anodynes either before or after genitourinary operations.

Electrotherapeutics.—Dr. William James Morton read this paper. He said that the greatest recent advance in this department of therapeutics was in the use of high frequency, high potential currents. If the dermatologists would only give a fair trial to the brush discharge, he felt sure they would be pleased with the therapeutic result. Recent observations had shown that the actinic rays from an arc light may pass through the human body and may then be capable of acting upon a photographic plate beyond.

Pediatrics.—Dr. CHARLES G. KERLEY said that one of the great advances of recent years in pediatrics was the securing of a pure milk supply and the scientific modification of that milk so as to best adapt it to the individual child. Another important step in advance was in the treatment of infantile summer diarrhœa. Much progress had also been made in the knowledge of the limitations of drug treatment, and in a better appreciation of the essential features of child life.

Dermatology.—Dr. CHARLES W. ALLEN read this paper. He said that he made use of Lugol's solution as a test stain in obscure cases of tinea versicolor, pityriasis rosea and similar cutaneous affections. In the dermatomycoses-formalin solutions had proved very useful. For intertrigo a solution of methylene blue was both efficacious and agreeable; the only drawback was its color. Radiotherapy was, probably, the most important recent introduction into dermatology.

Neurology.—Dr. EDWARD D. FISHER presented this report. He said that his experience with trional, sulphonal, and dormio was that they did not produce sleep in painful conditions unless aided by opium, and that the system soon became accustomed to the dose, necessitating its increase. The slower action of sulphonal was often useful in prolonging the effect of a small dose of trional. He had found antipyrin with the bromides very useful in the treatment of mild forms of epilepsy and also of insomnia. In his hands, aspirin had proved beneficial in doses of ten or fifteen grains for the relief of neuralgia. A combination of pyramidon with the salicylates was valuable in the treatment of neuralgia. Cannabis indica, combined with digitalis, was a combination of much value, when used continuously for a long time, in the treatment of neurasthenics suffering much from depression and cardiac palpitation.

THIRD DAY—THURSDAY, MAY 15.

The Therapeutic Use of the Organic Extracts.—Dr. OLIVER T. OSBORNE of New Haven presented this paper. Speaking of the thyroid gland, he said that the function of this gland seemed to be to regulate the peripheral circulation and the secretion of the mucin. He believed that the dose of all these glandular extracts should be small, as the physiological output from the glands was small. In simple goiter he could see no advantages in thyroid extract treatment *per se*. As he believed Graves' disease was due to a hypersecretion of the thyroid, the extract of this gland seemed to be contraindicated as a remedy in the active stage of this disease. If there were cerebral excitement, palpitation and progressive loss of weight, thyroid treatment was contraindicated, but if the patient were apathetic, had no palpitation, and was increasing in weight, thyroid extract was probably beneficial. He believed many cases of so-called hysteria were caused by temporary disturbances of the thyroid gland. He believed it was dangerous to use large, or even moderate, doses of thyroid extract for the purpose of reducing the body weight, particularly in persons showing a family tendency to obesity. The increase of weight occurring after the age of forty years was due, in his opinion, to the atrophy of the thyroid gland, which takes place at this time. The feeding of thyroid produces a tendency to hemorrhages; hence this remedy was of value in amenorrhea. When the physiological reduction of the thyroid secretion was not gradual about the time of the climacteric, the flushings and other nervous disturbances characteristic of this period were apt to be troublesome. In the insanities developing at this time of life it might be well to try thyroid extract. He had not found in the literature the report of a single well-authenticated case of acromegaly in which an autopsy disease of the pituitary body had not been found. It had been recently asserted that in acromegaly there was a retention of the tissue-building substances, and the similarity of the changes occurring in the osseous system in this disease to those observed in phosphorous poisoning would seem to point to the presence in the body in the early stages of an excess of phosphorous. He had found no remedy which would relieve the excruciating headache of acromegaly so well as tablets of pituitary extract. He was convinced that thymus treatment was often of service in cases of hypersecretion of the thyroid. For several years past he had given thymus to all of his tuberculous patients, and had found that the patients uniformly did better when given this extract in addition to the usual methods of treatment. From six to nine grains should be given three times a day. No case of sudden cardiac failure or shock should be allowed to terminate fatally without at least a trial of adrenalin. Of the 1 to 1,000 solution from five to ten drops should be given every fifteen minutes for a few doses, and then once in three hours. Adrenalin solution should be used in Addison's disease, anæmia and other conditions characterized by low blood pressure. In shock from anæsthesia and narcotic poisons, especially morphine, there was an indication for the use of adrenalin. The therapeutic value of ovarian extract was still in doubt. The benefit derived from the administration of testicular extract appeared to be wholly due to the nucleoalbumin contained in this extract. He had tried parotid gland in dysmenorrhea with apparent benefit.

Dr. GEORGE E. TYLER of Denver, Colo., said that in a number of cases in which marked nervous phenomena had followed the artificial menopause, he had apparently secured good results from the administration of the ovarian extract.

Dr. CARL BECK of New York said that his skepticism regarding organotherapy had received a rude shock by witnessing a case in which uterine myoma had been greatly reduced in size by the administration of mammary extract.

The Treatment of Opium Addiction.—Dr. SMITH ELY JELLIFFE of New York read this paper. There were three great classes of opium takers, he said, viz.: (1) Those making use of the ordinary pharmacopœal preparations of the drug; (2) Those taking it by smoking or smelling, and (3) Those taking morphine or its preparations by the mouth or subcutaneously. Great stress was laid upon the temperamental variations observed in this drug habit. The treatment recommended by the author had for its basis: (1) The substitution of different sensations by the use of other drugs, and (2) The substitution of different ideas by suggestion. Hyoscine hydrobromate, in doses sufficient to produce a stuporous condition had proved useful in his hands. Under the use of heroin and dionin there was a cessation of the craving and a sense of contentment was established.

Rontgen Therapy in Carcinoma.—Dr. CARL BECK of New York presented this paper. He said that soft tubes should be used for carcinoma of the skin and hard tubes for the deeper growths. The exposures for the first week should be only five minutes each, but, if there were no undue reaction, the exposure could then be increased to ten minutes and the interval gradually diminished. At first the tube should be placed two inches from the part. A noteworthy feature of the treatment was the speedy disappearance of the pain. Three patients were presented.

Dr. ROBERT REYBURN of Washington, D. C., expressed the belief that the principle of treating cancer by the knife was radically wrong, because of the exposure of the lymphatic channels to fresh infection with cancer. Caustics were improvement on the knife; the Röntgen ray was still better.

Dr. GEORGE E. TYLER hoped the enthusiasm over this Röntgen therapy would not lead to procrastination in the use of the knife.

Dr. BECK indorsed the views of the last speaker both on theoretical and clinical grounds.

The Treatment of Gonorrhœal Arthritis.—Dr. DE

FOREST WILLARD of Philadephia was the author of this paper. He said that as soon as effusion had occurred the joint should be tapped and the effusion withdrawn, and examined for gonococci. The diagnosis having been made, free incisions should be made on both sides of the joint and posteriorly, and the joint cavity flushed out most thoroughly with some bactericidal fluid. After this washing, if suppuration had not already occurred, drainage was not necessary, and the dressings and splint should be left undisturbed for ten days. Then massage, dry superheated air and passive motion should be employed to restore the function of the joint. If the joint refilled, the process should be repeated with or without drainage. The operation should be performed before any serious symptoms had arisen, and, of course, the source of the infection should be carefully treated to prevent a new infection. In the neglected cases a skiagraph should be taken, and then, on several successive occasions, under ether, an effort should be made to break up the adhesions.

Officers Elected.—*President*, Dr. Thomas E. Satterthwaite of New York; *Vice-Presidents*, Drs. Howard H. Baker of Washington, D. C.; J. N. Hall of Denver, and Oliver T. Osborne of New Haven; *Secretary*, Dr. Noble P. Barnes of Washington, D. C.; *Recorder*, Dr. William M. Sprigg of Washington, D. C.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held May 1, 1902.

ROBERT F. WEIR, M.D., PRESIDENT.

Abscess of the Prostate.—Dr. SAMUEL ALEXANDER presented a paper on this subject. He said that periprostatic abscess was an extension of a prostatic infection, a later development of prostatic abscess. Prostatic abscess, though of frequent occurrence, often passed unrecognized until it had destroyed certain adjacent structures. In nearly all cases such abscesses were the result of an infection derived from the urethra through the excretory ducts of the gland, the determining cause usually being traumatism. The amount of trauma necessary to produce suppuration of the prostate varied with the resistance of the organism. Sometimes such a slight trauma as an ordinary urethral injection was sufficient. Theoretically, infection through a single duct should infect only the one lobule, but in the urethral mucous membrane the infection of more than one lobule was the rule rather than the exception. Immediately preceding the formation of prostatic abscess the gland becomes swollen. One cause of the swelling was obstruction of the excretory ducts; another cause was the œdema resulting from the flow of blood through the prostatic plexus of veins becoming impeded. This swelling may be increased by sexual excitement or by increased frequency of urination, especially if the latter is associated with straining. The proof of this was to be found in the fact that when a catheter was used to drain the bladder, thus eliminating the straining efforts, the œdema of the prostate rapidly subsides. Abscess of the prostate terminates in several ways, viz. the pus may be discharged outside of the capsule into the perineum, or ischiorectal fossa, or open into the urethra. Such openings always occur on the floor or the side of the urethral canal, below the upper margin of the vera montanum. In prostatic abscess the pus escapes just below and to the outer side of the apex of the prostate, in the case of the perineum, and just to the side of the apex of the prostate, in the case of ischiorectal abscess.

Diagnosis.—In cases of prostatic abscess there was almost always a very large quantity of albumin found in the urine, entirely out of proportion to the pus or blood present, or the existing renal disease, and which disappears promptly on opening the abscess. The probable explanation was that, as a result of the pressure upon the veins and the œdema, serum was squeezed out into the posterior urethra and into the urine. Careful bimanual palpation would also detect an abscess of the prostate.

Operation.—When the abscess had extended outside of the capsule, operation was always indicated. The opening of the abscess through an incision made in the anterior wall of the rectum could not be too strongly condemned; these abscesses should be operated upon through the perineum and before periprostatic suppuration had occurred. The operation advocated was the opening of the prostatic abscess into the urethra by the ordinary perineal section. It should be remembered that the nearest approach of these abscesses was on the floor and the sides of the urethra above the vera montanum. The membranous urethra should be divided on a broad staff, and the prostatic urethra dilated with the finger. With another finger in the rectum, the point of greatest fluctuation is discovered, broken through and the bladder then drained for three or four days. In a great many cases epididymitis occurs, and nearly always the patient is up in five or six days, and at the end of the second week he is able to pass all of the urine through the urethra.

Dr. BRANSFORD LEWIS of St. Louis presented a number of plates, specimens and models illustrating prostatic hypertrophy.

Dr. JAMES BELL of Montreal reported an illustrative case beginning as a prostatic abscess, subsequently becoming periprostatic, and opening first anteriorly, then laterally and finally into the rectum, thus emphasizing the points brought out in the paper.

Dr. PAUL THORNDIKE of Boston said that the text books spoke of abscess of the prostate as a very common and dangerous disease. All would admit that it was common, but whether or not it was dangerous was a matter of opinion. He had only once seen a dangerous case, but he had been deeply impressed with the amount of pain and misery associated with this condition. When frequency of micturition was followed by pain and swelling, and the condition could not be quickly relieved, the time had come for operation. The dissection down upon the prostate between the urethra and the rectum was attractive to all; nevertheless, it left a large, deep wound which was slow to heal. Dr. Alexander had suggested as a method of operating one which was similar to his operation for the enucleation of the prostate, and it was technically easy and rapid, while convalescence after it was smooth and prompt. Occasionally the cases of œdema or congestion could be easily palliated, and for this purpose the tying in of a catheter would be found exceedingly useful.

Dr. F. TILDEN BROWN said he could substantiate what the author had said about the urine being markedly albuminous in these cases, and was inclined to accept the explanation given. Occasionally one met with a periurethral folliculitis, independently of an original prostatitis. In these cases the introduction of the finger into the bowel was extremely painful, as compared with what it was in cases of prostatic abscess. He suggested that after opening the prostatic abscess by the method described by Dr. Alexander, it might be better to make a counter-opening through the apex of the capsule of the gland, and using a light gauze dressing instead of a rubber drainage tube.

Dr. GEORGE E. BREWER said that he had frequently seen cases in which there was practically no fever, and cases in which even the retention disappeared or the irritability of the bladder became less, despite the presence of pus in the prostate gland. It was well to remember in obscure cases that the existence of suppuration was usually indicated by a leucocytosis. The older methods of operating upon prostatic abscess had served him so well that he was not prepared to unreservedly indorse Dr. Alexander's method of opening abscesses into the anterior urethra. It seemed to him much better to evacuate the abscess into the perineum without rupture into the bladder or urethra. In operating it should not be forgotten that sometimes these abscesses are multiple.

Dr. B. Farquhar Curtis said he had been surprised to hear the statement that prostatic abscess is a common disease, certainly it was not in the experience of the general surgeon. In tuberculosis of the prostate the capsule becomes distended, and owing to the painlessness of the condition the surgeon could readily study the distribution of the capsule. For the old periprostatic cases the horseshoe incision anterior to the sphincter seemed to him the best means of draining the ischiorectal spaces on either side of the prostate. In earlier cases, in which there was no infection from without, Dr. Alexander's method of operating seemed a valuable one. The dissection between the rectum and bladder seemed to him to be a comparatively simple one, the only disadvantage being the possibility of the formation of a sinus, yet he had healed these cases, even when tuberculous, without a permanent sinus. He was one of those who favored the method of draining the bladder by tying in a catheter.

Dr. John Vander Poel spoke of the obscurity of the etiology of prostatic abscess. He thought a distinction should be made between so-called follicular abscesses and true abscess of the prostate. The former might be present for a long time without giving rise to pronounced symptoms. Catarrhal prostatitis or prostatic congestion was exceedingly common, resulting from (1) Venereal excitement; (2) Such excitement without gratification; (3) Masturbation, and (4) By withdrawal. Such congestion favored bacterial infection.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, Held April 24, 1902.

James N. West, M.D., Chairman.

A Large Vaginal Cyst Removed in Toto.—Dr. H. J. Boldt presented this specimen. Beginning on the anterior wall of the vagina, he had traced it up into the broad ligament, and had slowly dissected it out. There was a good deal of hemorrhage, as was usual in cases of vaginal cyst. It was his opinion that the large cysts originate from the parovarium or the Wolffian ducts, while the small ones arise from a gland in the vaginal wall. He thought it a better procedure to extirpate the summit of the cyst, and unite the sac and vaginal mucous membrane.

Ruptured Tubal Gestation; Formation of Hæmatocele with Rupture of the Hæmatocele Wall.—Dr. Boldt reported this case, and presented the specimen. The patient was a woman of thirty, the mother of one child, born seven years previously. There was the usual history of ectopic gestation, except that she had not missed a menstrual period. However, with the onset of this period, an atypical bleeding and characteristic cramp-like pains had become the prominent symptoms. When the bleeding was not free the pain became excruciating. These symptoms had existed for five weeks before he saw her. Examination revealed a retrouterine mass with an indistinct outline toward the median line. On the right side was what appeared to be a hæmatocele. On the following day, on performing abdominal section, a rent was found on the inner side of the hæmatocele, through which clots and fluid blood were escaping into the peritoneal cavity. Convalescence progressed favorably.

Extirpation of the Uterus and Vagina for Complete Procidentia.—Dr. Boldt said that this patient was an aged widow, who had been prevented from attending to her household duties by the prolapse. The operation, described by Edebohls, seemed to him appropriate for this case, as the technique was simple and a permanent cure seemed to be assured. Seven sutures were used to columnize the vagina. The patient was doing well. The speaker said that when the vagina was not to be obliterated the most satisfactory results had been obtained by an anterior and posterior colporrhaphy with a perineorrhaphy. The abdomen was then to be opened and a high ventral fixation done.

Dr. Bache Emmet thought there would seldom be any need for this operation, as the same result could be practically secured by closing the vagina.

Benign Tumors Complicating Pregnancy.—Dr. Bache Emmet presented this paper. (See page 805.)

Malignancy Complicating the Pregnant State.—Dr. Simon Marx read this paper. (On page 808.)

Uterine Displacements Complicating Pregnancy.—Dr. Edward A. Ayres was the author of this paper. He said that such displacements, by their interference with the circulation in the uterus, were prone to cause abortion. Marked hypertrophy of the cervix was sometimes mistaken for procidentia. In order to prevent abortion, the patient should remain in a recumbent posture as much as possible, the uterus should be supported by inflated soft rubber rings, and as much room as possible above should be obtained by regular and thorough evacuation of the bowel and the use of a light diet. Pernicious vomiting might result from incarceration of the uterus in the pelvis. Efforts to replace the organ by taxis should be made after emptying the bladder by catheter. Unusual difficulty in micturition should awaken suspicion and lead to investigation. The bladder was certainly drawn upward to an enormous extent by the presence of adhesions, but such cases were best let alone, as the gradual enlargement upward of the uterus was the best taxis. The operation of ventral fixation was now generally considered to be a probable source of trouble in pregnancy, while the operation of suspensio uteri, or the union of the uterus to the abdominal wall by a band of peritoneum of indefinite length, rarely give rise to obstetric complications. Operations which shorten or double up the ligaments of the uterus were vicious from the standpoint of the obstetrician. Ovarian cysts often demand operation, and it was well to remember that, when operative interference was required, it could be done during the fourth month of pregnancy with the least risk of interfering with the progress of pregnancy. When the removal of the complicating tumor would probably prove a difficult or serious procedure, it was better to empty the uterus and postpone operation until after the mother had recovered from this. The hernias of the pregnant uterus were umbilical, ventral and inguinal. Pregnancy and labor might be seriously interfered with by certain forms of intestinal hernia. Inguinal and fermoral herniæ discovered during pregnancy should be reduced, if possible, and suitable trusses applied. Vaginal hernia should be reduced, or, if this were not possible, should be kept empty by ballooning the vagina with a colpeurynter until the latter was pushed out.

Inflammatory Diseases Complicating Pregnancy.—Dr. Henry C. Coe discussed this topic. He said that acute gonorrheal infection of the pregnant uterus was fortunately infrequent, although the chronic form was common and, in his opinion, was the cause of premature delivery more often than was generally recognized. The treatment of acute endometritis in pregnancy followed the ordinary rules. The best treatment of chronic endometritis was thorough curettage and cauterization of the uterus. As the preparation for a subsequent pregnancy, this treatment often proved most successful in women who had repeatedly miscarried. That acute oophoritis might complicate pregnancy he had shown in a paper published in 1892. Where the abscess could be clearly located, the line of treatment was clear. A median section after the sixth month of pregnancy would be attended with serious risk of infection. With pus clearly pointing in the posterior or vaginal fornix, the patient's chances would be improved by incising at this point rather than trusting to spontaneous rupture. He had known a cystic ovary to become a true ovarian cyst in the course of pregnancy. He would not hesitate to open the abdomen to break up periuterine adhesions if the indications were clear. In cases of old gonorrheal pysosalpinx the outlook was more serious. The probability of fresh indication from the side of the bowel, where the diseased ovaries were adherent to the intestine, should be borne in mind, and due attention given to the state of the bowels. In cases of pregnancy demanding laparotomy for any reason, he would advise making the incision to the right of the outer border of the rectus. Proctitis, ulcers and fissures of the rectum, and hemorrhoids often caused serious inconvenience to the pregnant woman.

What Aid Can the Pathologist Give in Diagnosis and Prognosis in Complications of Pregnancy.—Dr. William S. Stone read this paper. He said that a complete history would greatly help the pathologist in his effort to aid the clinician. He had known chancroid of the cervix to be confused with malignant disease, and only differentiated by microscopical examination. The possibility of the presence of deciduoma malignum in every case of irregular bleeding, particularly after the discharge of a uterine mole, should be borne in mind. The examination of the vaginal discharges during pregnancy might be the means of preventing infection in the puerperium. Examinations of the blood in cases of severe infection often afforded an index of their severity.

Discussion on the foregoing papers was postponed to the next meeting, owing to the lateness of the hour.

Surgical Suggestions.

Inguinal Adenitis.—If healing progresses slowly, the granulations may often be stimulated by ichthyol combined with blue ointment. If the case progresses as it ought, evidences of outstanding inflammation should disappear, as well as lymphatic hypertrophies, and the cavity should gradually fill up with solid granulations.—Eugene Fuller.

Ecthyma.—To cause the crusts to fall and regulate the local circulation:

℞	Safran	0.40 gm.
	Sulphate of zinc	7. "
	Sulphate of copper	2. "
	Boiled water, camphorated, to saturation and filtered	1 liter.

—Sabouraud.

Manson's Method is by far the safest method in the case of abscesses buried deeply in the substance of the liver. The tapping is done by a trocar and canula, and a large tube inserted stretched on a metal rod through the canula to the bottom of the cavity. Thereafter siphon drainage is employed, and the cavity is left to drain without either washing out or flushing. The chief danger lies in the possibility of displacement of the tube.—*Cautlic.*

Anthrax.—Sclavo's serum has a specific action. Carbolic acid may be used until the serum becomes accessible. Injections may be made at a distance from the local process.—Federici.

Various Hints.—In fracture of the patella, whether treated by wiring or any other method, the limb should be immobilized for about six weeks.

In operating for appendicitis, if you find coils of intestine adhering to each other, always wall off the rest of the peritoneal cavity with sterile pads, as if you knew that you were dealing with an abscess, for you can never know how soon a sudden gush of pus may take place.

After intra-abdominal operations distress from gas low down in the bowel is best relieved by enemata of hot water. If there is some shock and the presence of intense thirst, or if the latter alone exists, a pint of saline solution by the rectum will relieve the shock and to a considerable degree assuage the thirst.

In bullet wounds of the stomach, if there is a posterior opening which cannot be reached by incising the anterior layer of the great omentum midway between the colon and the greater curvature of the stomach, it will be necessary to open the anterior wall, repair the posterior wall through this opening, and then close the anterior one.

In intestinal paralysis following operative procedures within the abdominal cavity, give a high enema, consisting of sulphate of soda, sulphate of magnesia, inspissated oxgall, 2 drachms each, and turpentine 1 drachm, in a pint of warm water. The prompt use of this injection has saved many lives.

In operating, beware of too many assistants. They will surely get in each other's way unless trained to a high degree of efficiency. It is also well not to have too many instruments. Provide those that are needed, and those which an emergency may call for, but have nothing that is unnecessary, and not too many instruments in one pan.

In operations for chronic conditions of all kinds, in adults, it is well to estimate beforehand the amount of urea that is being excreted by the patient. If, as is very often the case, the secretion of urea is diminished, it is wise to institute some preliminary treatment for this condition. Attention to this point will bring about more satisfactory results.

In old prostatic cases rapidly increasing difficulty in urination is often caused by constipation. If the bowels are thoroughly moved the difficulty will often disappear in great part.—*International Journal of Surgery*, December, 1901.

More Hints.—In cold weather, when making use of chloride of ethyl for local anæsthesia, it is well to warm the part beforehand. This will secure better evaporation and more complete anæsthesia. It also prevents waste, as a much smaller amount of the chloride of ethyl will produce the required degree of anæsthesia.

Never use sutures larger than are necessary to properly maintain approximation, or ligatures larger than will suffice to hold safely the vessels or pedicles they are to constrict. Even when absorbable they are foreign bodies.

If there is no evidence that a bullet has perforated important organs, such as the hollow viscera, or that it is causing hemorrhage, or that it is producing dangerous pressure, no attempt at extraction should be made. The wound is to be treated antiseptically. If sepsis should occur, the general rules governing the treatment of septic foci must be applied.

In a wound occurring in some place where no aseptic dressings can be procured, it is better to leave it exposed to the external air than to cover it with probably infected substances. A protective crust or scab will thus rapidly be formed.

Whenever tendons are sutured it is necessary to maintain the limb in such a position that the muscles whose tendons have been rejoined shall be as perfectly relaxed as possible. In suturing nerves the parts should be kept absolutely at rest for a period of at least three weeks.

A surgeon who keeps on breaking small ligatures when tying minor bloodvessels gives evidence of the fact that he is using an altogether unnecessary amount of force, at least ninety-nine times out of one hundred.

Any dressing or apparatus applied to a person either insane or suffering from delirium tremens must be proof against the almost certain efforts on the part of the patients to tear these away.

In the case of a wound of the skull in which there is evidence of depression, even to the slightest extent, and if the means of doing aseptic surgery are at hand, conservative surgery is out of place. It is now a cardinal rule that depressed bone in the skull must be elevated or removed.

In erysipelas of the face of uncertain origin always examine the nasal cavity. The starting-point of the infection is sometimes to be found in small purulent collections confined beneath crusts, or in pustules situated around the hairs at the meatus.—*International Journal of Surgery*, 1902.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending May 17, 1902:

	Cases.	Deaths.
Measles	450	20
Diphtheria and croup	281	44
Scarlet fever	402	41
Smallpox	58	9
Varicella	68	..
Tuberculosis	294	168
Typhoid fever	23	14
Cerebro-spinal meningitis	..	3

Precautions Against Cholera in Manila.—The following sanitary order was issued by the military authorities in the Philippines, on the appearance of cholera in Manila:

1. Asiatic cholera is a disease the infection of which is taken in by the mouth. As a preventive it is therefore necessary to eat or drink only articles in which the infective principle has been destroyed by distilling, cooking, etc. Unboiled water, including aerated waters not imported, and sorbete, the native ice cream, fresh vegetables of any sort, as lettuce, cabbage, fresh fruits, etc., which are not cooked in their preparation are, therefore, dangerous and to be avoided. In addition, the greatest care must be given to the preparation of foods and the dishes on which they are prepared or served. The infection may be carried by washing such dishes with infected water or by wiping them with cloths which have been washed in such water.

2. All officers stationed in the division of the Philippines will give personal instructions and care to see that no member of their family, or servant of their household, drinks water that has not been distilled, or if not distilled, that has not been thoroughly boiled for at least twenty minutes, or any aerated waters that have not been imported, or sorbete, or eat fresh vegetables or fruit of any sort which have not been thoroughly cooked. Further personal care and superintendence is enjoined in the use of boiled water in the washing of dishes and the boiling of clothes, which have been used to wipe such dishes. The irresponsibility and ignorance of native cooks render careful supervision of the kitchen imperative, in order to avoid this disease.

3. The same care is enjoined, as specified in the preceding paragraph, in the use of water and preparation of foods in barracks or other buildings or camps where enlisted men or government civilian employees are stationed. All soldiers and all United States civilian employees are forbidden to use water for drinking obtained from the rivers or wells in the vicinity of Manila, unless the same has been distilled or thoroughly boiled. No excuse for ignorance in regard to this will be accepted, and proper disciplinary measures will be applied for any violation of this paragraph.

4. In order to prevent possible infection of food by flies, company commanders and other persons in the military service or attached thereto, in charge of messes, are enjoined to take the necessary measures to protect all food from flies and other insects. That this may be carried out, food should not be placed upon the table until immediately before it is to be served, and it should be covered at all times. The attention of company commanders and other persons in the military service, or attached thereto, is called to the necessity of care in covering the contents of dry earth or other closets with earth or chloride of lime, in order that flies may not have access to such contents, with possible transference of infectious material by such flies to foodstuffs.

5. As the division commander cannot be certain that saloon-keepers will not serve unsterilized water for customers to drink, all persons in the military service or civilian employees therewith are directed to confine their drinks at saloons, if they drink at all, to beer.

6. A sentinel or responsible watchman will be posted at every faucet where water is obtained from city water mains for army use, and such sentinel or watchman will be instructed to let no person drink thereat.

7. All officers and employees of the transport service, ships chartered or otherwise employed in the military service, will be at once warned to comply strictly with the foregoing regarding consumption of vegetables, etc., and drinking water.

8. All persons affected with diarrhœa or vomiting will report themselves immediately to their medical officers for treatment.

9. All cases of cholera, or cases suspicious of that disease, coming to the notice of medical officers will be immediately reported by telegraph to the chief surgeon of the division.

10. Cholera having made its appearance in Manila, careful attention to diet and the use of water rendered safe by boiling, with the avoidance of unsanitary localities, are all necessary in order to secure immunity from that disease.

11. This order will be read to all troops as soon as received and a copy kept posted in all barracks, quarters, and camps.

College of Physicians of Philadelphia.—Section on General Medicine.—At a stated meeting, held May 12, Dr. A. Hand, Jr., read a paper entitled "The Acarus Farinæ, an Occasional Parasite Found in Urine; Exhibition of Specimen." He pointed out that animal parasites may gain entrance into the urine (1) through the blood, (2) from the surface of the body or the clothing, (3) by contamination subsequent to voidance. He reported three cases in which the acarus farinæ was found—in two cases in children and in one in the father of one of these. The channel through which the parasite gained entrance was not clear, although it may have been through the intermediation of a dusting powder. Drs. J. D. Steele and A. P. Francine reported a case of cancer of the stomach in which the tumor was demonstrable by palpation and percussion and its detachment from the colon was shown by inflation of the colon. Drs. Charles W. Burr and A. C. Buckley reported a case of spinal rigidity due to rheumatoid arthritis, with autopsy. The patient was a young man who presented, in addition to rigidity of the spinal column and some interference with mobility at the hip and shoulder joints, cutaneous hyperesthesia, with small areas of anæsthesia on the thighs, exaggerated knee-jerks and increased plantar reflexes. Death resulted from pulmonary tuberculosis, with invasion of other organs, and post-mortem examination disclosed, in addition to ankylosis at the articulations of the lateral processes of a number of the thoracic vertebræ, slight degenerative changes in the posterior nerve-roots of the spinal cord and slight interstitial inflammation of the sciatic nerves. Drs. D. J. McCarthy and T. D. Henderson read a paper on "Spondylose Rhizomelique and the Relative Frequency of Spinal Involvement in Rheumatoid Arthritis." He related one case in which only the vertebral articulations appeared to be involved in the morbid process, with symptoms referable to the nerve-roots, and a second case in which other joints were involved. In a series of cases of deforming arthritis it was found that almost all of any standing exhibited some rigidity of the spinal column. Dr. F. A. Packard exhibited the heart from a case of aortic regurgitation with murmur audible at a distance from the chest. The phenomenon was attributed to a fenestrated aortic valve that was found.

Harvard University has awarded the Boylston Prize for 1902 to Doctor Robert L. Randolph, Associate Professor of Ophthalmology and Otology in the Johns Hopkins University. Dr. Randolph's work is an experimental one and is entitled "The Rôle of the Toxins in Inflammations of the Eye."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended May 17, 1902:

		CASES.	DEATHS.
SMALLPOX—UNITED STATES.			
Alabama, Mobile	May 10	21	
California, Los Angeles	Apr. 19–May 3	11	
San Francisco	Apr. 27–May 4	7	
Colorado, Denver	Apr. 28–May 5	3	
Florida, Jacksonville	Apr. 26–May 10	4	
Illinois, Belleville	May 3–10	3	
Chicago	May 3–10	10	1
Galesburg	May 3–10	5	
Peoria	Apr. 1–30	26	
Indiana, Evansville	May 3–10	1	
Indianapolis	May 3–10	6	
Kentucky, Covington	May 4–11	13	
Lexington	May 3–10	1	
Maine, Portland	May 3–10	1	
Maryland, Baltimore	May 3–10	5	
Massachusetts, Boston	May 3–10	28	6
Brockton	May 3–10	1	
Cambridge	May 3–10	1	
Everett	May 3–10	2	
Lowell	May 3–10	2	
Malden	May 3–10	2	
Newton	May 3–10	1	
Northampton	May 3–10	1	
Somerville	May 3–10	1	
Michigan, Detroit	May 3–10	2	
Grand Rapids	Apr. 26–May 10	7	
Minnesota, Winona	Apr. 26–May 3	1	
Missouri, St. Louis	May 4–11	48	
Montana, Butte	Apr. 27–May 4	4	
Nebraska, Omaha	May 5–12	20	
New Jersey, Camden	May 3–10	1	2
Hudson County, including Jersey City	Apr. 27–May 4	32	6
Newark	May 3–10	40	7
Passaic	Apr. 26–May 10	2	
Plainfield	May 3–10	3	
New York, New York	May 3–10	58	9
Ohio, Cincinnati	May 2– 9	11	
Cleveland	May 3–10	4	
Toledo	May 3–10	1	
Youngstown	Apr. 19–26	1	
Pennsylvania, Columbia	May 5–12	5	
Erie	May 3–10	3	
Philadelphia	May 3–10	24	2
Pittsburg	May 3–10	17	1
York	Apr. 1–30	3	1
South Carolina, Charleston	May 3–10	2	
Greenville	Apr. 26–May 3	1	1
South Dakota, Sioux Falls	May 3–10	1	
Tennessee, Memphis	May 3–10	21	1
Nashville	May 3–10	1	
Texas, San Antonio	Apr. 1–30	3	
Utah, Ogden	Apr. 1–30	3	
Salt Lake City	May 3–10	1	
Washington, Tacoma	Apr. 27–May 4	3	
Wisconsin, Green Bay	May 4–11	2	
Janesville	May 3–10	3	
Milwaukee	May 3–10	9	
SMALLPOX—FOREIGN.			
Great Britain, Birmingham	Apr. 26–May 3	7	
Gateshead	Apr. 26–May 3	1	
Leeds	Apr. 26–May 3	1	
Liverpool	Apr. 26–May 3	6	
North Shields	Apr. 26–May 3	7	
South Shields	Apr. 26–May 3	4	
Sunderland	Apr. 26–May 3	2	
India, Bombay	Apr. 8–15	..	16
Calcutta	Apr. 5–12	..	7
Karachi	Apr. 6–13	3	2
Madras	Apr. 5–11	..	3
Italy, Naples	Apr. 12–26	11	
Mexico, City of Mexico	Apr. 27–May 4	1	1
Vera Cruz	May 3–10	2	
Spain, Malaga	Mar. 1–30	..	5
YELLOW FEVER.			
Costa Rica, Port Limon	Apr. 23–30	1	
Mexico, Vera Cruz	May 3–10	17	9
CHOLERA.			
China, Amoy	Mar. 29–Apr. 5	2	2
India, Bombay	Apr. 8–15	..	1
Calcutta	Apr. 5–12	..	172
PLAGUE—INSULAR.			
Hawaii, Honolulu	Apr. 29	..	1
PLAGUE—FOREIGN			
China, East Honam	May 2	Epidemic.	
India Bombay	Apr. 8–15	..	664
Calcutta	Apr. 5–12	..	603
Karachi	Apr. 6–13	153	116
Japan, Nagasaki	Apr. 1–20	..	1

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

De la Conjunctivite Granuleuse. By Dr. Z. Hourmouziades. 16mo, 190 pages. Illustrated. 4 Rue Antoine Dubois, Paris, France. Price, Fr. 4.

Les Courants de Haute Frequence en Dermatologie. By Dr. H. Lebon. 60 pages. 4 Rue Antoine Dubois, Paris, France. Price, Fr. 2.

Quain's Dictionary of Medicine. By various writers. Third edition. 8vo, 1892 pages. Illustrated. D. Appleton & Company, New York. Half Morocco. Price, $10.00.

Annuaire des eaux Minerales. By Dr. G. Morice. 16mo, 351 pages. Illustrated. Paris, France. Price, Fr. 1.50, a la librairie Maloine, 23 place de l'Ecole de Medecine.

The Practical Medicine Series of Year Books. Vol. V. Obstetrics.—By Reuben Peterson and H. F. Lewis. 12mo, 233 pages. Illustrated. The Year Book Publishers, Chicago, Ill. Price, $1.25.

The Study of the Pulse, Arterial, Venous and Heptic, and the Movements of the Heart. By James Mackenzie, M.D. 8vo, 325 pages. Illustrated. The Macmillan Co., New York. Price, $4.50.

The Operations of Surgery. By Jacobson and Steward. Fourth edition. Vol I. 8vo, 727 pages. Illustrated. P. Blakiston's Son & Co., Philadelphia, Pa.

The Operations of Surgery. By Jacobson and Steward. 8vo, 775 pages. Illustrated, Vol. II. P. Blakiston's Son & Co. Philadelphia, Pa.

The Surgery of the Rectum. By Chas. B. Kelsey, M.D. 8vo, 402 pages. Sixth edition. Illustrated. William Wood & Co, New York City.. Price, extra muslin, $3.00 net.

The Röentgen Rays in Medicine and Surgery. By F. H. Williams. 8vo, 704 pages. Illustrated. The Macmillan Co., New York.

Forty-ninth Annual Report of the Mount Sinai Hospital of the City of New York, January, 1902. 8vo, 164 pages. Isaac Goldmann Co., Printers, New York City.

International Clinics: a Quarterly of Illustrated Clinical Lectures, Etc. By Henry W. Cattell, M.D. 8vo, 306 pages. Illustrated. Vol. I. Twelfth series. J. B. Lippincott Co., Philadelphia, Pa. Price, $2.00.

Health, Speech, and Song. By Jutta Bello Ranske. 8vo, 158 pages. Illustrated. Swan, Sonnenschein & Co., Ltd., London, England. Price, $1.25 net.

Sanatoria for Consumptives. By F. Rufenacht Walters, M.D. 8vo, 446 pages. Illustrated. Second edition. Swan, Sonnenschein & Co., Ltd. Price, $5.00 net.

Hernia, Its Etiology, Symptoms, and Treatment. By W. McAdam Eccles. Second edition. 8vo, 233 pages. Illustrated. William Wood & Co., New York. Price, muslin, $2.50 net.

Johnson's First Aid Manual. By Fred B. Kilmer. 8vo, 117 pages. Illustrated. Johnson & Johnson, New Brunswick, N. J.

Transactions of the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, 1901. By W. P. Letchworth. 8vo, 221 pages. Illustrated. C. E. Brinkworth, Buffalo, N. Y.

Fragments in Philosophy and Science. By James Mark Baldwin. 8vo, 389 pages. Charles Scribner's Sons, New York City.

Selected Essays and Addresses. By Sir James Paget. 8vo, 445 pages. Longmans, Green & Co., New York. Price, $5.00.

Hemoglobin Scale. By T. W. Tallquist. Wentzel Hagelstam's Forlag. Helsingfors.

Clayton Parkhill, M.D.—J. T. Eskridge, M.D. A Memorial, published by the members of the Denver and Arapahoe Medical Society.

A Laboratory Guide in Elementary Bacteriology. By W. D. Frost, M.S. 8vo, 355 pages. Illustrated. Second revised edition. By the author, Madison, Wis.

The Diagnosis of Surgical Diseases. By E. Albert. Translated by R. T. Frank, M.D. 8vo, 419 pages. Illustrated. D. Appleton & Co., New York.

Traite de Medecine et de Therapeutique. By Brouardel and Gilbert. 8vo, 998 pages. Illustrated. Librairie J. B. Bailliere et Fils, Paris. Price Fr. 12.

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Original Articles.

THE TREATMENT OF CHOLELITHIASIS.*

WITH REPORTS OF ILLUSTRATIVE CASES, INCLUDING ONE OF CHOLELITHIASIS IN A CHILD ELEVEN YEARS OLD.

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IN the treatment of disease it is the aim of the good physician to weigh carefully the peril or distress in which the patient is put by the malady and the possible dangers of the means which may be selected for his relief. A dangerous disease often demands a remedy which in itself may put life in jeopardy; but the risk is justified by the restoration of the health of the individual, who, without this risk, would have had to face early dissolution or an invalidism with the ever-present danger of fatal complications. Certain disorders will at once be brought to mind as belonging to this class, in which danger must be fought with danger, and eminent among these are the various infections of important or vital organs associated with conditions which may be relieved by mechanical means alone. Calculous disease at once occurs to us as the most perfect example of this class of ailments; yet, while urinary stone has, since ancient times, been regarded as a condition demanding surgical treatment, it has remained for the surgeons of our own time to point out the therapy of concretions within the vermiform appendix and those of the biliary passages. To be sure, an American surgeon, Dr. John Stough Bobbs of Indiana, did perform the first recorded operation for cholelithiasis, which he called "lithotomy of the gall-bladder," June 15, 1867,[1] with perfect success, but his example was not followed for many years.

Biliary calculi, according to Naunyn and Frerichs, quoted by Shattuck,[2] are due to the precipitation of cholesterin around a nucleus of precipitated bilirubin calcium, the process being caused by changes in the bile from stasis and catarrh. The presence of clumps of certain bacteria may also have an influence on the formation of the nucleus of a gallstone, and, indeed, M. W. Richardson of Boston has caused calculi to form in the gall-bladders of rabbits by injecting typhoid bacilli directly into the viscus.

The formation of gallstones may, to a certain extent, be prevented by exercise and the promotion of regularity of intestinal action. Stones having formed in the gall-bladder, however, it is impossible, so far as our present knowledge goes, to dissolve them or remove them by medical means alone.† (Kocher,[3].)

The next point to be considered, then, is, What may be the consequences of the presence of gallstones?

1. They may lie quiescent or latent within the gall-bladder, and in this case may do little, if any, harm.
2. Quiescent stones may, by constant slight irritation, cause carcinomatous degeneration of the gall-bladder or its passages. (Cumston,[4]; Kehr,[5].)
3. Gallstones may give rise to attacks of pain of the greatest severity. So terrible may this pain be that it has of itself caused death (Thomson,[6]), and the attacks may become so frequent as to make life practically unendurable.
4. Jaundice, with all its discomforts and dangers, is a common accompaniment of the stoppage of the common duct by stones or by the swelling of the mucous membrane caused by their presence.
5. Ulceration and infection of the gall-bladder.
6. Great tension of the gall-bladder, often with empyema of that organ, due to impaction of a calculus in the cystic duct.
7. Gangrene and perforation of the gall-bladder, with all the dangers which these accidents imply.
8. Cholangitis, extending into the finer ramifications of the biliary passages; a condition almost uniformly fatal.
9. Intestinal obstruction from adhesions around the gall-bladder, or from the presence within the gut of a gallstone of such size as to cause obturation.
10. Cirrhosis of the liver with all its disastrous consequences (Kehr,[7]), from prolonged obstruction of the common duct.

There are other evil results from the presence of tone besides those mentioned, but the list as it stands will suffice to show that cholelithiasis is not a condition to be taken lightly, either by the unfortunate patient or by his physician.

Knowledge of the existence of latent cholelithiasis should put us on our guard against the various complications and sequelæ which may occur. Medicine can do much toward preserving the latency of the disease and averting attacks of colic. Just as soon, however, as there appears a tendency to frequent or severe attacks, or whenever a complication arises, such as the impaction of a calculus or an acute infection of the gall-bladder, or when there is a steady boring pain in the epigastrium and in the dorsal region with intermittent icterus, indicating the presence of a stone in the common duct without true impaction, the case becomes one for the surgeon, and a delay on the part of the physician may be considered fully as culpable as delay in appendicitis.

Indeed, M. H. Richardson[8] goes so far as to maintain that gallstones should be removed as soon as their presence has been diagnosticated, unless a single stone without facets has been passed by the rectum, when it may be assumed that there are probably no others in the gall-bladder. This is by no means an invariable rule, however, for I have several times found more than one unfaceted stone.

Disease of the gall-bladder is, in many respects, similar to disease of the vermiform appendix. Concretions are as little likely to be removed by nature or by internal medicine in the one case as in the other. Spontaneous permanent cures are in both instances equally impossible. Acute infections are as dangerous in the one organ as in the other, or, perhaps, rather more dangerous in the case of the gall-bladder, for here we have jaundice and cholangitis as possibilities in addition to the perils common to both conditions. Malignant degeneration, too, is much more common as a result of gallstones than of appendicitis. Both diseases call for surgical intervention, although, as a rule, the operations for cholecystitis are of somewhat greater magnitude than those for the relief of appendicitis.

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*Read before the Metropolitan Medical Society, March 25, 1902.

†The few exceptions to this rule are in the case of very small stones. When large stones appear in the stools it is more than likely that they have ulcerated into the intestine, and not passed by the natural channels.

Surgery can go very far toward effecting a radical cure in these most serious cases, and, if the patients are operated upon in time, the mortality rate is surprisingly low. In fact, it is now pretty generally understood that, as in appendicitis, so also here the results of the surgeon depend entirely on the skill and wisdom of the physician in recognizing the approach of danger before it has become imminent.

I have operated many times for gall-bladder disease, twelve times extirpating the entire organ. But one patient has died who might reasonably have been expected to recover, and several of the worst cases have been cured. The fatal case referred to was my first of cholecystectomy, the operation having been performed June 18, 1896, for complete organic stricture of the cystic duct. The gall-bladder was very tense, and contained transparent serous fluid unstained by bile. The patient stood the operation well, and there was but little shock. The incision—a "cross cut" of the rectus, which I have now practically abandoned—was carefully closed by silk suture in five layers, but the following day, during a severe fit of coughing, the wound opened and the intestines prolapsed. Neither the ward nurse nor the house staff recognized the trouble until several hours had elapsed, when the prolapse was reduced, but the patient died of peritonitis. With this single exception, the fatal cases were all those of patients suffering from sepsis or chronic icterus.

My list of operations comprises cholecystotomy with drainage, which is the simplest of all; ideal cholecystotomy, in which the stones are removed and the gall-bladder closed by suture; cysticotomy, or incision of the cystic duct; choledochotomy, the most difficult and dangerous of these operations, the incision of the common duct, and, last and most radical, though not the most difficult, cholecystectomy or the complete removal of the offending viscus.

The choice of the kind of operation for each individual case is of the greatest importance, and it must depend largely on the general condition of the patient, as well as upon the character of the disease. In the early days of gall-bladder surgery it was considered sufficient to relieve the tension or drain the suppurating viscus regardless of such unfortunate results as bile fistula, or continued common-duct obstruction, or frequent relapses with the necessity for repeated operative drainage of the gall-bladder. In this respect, we note another parallel with appendicitis, which was formerly treated by mere drainage of the perityphlitic abscess, often repeated a number of times. Just as now we try to effect a permanent cure by the removal of the diseased appendix, so there is a strong tendency to such procedures as shall accomplish a similar result in gall-bladder disease, through the complete removal of the viscus. Perhaps there is no better way in which I can illustrate the present resources of this branch of surgery than by recounting a few of my cases with special reference to the proper selection of the type of operation or the contraindications to any form of surgical therapy.

Case I.—A lady, sixty-six years old, very stout, and with a tendency to cardiac weakness from excess of fat, was seen in a first attack of cholecystitis of a mild type, due apparently to cholelithiasis. The disease was of several days' standing, and there was a distinct tumor in the right hypochondriac region. Slight icterus. Temperature 100°. Pulse regular, but compressible. This case was not considered urgent, but the patient was carefully observed and treated medically, with the speedy subsidence of the attack.

Operative procedures in a patient of this type are particularly dangerous, and if undertaken at all they should be limited to the mere incision and drainage of the gall-bladder, which would have been undertaken at the first sign of general systemic indications of sepsis. It is not a case suitable for the interval operation, but rather for the prophylactic internal treatment, with the hope of bringing about continued latency, which, as Kehr has pointed out, is the next best thing to a cure. In feeble or aged individuals, then, or in those suffering from other serious organic disease, such as of the heart or kidneys, palliation and not cure is the better plan, reserving operative treatment for such emergencies as may themselves directly threaten life. Here, however, very frequent and severe biliary colic, with distension of the gall-bladder, in spite of thorough medical treatment, may be considered as threatening life, and the palliative operation should be performed at some time during the attack, while the viscus is tense and easily reached.

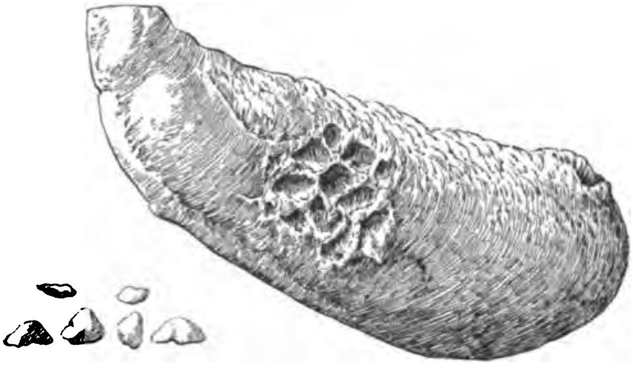
Case II.—H. H., a gentleman, fifty years old, had frequent and severe gall colics without jaundice; otherwise he seemed healthy, and Dr. Manges, who had examined him at my request, concurring in the diagnosis of cholelithiasis, it was determined to operate. On May 25, 1901, he was admitted as a private patient to Mt. Sinai Hospital. Just before his admission he had a sudden rise of temperature to 104°, with signs of acute obstruction and infection, so there was no further delay in operating. The patient bore the anæsthetic very badly, however, there being great irregularity and shallowness of the respiration, with a wretched and flickering pulse. Immediate relief by the quickest method became imperative, so the tense gall-bladder was speedily packed into the wound and cholecystotomy performed. No stone was found in the gall-bladder and none in the cystic duct. A full and careful exploration of the other ducts was out of the question, so the wound was hastily dressed and the patient sent back to bed. Convalescence with gall fistula followed, and the man is now in excellent health, but he is obliged to wear a tube in the fistulous opening, which discharges two or three ounces of bile per day, the remaining quart or more being evidently discharged by the normal passages into the bowel.

This case would have been suitable for cholecystectomy with the removal of any calculi impacted in the ducts. This being out of the question, however, on account of the bad anæsthesia, we had to content ourselves with the next best thing.

Case III.—Mr. L., a man thirty-one years old, was sent to me by Dr. L. Stieglitz with a diagnosis of cholelithiasis with frequent attacks of colic. The patient had had peritonitis some years before, probably from a gall-bladder infection. When I first saw him he was just recovering from an attack of colic, with slight fever and jaundice. A few days later he entered the private patient department of the hospital, and on July 23 I performed cholecystectomy. The operation was far from simple, because of numerous troublesome adhesions, apparently the result of the previous peritonitis. The thick-walled gall-bladder was of rather small size, and contained a number of irregularly-shaped pigment stones, which were so soft that they could be easily crushed between the fingers. Some of them were shaped like jack-stones, and the largest ones were the size of a large pea. After an annoying delay, due to the formation of a secondary abscess about the stump, this patient made a good recovery and remains in normal health.

This man was young and in good general health so that I was anxious to make as radical a cure as possible. Had I not removed the viscus, this could hardly have been accomplished, for the chronic infection and its resulting action upon the mucous membrane would have rendered the recurrence of cholelithiasis very probable.

Case IV.—Annie K., thirty-three years old, was admitted to my service at Mt. Sinai Hospital on January 24, 1902, with characteristic cholecystitis. There was a history of repeated attacks of epigastric pain, with vomiting, followed by jaundice. When admitted she had been sick three days, had had chills and vomiting and a temperature of 105°. The urine and stool were negative on examination. The liver was somewhat enlarged and the entire abdomen distended, with rigidity and tenderness in the right hypochondrium. January 25, the day following admission, the operation was performed, the anæsthetic selected being nitrous oxide gas, followed by ether. The abdomen was extremely fat. Adhesions present, but not very troublesome. The gall-bladder tense and apparently in danger of bursting on manipulation. Tension was relieved by aspiration, and then, after manipulating some cystic duct calculi back into the bladder, the entire organ was removed, the wound drained and closed by suture of the peritoneum and fascia, and the edges of the skin incision approximated by sterile zinc-rubber plaster. The illustration shows specimen. It has been turned inside out so as to show the changes in the mucous membrane. There are ulcerations and patches of gangrene, and one may see with great distinctness the bed which these stones have made for themselves in the mucosa, and can easily understand how such constant irritation as must have been here present, may be the direct cause of malignant change. The stones are faceted, and at least, in their outer portion, are of cholesterin. The entire viscus was filled with fully four ounces of grumous pus. I can recommend this method of preserving the gall-bladder for observation and study.



The patient was a very sick woman for many days on account of a severe bronchopneumonia with myocarditis. She was finally discharged well on March 5, thirty nine days after the operation.

Case V.—Esther W., thirty-five years of age, and an old sufferer from pure cholelithiasis with no signs of acute infection, was admitted to my hospital service last autumn for operation. She had never had fever, but for years had suffered from almost daily gall-colic. Stones had occasionally been passed by the bowel. On October 18, I made a small incision through the right rectus, and on digital exploration found a thin-walled rather contracted gall-bladder containing stones, the ducts being apparently empty. Because there had never been fever, in spite of the numerous attacks of colic, and because the walls of the viscus felt thin and absolutely normal, I merely incised it at its fundus, and after removing six stones as large as small hazelnuts I sutured the opening in the gall-bladder and then closed the abdominal wall in the usual manner, leaving a very small drainage opening. In eleven days the patient left the hospital perfectly well.

This is the so-called ideal cholecystotomy. Its application is extremely limited, since it is suitable only in cases like the one just recounted. If there is a suspicion of infection within the gall-bladder the operation is unsurgical, and should be set aside in favor of cholecystotomy with drainage or better yet, cholecystectomy.

Case VI.—The patient, Mrs. R. K., fifty-six years old, was referred to me by Dr. Alfred Meyer, who had examined her for the first time less than twenty-four hours before. The previous history throws no light upon the case. For three and a half days the patient had had complete intestinal obstruction, not yielding to usual cathartic measures. Then there came severe right hypochondriac pain without chill, but with constant vomiting, becoming intestinal in character. Her pulse rate was 86, the respirations 40, and the temperature 100.5°. The tongue was dry and the face drawn. No icterus. The abdomen was somewhat distended, and individual coils of intestine could be made out. The entire picture was one of intestinal obstruction, with the probability that it was due to a constricting neoplasm of the large intestine with acute symptoms, caused by inflammatory œdema, with complete closure of the lumen of the gut. An incision was at once made (February 23, 1902) in the right upper iliac region, with the idea that a colostomy at this point would relieve the obstruction and tide us over the present emergency. On opening the abdomen collapsed transverse colon and distended cæcum were encountered, an adhesion in the neighborhood of the tense and distended gall-bladder being the obvious cause. The adhesion was divided and the obstruction relieved. The gall-bladder being evidently the seat of serious acute disease, I fastened it in the wound by a few stitches, and drained it of its foul-smelling pus. Two or three days afterward I removed two large calculi through the cystotomy wound, and the patient is now convalescent.

Removal of the gall-bladder would have been the more radical procedure here, but the patient's condition was such that the risk would have been unwarranted. Let me call attention to the fact that we have here an example of true intestinal obstruction, directly caused by adhesions from cholecystitis.

Case VII.—Mrs. B., fifty-six years old, had for years been afflicted with what had been pronounced as gastric trouble. In September, 1901, she came from her home in the West to consult Dr. Manges, having for a number of weeks suffered almost continuously to such a degree that she had to be kept for the greater part of the time under the influence of opiates. She had lost much weight, no doubt partly due to the fact that she was unable to retain food taken by mouth. There was considerable jaundice, and a tender tumor could be made out in the right hypochondrium. The diagnosis of obstructive jaundice, probably due to gallstones, was made, and the patient was referred to me. Exploration was performed on October 18 through an incision through the right rectus, when it was found that the tumor consisted of a large right hepatic lobe. The gall-bladder was much contracted and contained stones, which were not removed at the time, because there were a number of large nodules in the liver which looked cancerous. The wound was, accordingly, left open for a secondary cystotomy, if advisable, and a piece of one of the masses removed for examination. It proved to be carcinoma, so nothing further was done. The patient lingered for a number of weeks and died asthenic. A post-mortem examination revealed stone in the gall-bladder, with carcinoma primary in that organ and with many metastases. One large mass simulated during life an enlarged and tense gall-bladder.

This case illustrates the course of malignant degeneration following cholelithiasis, probably quiescent for years.

My list will close with the following brief reports of three cases, which I may term ideal cholecystectomy, *i. e.* cases in which the operation was performed before the supervention of cholecystitis, adhesions, and jaundice.

Case VIII.—Mr. R., a gentleman fifty years old, in the practice of Dr. Walter Brickner, had repeated typical attacks of biliary colic. Cholecystectomy January 16, 1902. One large stone in the cystic duct was milked back into the gall-bladder, which contained five others, about as big as cherries, and several minute ones. Viscus, about as large as half a small sausage. Discharged from the hospital February 9 after an uneventful recovery.

Case IX.—A most unusual case. Cholecystectomy for cholelithiasis in a child eleven years old. Erma, J. W., a patient of Dr. W. W. Talley, had been troubled with attacks of jaundice at frequent intervals from her sixth year. The first attack came on after whooping cough. Jaundice usually lasted about two weeks. From her eighth year the child began to have colic preceding the icterus, and for a number of months before I saw her, the colicky attacks had become extremely frequent, so that the girl's skin was never of a normal color. I made the diagnosis of cholelithiasis, which was concurred in by Drs. Talley and I. Adler. On February 22 of this year I operated, removing a thickened and rather large gall-bladder containing a number of irregularly shaped pigment stones. There was no infection of the surrounding tissues and the operation was easily performed, the gall-bladder peeling with facility from the liver. The convalescence was absolutely normal and the patient was discharged from the hospital on March 9.

Case X.—Mrs. S., thirty years old, patient of Dr. Adler, was operated upon for cholelithiasis with frequent colicky attacks. The operation was performed on March 4 of this year, in interval between attacks. No adhesions complicated the case and the gall-bladder, containing a number of calculi, was quickly and easily removed. At the present writing, March 22, two and one-half weeks afterward, the wound is entirely healed, and the patient is kept in bed merely to insure the firmness of the cicatrix.[*]

Cholecystectomy, then, may be considered, other things being equal, the most radical treatment at our disposal for the cure of cholelithiasis. The operation devised by W. J. Mayo[9] is the next best thing. It consists in the evisceration of the mucous membrane of the gall-bladder and is practiced when formidable adhesions forbid the safe extirpation of the entire organ.

The postoperative course of a case of cholecystectomy is, as a rule, far less annoying to the patient and much simpler for the physician than the postoperative course of cholecystotomy with drainage. Then, too, the trouble from adhesions is much less after the clean removal of the gall-bladder than after cholecystotomy with fixation of the gall-bladder to the abdominal parietes. This latter condition has, in my experience, not infrequently been a source of considerable pain and distress from the dragging upon the liver.

It might be suggested that in the event of the formation of calculi in one or another of the ducts after cholecystectomy further operative measures might be rendered somewhat more troublesome on account of the absence of an important landmark. I can but say, however, that if this ever occurs it must be extremely rare, and should surely not be regarded as a serious surgical objection.

The gall-bladder has, perhaps, a function. I do not think that it has ever been discovered, but, whatever it may be, the preservation of the infected organ can scarcely overbalance the advantages of the radical cure of a distressing and serious disease.

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The Etiology and Treatment of Obesity.—Professor Debove says that in order that a person may lose weight he must be put on an insufficient diet without, however, allowing him to suffer from hunger or from the slightest constitutional disturbance. To assuage hunger all we have to do is to resort to aliments possessed of low thermic value, even when given in large quantities. He usually orders milk, preferably skimmed, mixed with water or tea, green vegetables and fresh fruit. Persons fed on fresh vegetables, raw meat, etc.—in fact, on what might be called living substances, are much better able to support an insufficient diet than others. The patients are allowed to drink as much water as they wish. Great care is taken to keep the bowels freely open. The author reports cases which demonstrate the value of his method of treatment.—*Medical Press and Circular.*

A Case of Tetany in an Adult.—Edwin A. Locke reports a well-marked case in a man of thirty-six years. The disease is relatively so infrequent in America as to be worthy of record. There was a striking absence of all the commonly recognized causes, but there were prolonged muscular work, fatigue, alcoholism, and exposure to cold and wet, which are usually mentioned as occasional causes of the disturbance. The condition was easily distinguishable from epilepsy, the muscular spasm of cerebral congestion, and hysterical conditions. Of especial interest in this case were the presence of polyuria and albuminuria during the attack, but few cases of either condition having been recorded. They are much more frequently found in children than in adults.—*Boston Medical and Surgical Journal.*

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[*] Ten days later this patient was discharged, the wound soundly healed.

ACROPARÆSTHESIA (THE PARÆSTHETIC NEUROSIS); THE ANALYSIS OF ONE HUNDRED CASES.

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It often facilitates the clinical recognition and pathological interpretation of a symptom to describe it in as much detail as if it were a disease. In this way its frequency, its association, its relationship to age, sex, occupation and environment, its duration, modes of onset and termination, may be determined. Our knowledge of headache, for instance, has been obtained largely in this way. The same is true of neuralgia, of delirium, of insomnia, all of which are symptoms, but which are commonly considered as entities in our textbooks.

Acroparæsthesia is comparatively a new term, having been introduced by Schultze of Bonn in 1893. Its significance is clear from its etymology. *Acros* is Greek for extremity, and paræsthesia a compound Greek word, signifying abnormity of sensation. Acroparæsthesia is, therefore, the term used to indicate abnormal sensation of the extremities, the sensations characterizing it being principally those of pricking, tingling, stinging and subjective numbness.

Attention was first called to the symptom-complex, now designated acroparæsthesia by Putnam of Boston in 1880. He stated that patients with this disorder presented a disturbance of the subjective sensibility of the skin, giving rise to what is popularly known as numbness, recurring periodically, coming on especially at night, or early in the morning, and affecting one or both hands, either alone or in company with the arms, the legs, or, rarely, the entire body. Putnam cited a number of typical instances of the affection, and gave an analysis of thirty-one cases which had up to that time come under his observation. His description of the condition was so accurate that little has been added to it. In 1885 Dana of New York, in an article on the acroneuroses, called attention to the same symptom-complex, and gave an analysis of twenty-eight cases. In this article particular attention was given to the morbid dependency of the condition. In the same year Saundby of London described it, and cited a number of illustrative cases. Despite these contributions the subject attracted little attention until Schultze, and afterwards Laquer of Frankfort-on-Main, in 1893, wrote their papers; the former giving to it the name by which it is now commonly known.

This neglect of the writings of two American neurologists has apparently given rise to a mistaken belief on the part of some writers, especially some German writers, as to who was the first to describe it. In the latest monograph in which the subject is treated, "Herzneurosen," by A. Hoffman of Düsseldorf, is found the astonishing statement (which, however, is not original with him) that until the article of Schultze the clinical picture was not generally recognized. This can only be true of *some* of his countrymen, for Schultze was familiar with the contributions of the writers above mentioned, as well as those of Ormerod, Bernhardt, Berger and others, who wrote upon this and allied paræsthesias, and he discussed them, fundamentally, in the article in which the term acroparæsthesia was first used.

In September, 1893, I published an article on the subject in the *Boston Medical and Surgical Journal*, under the title of "The Paræsthetic Neurosis," which was based upon a study of forty-three cases previously observed. In the same year Friedman of Mannheim analyzed and commented upon eight cases, while in the following year Sinkler of Philadelphia recorded his experience. Since that time the subject has not been much studied, save by Gallois, and by Charbo, the latter having devoted his inaugural thesis to it. Within the past two years, Edgeworth and Savill, in England, have published some cases, the latter attempting a classification of it, with other acroneuroses, but withal comparatively little attention has been given to the matter.

When I published my first article on this subject it seemed to me that there was a fatigue, or an intoxication state, of the nervous system, manifesting itself through the peripheral sensory nerves, whose chief symptom was paræsthesia of the extremities, which might be thought of as a clinical entity, and called the paræsthetic neurosis. Further acquaintance with the condition has convinced me of the unadvisability of considering it as a disease in the majority of instances, while at the same time it has corroborated the opinion then expressed as to its occurrence, morbid dependency, course and termination. I now look upon acroparæsthesia as a symptom, or symptom-complex, in the same way that I look upon headache or neuralgia, and it may be associated with or dependent upon as great a variety of causes. It is a symptom-complex which I seem to encounter every year with greater frequency, especially in my clinic, and for this reason I am prompted to again call attention to it. During the past five years the diagnosis of acroparæsthesia has been made one hundred times in my clinic, and it is from the records of these cases that the statements herein as to the causation, symptomatology and treatment are made. Attention is called to the fact that this diagnosis is never recorded when the symptom-complex of acroparæsthesia is associated with and, therefore, inferentially dependent upon such diseases as neuritis, rheumatism, gout, or other arthritic conditions, diabetes, pulmonary tuberculosis, or conditions commonly looked upon as surgical, such as flat foot and trigger finger. In a similar way clinical histories are not labeled "headache," even though this is the prominent symptom, when the disease is pachymeningitis, intercranial syphilis, or glaucoma. Paræsthesia of the extremities is a symptom of a number of diseases—for instance, any of those mentioned above, but it is not of these that I write. In some of these cases recorded as "acroparæsthesia" there may have been one of the conditions mentioned above with which paræsthesia of the extremities is associated. If so it could not be detected. In other words, the diagnosis was made only when the acroparæsthetic symptom-complex was the only manifestation of disease. There are many reasons for looking upon acroparæsthesia of this sort as a disease and not a symptom —that is, for considering it a fatigue or exhaustion state like neurasthenia, and I see no possible objection to so interpreting it—a symptom in some instances, a neurosis in others. Possibly it is oftener a symptom, pure and simple, than we believe, and that if we could recognize the earlier stages of arterial fibrosis and the lighter grades of perineuritis and sensory neuritis this form would still be commoner.

To call attention to the clinical picture of acroparæsthesia, I shall cite a case in detail, an unselected history, the last one recorded of the one hundred cases:

A widowed dressmaker, thirty-six years old, relates that last summer, while at Atlantic City spending her holiday, she first observed that soon after retiring, generally after she had got partly or wholly asleep, she was aroused by most disagreeable and painful sensations in both arms and hands, as if both upper extremities had gone "asleep." She would open and shut the hand vigorously a few times, bend and extend the forearms, "to make the blood circulate again," and finally the paræsthesia would gradually disappear. Then she would fall asleep, but only to be awakened in a similar fashion, this occurring, perhaps, half a dozen times during the night, and almost invariably in the early morning. On arising in the morning, she felt as if she had been strained from the armpits, and was, of course, unrefreshed. So far as she knew, the only thing that would provoke an attack of paræsthesia at once was to lie down with the hands extended above the head. She had fallen into the habit of clutching the sides of her nightdress when she retired, so as to keep her hands from straying upward. The attack would occur, however, with the hands in the latter position, but not so frequently. No cause could be attributed for the occurrence of the attacks, save that she was overworked and felt run down. Treatment, consisting of tonic baths, overfeeding, enforced rests, adoption of a regime to overcome constipation, from which she had long suffered, a quiet life in the open air, dispelled the symptoms after a few weeks, and she remained free from them until toward the end of the following winter, when she began to complain of a similar sensation in the big toe of the left foot and in both groins. Occasionally, her hands and forearm "feel as if they are going asleep." The occurrence of these symptoms was contemporaneous with much more obstinate constipation than she had previously experienced, and with a feeling of loss of ambition and easily-induced fatigue. Examination revealed no objective phenomena of any description. Constipation is really the patient's burden. She goes on taking food until, as she expresses it, "her stomach will not hold another bit. Then she takes a cathartic.

This case may be taken as an example, which is, however, subject to great variation with different individuals. It is superfluous to say that no two patients with nervous disease describe their infirmities in exactly the same way, and to this rule acroparæsthesia offers no exceptions. Sufferers from this affection are usually in fair health, except for the paræsthesia. As has been said above, this paræsthesia consists of a tingling, stinging, pricking feeling of the extremities, especially of the hand, a sensation of "pins and needles" and formication (so-called "going to sleep" of the extremity), associated with more or less profound feeling of numbness, slight unwieldiness, and diminished dexterity. These sensations are not limited to the distribution of a single nerve, as when one strikes the ulnar nerve at the elbow, but they are apt to be most severe at the finger ends. The sensations vary in severity from slight disagreeableness up to severe pain.

Objectively, nothing is to be made out in the vast majority of cases. In a few instances, sensibility is slightly diminished, constituting hypæsthesia. There is no tenderness on pressure over any of the nerves, save in those instances in which it is dependent upon mild neuritis or perineuritis, and no perceptible atrophic or degenerative changes. In no instance have I been able to make out anything, even approximating, irregularity over the course of a nerve which would lead one to believe in the existence of minute growths in the sheath of the nerve, such as have been described by Friedmann. In the vast majority of my cases no changes in the color or temperature of the skin have been observed, either by patient or physician. The skin is often relaxed and clammy to the touch, and the pulse lacking in vigor, but there is no redness or crimson coloration suggestive of erythromelalgia, or paleness and blanching of Raynaud's disease. The affection comes on in attacks or paroxysms, most often at night, just after the patient has gone to sleep, or toward early morning. In some cases, perhaps in nearly one-half, the paræsthesia is troublesome during the day. It is much more likely to be complained of when the patient is at rest, however, than when actively at work. While the paræsthesia is present there is accompanying lessening of manual dexterity and ability, which is both subjective and objective, and in some instances after the paroxysm disappears there is complaint of weakness, or, as the patients often express it, of "stiffness" in the hands. This, however, is not evident to the observer.

Information concerning the etiology and detailed symptomatology from examination of these one hundred cases is as follows. For the statistical work of the report I am indebted to one of the assistants in my clinic, Dr. Wm. J. Dougherty of Yonkers.

Etiology.—*Age.*—Average age, thirty-nine, ranging from seventeen to seventy-nine years. Of the one hundred cases, twelve occurred between the ages of twenty and thirty, twenty-seven between thirty and forty, thirty-one between forty and fifty, eighteen between fifty and sixty, five after sixty, and only one under twenty years.

Sex.—Of the one hundred cases sixty-nine were females, and thirty-one were males. Of the females 65 per cent. were engaged in house or laundry work, 15 per cent. were needle workers, 10 per cent. were machine workers. The males were equally divided into tailors, laborers and "clerks." The latter designation may be construed to mean anything from a chevalier d'industrie to a hobo.

Nationality.—Thirty-four of the patients were Americans, forty-one Russians—all Jews—fifteen English, Irish and Scotch, ten Germans and French.

Previous Diseases.—In every instance the patient's previous health was inquired into. Ten of them had suffered from what they called rheumatism, but not rheumatic fever. Four had had the grip within the year from the onset of the paræsthesia. Several had had typhoid, pneumonia, pleurisy, and otitis media at a period remote from the paræsthesia. In none of the cases was there a history of syphilis.

Season.—The time of onset was recorded only in twenty-four cases. Of these eight occurred in the spring, eight in summer, and four each in autumn and winter.

Mode of Onset.—In regard to this point, also, many of the histories are not explicit, but in twenty cases in which it was noted the onset of the condition originally was sudden in fourteen instances.

Frequency of Occurrence.—Of 1,021 new patients treated at the clinic during the year 1901 seventeen cases were suffering from acroparæsthesia not associated with other disease. Thus its frequency compared with neurasthenia may be seen when it is said that during the same time 115 cases of the latter disease were diagnosticated.

Attributal Cause.—In the majority of instances, no cause could be attributed. The question was always asked, however, and the following were mentioned by the patient: Rheumatism, once; the grip, twice; pregnancy, twice; change of life, four times; menorrhagia, once; constipation, once; fright, three times; staying too long in bathing, once; miscarriage, once; and blood poisoning, once. Eight patients admitted the use of alcohol rather freely, and seven intemperate use of tea.

Symptoms.—*Location of the Paræsthesia*—In 52 per cent. of the cases, the paræsthesia was confined to the hands or arms. In 10 per cent. to the feet or legs, and in 30 per cent. it occurred in both the upper and lower extremities. In 1 per cent. to the face. In 15 per cent. the paræsthesia, in addition to the extremities, occurred in other parts. In one instance it became general when the patient assumed a recumbent posture; usually, however, it confined itself to the upper extremities.

The Patient's Complaint.—Some pains were taken to transcribe the patient's exact designation of his symptoms, and they are here stated in the order of their recorded frequency. Numbness, sticking pain, tingling sensations, stiffness, creeping, crawling sensations, itching feeling, burning sensation, cold sensation, wooden feeling, swollen sensation.

Accompanying Conditions.—In this series, the most constant accompaniment was some disturbance of the gastro-intestinal tract. Constipation was noted in 32 per cent. of the cases, stomachic and intestinal fermentation in 10 per cent., and anorexia and coated tongue in 15 per cent. Eleven of the cases had marked neurasthenic symptoms and fourteen complained of headache. In one case, in which paræsthesia occurred in an individual afflicted with rheumatic arthritis, the symptoms of erythromelalgia occurred. In twenty cases the pulse was small, feeble, the extremities clammy, the circulatory tone low. Varicose veins were noted in three instances. There were no cases of sclerodactylia or of Raynaud's disease in the series. The symptoms were brought out or made worse by cold water in eight instances, hot water in four, damp weather in six, lying down in eleven, exertion in three, fatigue in five, menstruation in one. In 17 per cent. of the cases the patients complained of impaired dexterity.

Duration of the Condition.—The average duration was about fourteen months, ranging from one week to six years. In one case it is said to have existed for twenty-eight years, but this is not included in the average.

Study of these statistics shows that persons between thirty and fifty years of age are most likely to be affected. This is the period of greatest strenuousness, of financial and family anxieties, and the time when realization of one's limitations and infirmities comes as a burden and the vitality of youth is no longer there to counteract.

Men are oftener affected than has previously been supposed. In explanation of this it should be said that many of the males were tailors. All experience goes to prove that acroparæsthesia stands in close etiological relationship to occupations that produce fatigue and exhaustion of the upper extremities, such as that of tailors, dressmakers, embroiderers, etc., and those that necessitate keeping the hands in water, such as dishwashers and laundresses. It should further be said that nearly all the males were Jews of the lower class, who are notoriously predisposed to nervous disease, especially the functional varieties, and more especially to exhaustion and toxic neuroses. There can be no doubt, I believe, that in some instances this form of acroparæsthesia is a symptom of general or neuromuscular exhaustion, the same as headache, depression, sleeplessness and other familiar symptoms of exhaustion. In the cases that occur in laundresses and dishwashers it is probable that the paræsthesia is an expression of the vasomotor dilatation or paresis that such immersion invariably provokes.

Nothing of importance is to be learned from observation of the patient's nationality. The symptom-complex seems to occur in dispensary patients of all nations. Another noteworthy fact is, that so far as could be made out, the paræsthesia was not a sequel of any previous ailment.

Acroparæsthesia is occasionally, and, perhaps, often dependent upon changes in the walls of the bloodvessels. One of the common causes of arterial degeneration is syphilis, but none of our cases gave a history of luetic infection. I am inclined to believe that the cases of arterial degeneration accompanied with paræsthesia are of the very slowly progressive variety, with changes, predominantly, in the tunica media; not the rapidly progressive forms, with changes principally in the intima characteristic of luetic arterial degeneration.

Some writers on the subject are of the opinion that exposure to cold and inclement weather is responsible for the occurrence of the symptom-complex in some instances. My own conviction is that they have little or nothing to do with it, and the annotation in our histories relative to this point substantiates that belief. As a matter of fact, the occurrence of the symptom-complex is rarely attributable to any cause save overwork, although now and then a case is encountered in which tea drinking, the abuse of alcohol and tobacco, dyspepsia and constipation, seem to be the cause, and this is particularly striking because the paræsthesia disappears when they are overcome. The frequency of the symptom-complex is best conveyed by comparison with neurasthenia. About ten cases of the latter to one of the former come to the clinic. The diagnosis of neurasthenia is not made when any organic condition upon which the neurasthenia may depend is discoverable, even though the symptoms of this fatigue neurosis are most characteristic. Therefore the diagnosis of neurasthenia is not made nearly as often as formerly.

Study of the symptomatology does not reveal anything that has not heretofore been noted. Sometimes, but not as a rule, the paræsthesia develops suddenly. In upward of one half of all the cases the disagreeable sensation was confined to the upper extremities. In studying the grouped symptomatology it is quite noticeable that gastro-intestinal disorder was frequently present. Despite the coexistence of this and acroparæsthesia it is difficult to say that the latter is dependent upon the former. Theoretically, it is tempting to construe the acroparæsthesia as an end phenomenon of the dyspepsia, the intermediate stages being auto-intoxication, the poisonous matter acting directly upon the sensory nerves of the hands, highly predisposed by exhausting work, or indirectly upon the bloodvessels through the vasomotor nerves and the sympathetic system, and there is no doubt that this is the manner in which some of the cases do arise.

The pathogenesis of acroparæsthesia is practically unknown. Many theories have been formulated to explain its occurrence, but none of them has been proven. It is not likely that all cases are of the same pathogenesis. In fact, it is extremely unlikely that they are. In one instance the paræsthesia may be called into existence by an insufficient amount of lymph in the nerve sheaths, which is caused, in turn, by vascular disturbance: venous sluggishness, or insufficient arterial blood. This explanation would seem to be adapted to those cases in which the paræsthesia occurs in a person who sleeps with the hands extended above the head, and in those in whom the paræsthesia is induced by holding the hands in cold water for a length of time. In another instance the paræsthesia may be looked upon as an autotoxic manifestation, the poisoning arising in the alimentary canal, with constipation. Of course, we do not know why the sensory nerves of the extremities should be singled out to manifest this intoxication, nor do we know why such manifestation should be paroxysmal, but neither do we know why intestinal indigestion often causes paroxysmal headaches. Finally, the paræsthesia may be a manifestation of disorder from fatigue, exhaustion or intoxication of the sympathetic nervous system. The symmetry of its distribution, its localization in the extremities, its paroxysmal occurrence, its tendency to remission, and its occurrence in neuropathic individuals, all speak in favor of this view.

As a matter of fact, it seems to me that we may infer something in regard to the occurrence of the particular form of paræsthesia that we are describing from those varieties that are symptomatic of some readily detectable condition, such as arterial fibrosis, mild forms of multiple neuritis, which do not extend as far as true inflammation of the nerves, tabes, cervical pachymeningitis, etc. The paræsthesia that is an accompaniment of some cases of arterial sclerosis, and which, occasionally, is a herald of an apoplectic attack, is not unlike that of acroparæsthesia, save that it is not so liable to paroxysmal occurrence, and is usually not so annoying. But so far as the patient is concerned, it is the same kind of a feeling, and, therefore, it may be that some of the cases of acroparæsthesia that we are describing may be induced in a similar way.

Treatment.—By all means, the most important element in the treatment of these cases is the removal of the cause, and the treatment of any accessory condition which it may have produced. In other words, if constipation exists, it is necessary not only to overcome that, but to counteract the effects which it has had upon the general nutrition. An investigation of the patient's mode of life and occupation will often reveal the factors that are apparently the excitants of the paræsthesia, although removal or avoidance of them does not always succeed in overcoming it, even though it be combined with a tonic and restorative plan of treatment. Prolonged rest, nourishing diet, and new environment are the requirements for a speedy and complete cure. This is scarcely possible but for a few. For the majority, a compromise must be made, for often no one of these is possible. Tonic hydrotherapy, the cold splash bath, or half-bath, at a temperature of from 75° to 65° F., followed by vigorous frictioning of the skin, especially of the spine and abdomen; regulation of the diet, and especially increase in frequency of taking nourishment; enforced rest, such as lying down for a half hour to an hour at noon time or before supper; and the administration of such restoratives as iron, arsenic and strychnine, will, if persisted in, suffice to relieve this condition in the majority of cases. Such treatment is within the means of even the most humble. The paræsthesia can be temporarily relieved by the use of bromides and other sedatives, such as phenacetin, but it is extremely unadvisable that these should be given, save except occasionally for a few doses, as their repeated administration contributes to depreciation of vitality. The use of electricity has been attended with gratifying results in a number of instances, both the galvanic and the Franklinic currents. The former in the shape of galvanization of the cervical and brachial plexuses, the positive pole over the latter, applied in labile fashion the negative pole against the sternum, a current of five milliamperes being allowed to flow for about ten minutes. In sensitive patients the current over the neck must be somewhat weaker. The static current, both in the shape of the direct spark, and of the hyperstatic current, has seemed to give relief to some of the patients, and, judging from the regularity and frequency with which they come to the clinic for its administration after they have received it a few times, it is a grateful therapeutic measure, even though these same data do not speak convincingly of its curative qualities. When the attacks occur in the early hours of the morning, I have seen gratifying results attend the taking of a small quantity of trional or sulfonal, administered with hot milk, on retiring. Occasionally treatment directed immediately to the overcoming of the uric acid diathesis, indigestion, constipation, and anæmia, seems to be sufficient, but in the majority of instances there is needed in addition some such plan of treatment as that which is successful in the ordinary cases of neurasthenia. Some cases resist all treatment and finally get well spontaneously, as it were, while others recur whenever the general health or vitality is let down, and disappear again when the individual regains normal health.

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THE SYMPTOMS OF CHRONIC NON-ALCOHOLIC GASTRITIS.

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The cases upon which the following report is based are of chronic non-alcoholic gastritis, occurring consecutively in private practice only. The diagnosis in each case has been verified by gastric analysis, which has been frequently repeated in the majority of instances. As the patients came under observation they were entered in long case-books with cross-rulings for checking off the presence or absence of symptoms, and it is from these case-books that the following data have been obtained. When the symptoms so presented are compared with those we would be led to expect by reading the existing textbooks of general medicine on the subject, we notice a most radical difference, and it is the object of this paper to show how great is this difference between the clinical course of chronic gastritis in actual practice and that which exists on a literary basis. Upon analyzing the symptoms it becomes evident that the cases can be divided into three groups according to the degree of gastric secretion: (*a*) cases of hyperacidity; (*b*) cases of normal acidity; (*c*) cases of diminished acidity. In each group there also seems to be a natural division into the cases with atony and those without. A practical clinical grouping, therefore, of cases of chronic gastritis would then be as follows: (1) Hyperacid cases without atony; (2) Hyperacid cases with atony; (3) Normal acid cases without atony; (4) Normal acid cases with atony; (5) Anacid cases without atony; (6) Anacid cases with atony. The total number of cases upon which the report is based is forty-six.

Hyperacidity without Atony—Ten Cases.—Of the actual symptoms presented in this group only four gave symptoms referring to the stomach, and in these the symptoms were those of acidity only.

Case I.—Male, thirty-eight years old. Following a sunstroke eighteen years ago, patient has noticed acidity of the stomach, requiring constant use of soda. This symptom, at first intermittent with long periods of freedom, has, for the last five years, become constant. The appetite is good, and he suffers neither from pain, nausea, vomiting, or gas, but is well nourished, and not anæmic. The fasting stomach was of normal size and of good muscular power, and contained in the fasting condition 30 c.cs. of bile-stained mucus, without acidity, and without food remains. Test—

breakfast gave 170 c.c. of foodstuff, containing large masses of mucus; total acidity, 96—free HCl. 80; combined HCl. 8.

Case II.—Male, twenty-eight years old, who, since an accidental ammonia poisoning five years ago, has suffered from acidity two hours after meals and feels "gone" on an empty stomach. These symptoms are relieved immediately by eating or by taking soda. There are no other symptoms referred to the stomach, and the patient is well-nourished and not anæmic. The stomach is of normal size; its muscular function varies between hypermotility and temporary atony, according to the reaction which fatigue, loss of sleep and nervous strain makes upon an impressionable nervous system. The fasting stomach contains 30 to 40 c.c. of bile-stained mucus without acidity. The test-breakfast shows a total acidity of 56 to 84, and lavage brings a large quantity of glairy mucus. Indican is present in the urine in abnormal quantities.

Case III.—Female, forty-five years old, who has complained for one year of gnawing feelings on an empty stomach, relieved by eating and by soda. There are no other symptoms, and the patient is well-nourished and not anæmic. Stomach of good size and of good muscular power, contains in the fasting condition 40 to 60 c.c. of neutral mucus. Test-breakfasts show moderate hyperacidity of 60 to 70, with large quantities of lumpy mucus.

Case IV.—Male, forty years old, who for eight years has had hyperacidity; better in summer when he gets exercise, and worse in winter. The patient is never without his soda mints, taking them regularly two or three times between meals and several times during the night. The appetite is good and, except for the acidity, there are no other symptoms. The patient is well-nourished and not anæmic. The stomach is of normal size and of normal muscular power. Lavage brings large quanities of glairy mucus. Test-breakfasts show a total acidity of about 86. By treatment of the gastritis, the acidity has disappeared.

In these four cases there is a well-marked similarity. In all, acidity was the only symptom, and was largely under the control of the nervous system in all, being more prominent whenever the patients were tired or nervous. They might well have been considered cases of nervous hyperacidity; in fact, three were so treated at the start.

It is important to remember in this connection that an inflamed stomach is, if anything, more apt to be neurotic than a healthy stomach, so that a gastric neurosis may well be ingrafted on an organic affection.

The feeling of the writer is that long-continued gastric neuroses are exceedingly rare unless engrafted on an organic basis, and that in all cases of prolonged so-called neuroses, gastric analysis should be made. In the treatment, moreover, both elements—the organic and the neurotic—should be considered.

Three of the cases gave well-marked intestinal symptoms, forming a distinct clinical group.

Case V.—Male, forty-three years old, for three months has suffered from diarrhœa, having from five to twelve loose stools daily, without blood or mucus. During this time has lost twenty-seven pounds, and looks as if he had cancerous cachexia, being sent, in fact, to the writer with the diagnosis of malignant disease of the colon. The diarrhœa, while checked temporarily by drugs, rapidly returns as severely as before. The appetite is good. There is neither pain, nausea, nor vomiting nor gas on the stomach, but as eating regularly increased the diarrhœa, he has most rigidly over-dieted, a fact that has contributed materially to his loss of flesh and strength. Examination showed normally located colon, of normal muscular power and without evidence of catarrh. Microscopical examination of the stools being, moreover negative, it seemed improbable that any intestinal lesion existed. Repeated examination of gastric contents showed a constant hyperacidity (total acidity 70 to 85), with a large amount of mucus, both in the test-breakfast and in the fasting state. Under full diet with food between meals, and small doses of bromide to check the excessive peristalsis, the diarrhœa stopped in two days, the flesh and strength returned, and for a year the patient has remained perfectly well.

Case VI.—Male, forty-three years old, for two years has had every morning a loose, painless diarrhœal stool. Aside from a sense of fulness in the central abdominal region after meals, there are no other symptoms referable to the digestive tract. Examination shows the colon normal in position in muscular power, and free from catarrh. Gastric analysis revealed a well-marked catarrhal inflammation of the stomach, with total acidity of 70. The symptoms ceased in two weeks by taking soda between meals, and for four months have not returned.

Case VII.—Male, fifty-six years old, for four months has had a more or less steady pain in the right iliac fossa, with one or two loose movements with considerable gas. There is no abdominal tenderness and the leucocytes number 5,800. During this time the patient has lost twenty-five pounds, and looks almost cachectic. Palpation of the abdomen failed to detect any abnormalities. The functions of the colon were normal, and evidences of catarrhal colitis were not found either by irrigation or by microscopical examination of the stools. Gastric analysis showed a marked gastritis, with a total acidity, ranging from 80 to 94, with hypersecretion. The urine contained an excess of indican. The patient was put upon soda in full doses between meals and within a week the symptoms disappeared, and in three months there was perfect return of flesh and strength.

In these cases the symptoms seemed due to an increased intestinal peristalsis, caused by the irritation of the small intestine by too acid chyme. The stools all had the appearance of small intestine stools, and contained neither mucus nor blood. Neither was there any other sign of abdominal lesion. The symptoms were rapidly and permanently relieved by antacid treatment. All three patients were under-nourished and anæmic, and their appearance suggested cancerous cachexia, and, in fact, two of the three being referred to the writer with this diagnosis. It is moreover interesting that not one of them gave a single symptom pointing to the stomach. Two cases gave symptoms of recurring bilious attacks without a symptom that drew attention to the stomach.

Case VIII.—Male, forty years old, for six months has suffered from discomfort and feeling of fulness in the bowels several hours after eating. During this time he has been somewhat constipated. He feels weak and nervous, has congested feeling in the head. with a coated tongue, and malodorous breath, and from time to time complains of "bilious attacks," of vomiting, and headache. Analysis showed mucous gastritis, and an acidity of 95.

Case IX.—Female, forty-two years old, for years has suffered from sick headache, induced by taking an ordinary amount of wine at dinner, or by being overtired. There are no other digestive complaints.

Analysis shows mucous gastritis, with a total acidity of 64.

The explanation of these cases seems to be that the upper intestine becomes congested by the over-acid chyme, and that the symptoms are due to a resulting toxæmia. The writer has been very skeptical as to the existence of a primary functional disturbance of the liver, but believes that these cases are practically intestinal toxæmia, and that the action of calomel is simply to carry off poisoning intestinal products. Further, that in every case of "biliousness," or recurring "bilious attacks," a careful examination of gastric contents should be made, and that the primary seat of the liver disturbance will almost always be found in some well-marked change in gastric chemistry.

One case of the series gave only a history of extreme lassitude, in attacks lasting about two weeks, with vague symptoms of abdominal distress. In this case a course of Wiesbaden water brought about a good and permanent result.

Of the ten cases of hyperacid gastritis without atony only one gave nausea as a symptom, and that occurred only at times when he was tired, and had not had a proper amount of sleep. The cause for nausea in this case was proven to be a temporary atony, as shown by a large amount of residual lavage water at these times, and by other ordinary signs of this condition. Pain occurred only once and that was the pain of acidity, occurring before meals and being relieved by eating and soda. Flatulence was not noted in a single case. In every case the appetite was normal or increased. Vomiting did not occur in a single case.

II.—Hyperacidity Cases with Atony, Eleven Cases. —CASE I.—Male, thirty-five years old, sixteen months ago noticed "churning" feelings in the intestines on lying down at night, During the first week there was considerable diarrhœa, followed by constipation, lasting till date. The churning feelings have continued, and he is annoyed by the constant presence of gas in the stomach and bowels. The fasting stomach contains 50 to 80 c.c of mucus and liquid of total acidity, 50 to 70; no food remains. Test-breakfasts show well-marked mucous gastritis, and an acidity ranging from 72 to 98.

CASE II.—Female, sixty years old, all her life has had "burning acidity," and is always taking soda. She has required laxatives for years. Aside from an occasional dizzy attack, there are no other symptoms. Gastric analysis shows mucous gastritis with an acidity of 70. Moderate atony by the ordinary tests.

CASE III.—Male, forty-eight years old, has suffered from constipation, with gastric and intestinal flatulence, for years. There are no other general or local symptoms. Analysis shows mucous gastritis, with an acidity of 60 to 70. The colon is atonic and the seat of a moderate catarrhal inflammation. Under treatment for the gastritis the symptoms improved, and for one year the patient has remained perfectly well.

CASE IV.—Female, thirty-nine years old, for thirteen years has suffered from constant flatulence in both stomach and bowels. The bowels are regular, the appetite good; there is no distress after eating, except an occasional attack of acidity. The fasting stomach contains 80 c.c of mucus, with an acidity of 26, composed entirely of free HCl. The test-breakfast is imperfectly digested, and mixed with a large amount of mucus and of an acidity of 80. The colon is atonic, but neither catarrhal nor displaced.

CASE V.—Female, twenty-four years old, for one year has complained of pain in the stomach of a cramp-like character, evidently due to flatulence. There has also been a gnawing pain before meals, relieved by eating or by soda. The bowels have been obstinately constipated, and there has been constant intestinal flatulency. The general health has become much impaired, the weight, gone from 145 to 115 pounds in this time, and for ten months the patient has not menstruated. The stomach was found to be atonic, the greater curvature reaching a finger's breadth below the navel. The examination of the fasting stomach was negative. Test-breakfast showed semi-degisted breadstuff, admixed with masses of mucus, and of a total acidity of 64. The colon was atonic, neither displaced nor catarrhal. By appropriate diet and applications of intragastric faradism, and bodily rest, the weight was increased to 141 pounds in six weeks, the neurasthenic symptoms rapidly disappeared, menstruation returned, and for a year has been perfectly regular.

CASE VI.—Male, twenty-six years old, for three years has complained of fairly constant acidity, and of gas in the stomach and bowels, and constipation of a pronounced spastic character. He is nervously depressed and has very little appetite. There are no other general or local symptoms. The stomach is normally located, but atonic, and contains a large amount of slightly acid mucus, in the fasting condition. The test-breakfast is semi-digested, contains a large amount of mucus, and is of the total acidity of 72 to 80. The colon is in a spastic condition, but shows no colitis.

CASE VII.—Female, twenty-six years old, for two years has suffered from gastric flatulence, acidity of the stomach about two hours after meals, and occasional attacks of severe pain, evidently due to pyloric spasm. Neurasthenic symptoms, or, more properly speaking, toxæmic symptoms, such as flushings of face and insomnia, are present in great variety, and to a distressing degree, associated with attacks of great mental depression. The urine is reduced 20 to 25 ounces a day, and contains an excessive amount of indican. The stomach is atonic the greater curvature lies a finger's breadth below the navel, and contains a large amount of mucus in the fasting state. The test-breakfasts are semi-digested, and contain much mucus, and are of the total acidity of 66 to 75. The colon is normal in all of its functions.

CASE VIII.—Female, twenty-six years old, for several years has suffered from the feeling of lump in the stomach, relieved by raising gas, and from time to time is obliged to take soda mints. The bowels are obstinately constipated, and every few weeks there are passed long strings of mucus, with griping abdominal pain, a typical membraneous colitis. Between these attacks the colon washes clear, but a moderate coloptosis is revealed by inflation. The stomach lies one inch below the navel, and is moderately atonic. The fasting stomach contains mucus. Test-breakfasts show semi-digested foodstuff, glairy mucus, and a total acidity of 66.

CASE IX.—Female, forty years old, for years has suffered from constant headaches of varying character, gas in the stomach and heartburn. The patient is hysterical, introspective, and is constantly taking a great variety of headache powders. The general condition is poor, the bowels are constipated, The fasting stomach contains a large amount of mucus. Test-breakfast is semi-digested, comingled with tenacious mucus, and is of a total acidity of 76. The colon is normal.

CASE X.—Female, thirty-five years old, complains of "gnawing emptiness," relieved by soda and by eating with gastric and intestinal flatulence.

There are occasional pains referred to the stomach, evidently due to gaseous accumulation. When tired, there is some nausea, which has a relation to eating, but which does not interfere with a normal appetite. The patient is anæmic, neurasthenic, and poorly nourished. The stomach and colon are both displaced, together with the right kidney. The fasting stomach is free of mucus, the test-breakfast is semi-digested, contains a large amount of mucus, and is of a total acidity of 80.

CASE XI.—Gave only the symptoms of recurring bilious attacks, and a moderate anæmia, no other symptoms whatever. Analysis shows mucous gastritis of a total acidity of 66.

Although these ten cases gave symptoms referable to the stomach, and all gave positive proof by gastric analysis of the presence of mucous gastritis, the grouping of symptoms, gas acidity and constipation, is not at all characteristic of gastritis. A similar picture is afforded by atony alone and by gastroptosis. Simple atony gives exactly this picture, while gastroptosis with atony is varied only by the greater prominence of neurasthenic and subnutrition symptoms. Subnutrition seems to be rare in uncomplicated gastritis. Of these eleven cases only four were under-nourished. Of these four cases two were complicated by gastroptosis—both of these had over-dieted. The third case had over-dieted and gained twenty-seven pounds in four weeks after more liberal nourishment. The fourth case was an hysterical woman, who ate most irregularly and lived on drugs.

Although gastroptosis is to be suspected if subnutrition or neurasthenia be markedly present, the diagnosis can only be made by a careful examination of the size and position of the stomach, and of the gastric contents.

The question of food retention is interesting in connection with gastric fermentation. Gas was a marked feature in all but two cases.

While in these cases a delayed food-exit was usually present, it was noticed that test-breakfasts, as well as gastric contents, removed four to five hours after a regular meal, did not differ from those obtained in the non-atonic cases.

Sarcinæ were not found in any of the cases, nor were the yeast-fungi increased. Further, these gastric-contents did not ferment even when mixed with starch or sugar solutions and kept at a blood temperature in a bacterial box.

A large number of experiments were made to demonstrate this point.

In each case 10 c.c. of gastric contents were placed in a bottle having a tight cork, through which a glass tube was passed leading into an inverted water-filled test-tube, so that the gases could be collected. This apparatus was kept in a bacterial box at a temperature of 104°. Similar quantities of gastric contents were mixed with an equal amount of thin starch solution and with an equal amount of syrup. It was also proven that the apparatus was air-tight.

In a few instances about 1 c.c. of gas was formed, but in the great majority of instances no gas at all could be demonstrated, although the mixtures stood for days. Specimens of gastric-contents come to the writer through the mail and arrive in perfectly good condition. Time is too limited to go further into the nature of the gas in these cases. It certainly seems as if fermentation in these cases was a myth. The writer's own theory is that nature, unconsciously to the patient, endeavors to neutralize the hyperacidity by the swallowing of alkaline saliva, and that the gas in these cases is simply swallowed air. This is corroborated by the fact that gas occurs more frequently in hyperacidity than in low acidity, in which fermentation should more easily occur.

Of these cases two had spastic colons, seven had atonic colons. In only three was colitis present and two of these had coloptosis.

It is interesting that while hyperacidity *without* atony gave a clinical group of diarrhœa and emaciation, not one of the cases of hyperacidity *with* atony gave diarrhœa as a symptom. This is probably due to a concurrent atony of the colon, preventing the increased peristalsis seen in the first set of cases.

Gastritis with Normal Acidity, without Atony, Five Cases.—Of these five cases not one gave stomach symptoms of any significance whatever.

CASE I.—Female, thirty-two years old. For several years has been anæmic and moderately constipated. When tired may complain of a little nausea not related to meals, and may feel "gone" in the empty stomach. There are no other gastric or intestinal symptoms. Examination shows mucous gastritis, with normal acidity. The colon is normal.

CASE II.—Female, eighteen years old. For ten years has complained of headaches, biliousness and torpid liver. Aside from a moderate constipation, there are no other gastrointestinal symptoms. Examination shows mucous gastritis, with moderate acidity. The colon is normal.

CASE III.—Male, thirty-five years old. The patient is worried by small things and tires easily. There is no pain, nausea, vomiting, gas, nor loss of appetite. The bowels are regular. Despite the absence of digestive symptoms, examination reveals a mucous gastritis of considerable intensity. The total acidity is normal.

CASE IV.—Male, thirty-five years old. Complains of constipation, attacks of faintness, and dizziness, and headaches like migrain, apparently toxic in origin. There are no other gastrointestinal symptoms. Examination shows marked mucous gastritis, with normal acidity. The colon is atonic but not catarrhal.

CASE V.—Male, thirty-five years old. Complains of "bilious attacks." Has a feeling of lump in stomach all the time, except for a short time after meals, and which passes away after a few doses of bromide. Bowls regular. There are no other gastro-intestinal symptoms. Examination shows well marked mucous gastritis.

Gastritis with Normal Acidity with Atony, Two Cases.—CASE I.—Male, thirty year old. For three years has complained of a sense of weight in the epigastrium after eating. Not fairly constant. Gastric flatulence. He feels faint and gone on empty stomach. The bowels are constipated, alternating, however, with occasional sharp attacks of diarrhœa. The stomach is normal in size and position, but of poor muscular power. There is a well-marked mucous gastritis, with a total acidity of 52. The colon is in a spastic condition, but not catarrhal.

CASE II.—Female, thirty years old. For five years has been anæmic, in spite of having taken more or less continuous treatment by iron. There are waves of faintness, independent of eating, and not interfering with a normal appetite. The stomach is atonic, and the greater curvature lies two fingers' breadth below the navel. There is a mucous gastritis, with an acidity ranging between 30 and 55. Under treatment by lavage and intro-gastic faradism the anæmia rapidly improved, and for two years the patient has remained perfectly free from symptoms.

These cases of normal acidity with atony gave no gastric symptoms, except the gas so common with atony.

Gastritis Anacida Without Atony, Ten Cases.—Of these ten cases three gave intestinal symptoms only.

Case I.—Male, seventy-eight years old. Since an attack of cholera in 1849 has had intestinal cramps, "wind on the bowels," and diarrhœa in attacks, laying him up for several days every week or so. Between these attacks has one loose movement every morning, without pain. Appetite good, the patient fairly well-nourished, not anæmic. There is no pain, nausea, vomiting, nor gastric flatulence. Repeated examinations for five years have never revealed a trace of acid nor of enzymes; zymogens active, 1 to 10; inactive, 1 to 20. In spite of the severity and long continuance of the case, there has never been a trace of gastric atony. Colon examination reveals atrophy of the mucous membrane, which, interfering with water absorption from the colon, allows the loose daily stool. Under anacidity diet, and the pancreatin, the acute attacks have entirely subsided, and have not reappeared for three years, and the old gentleman is pretty hale and hearty for his years.

Case II.—Male, forty-three years old. For three months has complained of diarrhœa, cramps, and emaciation. The appetite is good, there is no gas, nausea, vomiting nor gastric pain. The colon is normal. Test-breakfast shows foodstuff semi-digested, with much mucus. Total acidity varies from 10 to 26. Diarrhœa ceased at once by lavage and Kissingen, and for one year has not returned.

Case III.—Male, fifty-five years old. For one year he has had one loose morning stool, with considerable intestinal gas; there are no gastric symptoms. Examination shows mucous gastritis, with anacidity; the enzymes absent; zymogen active in 1–160 dilution. The colon is normal. Although the patient has been under medical treatment for one year without relief, the symptoms disappeared entirely in two weeks, by anacidity diet and Kissingen water, and has not reappeared. Of late there has been a return of the acid.

Two cases gave the history of bilious attacks alone.

Case IV.—Male, sixty-six years old. Since 1864 has had "bilious attacks," like sick headache, every few weeks. He has a moderate amount of intestinal gas, but none on the stomach. There is no pain, nausea nor vomiting. The appetite is good, the bowels are regular, there is no gas. The test-breakfast shows no trace of acid nor of enzymes; zymogen (rennet) is active in a dilution of 1–160. Under diet and Kissingen water has had no attacks for a year; there is, however, no return of the acid.

Case V.—Male, fifty-five years old. For fifteen years has complained of "bilious attacks," with headache, nausea, occasional vomiting, coated tongue and foul breath. Between these attacks he felt perfectly well till about two years ago, when he began to suffer constantly from headache, lassitude and general dopiness. The test-breakfast shows a total acidity of 16, a slight trace of butyric acid, no free or combined HCl., enzyme absent, rennet zymogen active in 1–160 dilution. His appeite is good; there is no pain, gas, nausea, nor vomiting.

Cases VI., VII. and VIII.—These cases gave simply loss of flesh and strength without gastric symptoms. In two of these cases there was a vague feeling of abdominal distress, after hearty meals, but otherwise nothing to draw attention to the stomach. In all three achylia was present, enzymes absent, rennet zymogen present in 1–160 dilution.

Case IX.—This case gave neither gastric nor intestinal symptoms, but from time to time there were attacks of intestinal spasm, resembling pseudo-angina, apparently of toxæmic origin. The patient was a well-nourished, healthy-minded lady, thirty-two years old, free from every trace of nervousness. For years there had been muscular pains of a shooting character, from time to time, but further than this a rheumatic history could not be obtained. For the past five years there occured with, or without exertion, attacks of paleness, faintness, and moderate dyspnœa. Other vaso-motor symptoms, such as sudden flushings, were also noted. The heart and arteries were normal. In the urine neither albumen nor sugar could be found, but there was an excessive amount of indican. The fasting stomach contained a small amount of mucus, the test-breakfast was undigested, mixed with stringy mucus, and contained neither free nor combined HCl.; enzymes were also absent; rennet zymogen was active in 1–120 dilution.

Case X.—The next case of this series was a female, thirty-five years old, who six years ago was attacked by vomiting and purging, lasting pretty continuously for four months. Since then the attacks have occurred about every year with diminishing severity, so that the last attack lasted only four days. Three years ago she was suddenly seized with severe pains, running from the right free border of the ribs, to the back and downward, lasting a few hours and not being followed by jaundice. The following year jaundice occurred for a few days without pain; no other history obtainable. Between the attacks of vomiting patient feels perfectly well and strong, and has no complaints whatever. Repeated examinations, extending over eighteen months, have shown complete absence of enzymes. Rennet zymogen has been active up to 1–64 dilution, delayed up to 1–160; inactive in dilutions weaker than this. Under achylia diet and Kissingen there have been no attacks of vomiting during this period.

Upon comparing the hyperacid cases without atony with the similar group of the anacid class, a great similarity is noted in two clinical forms.

Only three of the ten hyperacid group complained of intestinal symptoms of diarrhœa and emaciation. Three of the eleven anacid cases gave exactly these symptoms. Take for example Case 1 of the hyperacid cases, giving intestinal symptoms: male, forty-five years old, who for three months had suffered from diarrhœa and emaciation, and compare Case 2 of the anacid group, giving intestinal symptoms: a male, forty-three years old, who for three months had complained of diarrhœa and emaciation. Here were two cases giving exactly similar symptoms. One had hyperacidity, the other had anacidity. Neither gave gastric symptoms, both had normal colons. One was cured by reducing the hyperacidity by soda, and the other was cured by increasing the acidity by Kissingen water.

Secondly—In both sets of cases, the hyperacid and the anacid, there is a group of cases complaining of biliousness—two of the ten hyperacid cases and two of the eleven anacid cases. Neihter group gave gastric symptoms. It is interesting that two gastric conditions, apparently so diametrically different from each other, should give the same clinical course.

Anacidity with Atony, 8 Cases.—Two cases gave entirely intestinal symptoms.

Case I.—Female, fifty-one years old, two years ago was suddenly seized with sharp attack of diarrhœa lasting several weeks. Since then the trouble has returned from time to time, and during this time the patient has lost thirty pounds in weight. There are no gastric symptoms. Examination shows an atonic and displaced stomach, the greater curvature lying 10 cm. below the navel. The fasting stomach contains a small amount of mucus. Test-breakfasts repeatedly taken during the past year have shown a total absence of free and combined acid, enzyme absent, rennet zymogen active in 1-160 dilution. The colon was moderately displaced, there was neither atony nor catarrh, the stools were free of mucus and their microscopic examination was normal. Under treatment by Kissingen water and a suitable anacid diet the diarrhœa has not returned during the past year.

Case II.—This case presents, in a striking way, a number of most important, and to the mind of the writer entirely new, points in the treatment and course of anacid gastritis. Male, forty-five years old. Well until September, 1899, when, after eating clam chowder, diarrhœa developed, lasting several days, and then subsided. In October a similar attack occurred without apparent cause, lasting a week. During November and December the bowels continued irregularly loose. Acute exacerbations of increasing severity in January and February, 1900, From this time till he entered Trinity Hospital in December 28, 1901, he suffered from chronic diarrhœas, having 10 to 12 stools daily most of the time, varied by intermissions of less severity. When seen December 28, 1900, nutrition was poor, the weight was 105, a loss of forty pounds during the year. There was an appearance of cancerous cachexia; hæmoglobin, 54. Abdomen was distended with gas, no masses, no tenderness. Colon irrigation showed normally located colon, of normal muscular power and absence of catarrh. Dejecta resemble small-intestinal stools, without mucus or blood, 10 to 15 daily. Stomach showed atony of its wall by the ordinary tests. Six hours after breakfast food remains are present in the stomach. Test-breakfasts show complete achylia, with a large amount of mucus. Lavage was ordered and given daily by a trained nurse, for two weeks, without the least change in the patient's condition, although he was given at the same time a diet suitable for his achylia. The lavage water returned perfectly clear, although it was noticed that all the water was not returned, thirty to thirty-six ounces remaining in the stomach. A suction lavage apparatus was improvised, which brought away the residual water and a great amount of mucus. At the same time daily applications of intragastic faradism were given. The result was that the tone of the stomach improved to such an extent that the residual water was decreased so that only three to six ounces remained in the stomach after lavage, the acid, returned in normal quantity, diarrhœa ceased and for a year has not returned, the blood count rose to 85 and in six weeks the patient increased in weight from 105 to 145 pounds. For the past year the patient has been in perfect health, working as foreman in a stone quarry.

Two cases gave intestinal symptoms, in combination with those of gastric atony and general neurasthenia.

Case III.—Female, thirty years old. For thirteen years had been complaining of intestinal indigestion, for the past five years the symptoms have been so severe that the patient was obliged to lead the life of a semi-invalid. The chief complaint was of alternating attacks of diarrhœa and constipation. These diarrhœal attacks lasted only a day or so at a time, but were accompanied by such dizziness, faintness, and prostration that it would require a week or ten days of careful nursing to restore the patient to her former strength. By the time this was accomplished another diarrhœal attack would occur. The atonic symptoms consisted of the constant pressure of gas in the stomach and intestines, and a dull, aching pain in the epigastrium, induced rather by the quantity than the quality of food. The patient was neurasthenic, poorly nourished, and complained of a steady feeling of nausea, which, however, was never followed by vomiting. This feeling of nausea was regularly induced by fatigue or mental excitement. Examination showed an atonic stomach, with the greater curvature lying a finger's breadth below the navel. The fasting stomach contained a large amount of glairy mucus. Test-breakfast gave evidences of a catarrhal gastritis, with total acidity of 18, with no free HCl.; combined HCl., 10. The colon was normal in all of its functions and not catarrhal, the stools were apparently normal. Under a treatment, chiefly of Kissingen water and intragastric faradism, the symptoms rapidly diminished, and the patient has remained in comparatively good health for over a year.

Case IV.—Female, fifty-five years old. A nervous, gouty, complaining lady, "with pains in every part of her body all her life." suffered with morning diarrhœa and cramps for one year. There were constant gaseous accumulations in both stomach and bowels, the symptoms of hyperacidity, such as heartburn, were occasionally present, although test-breakfasts showed an entire absence of organic or inorganic acids, either free or in combination; enzymes were absent; rennet zymogen active in 1-200 dilution. Colon irrigations were normal. Marked insomnia was present.

Two cases gave chief symptoms, waves of nausea, independent of food. Both were neurasthenic:

Case V.—Female, forty-eight years old. For about ten years there had been more or less constant a feeling of fulness, and distention in the central abdominal region, worse about two hours after eating. There were waves of nausea, sometimes transitory, at other times extending over days, not intensified by eating and not interfering with a fair appetite. The patient has been under a severe and continual nervous strain for years, and the symptoms are regularly intensified by an increase in the amount of nervous worry. Examination shows the stomach lying from 4cm. above to 7cm. below the navel, and in an atonic condition. Lavage leaves ½ liter residual water, which the stomach is unable to express. The fasting stomach contains a small amount of neutral mucus. Test-breakfasts show absence of HCl., total acidity of 10-12. Enzymes absent, rennet zymogen weak in 1-200 dilution, active in 1-100 dilution.

Case VI.—Male, forty-five years old. During youth the patient had suffered from dyspepsia and severe heartburn. Those symptoms continued for a few few years and then subsided, to reappear in increasing intervals and with diminished severity. Ten years ago acute septicæmia developed, from an operation cut, and ran a long and severe course. During convalescence the appetite was lost, and there was regurgitation of food having a rotten-egg flavor, together with continual nausea. Since then the stomach has been washed almost daily, the morning lavage bringing a large amount of mucus, usually without food remains. If, however, the patient has been overtired, or has partaken the previous evening of a heavy dinner with wine, food remains would be found in the morning fasting state. The rotten-egg odor has not been noticed for some years. There is considerable gas, both in stomach and in bowels, and a sense of heaviness in the stomach after meals, depending both on quantity and quality of food. The most distressing symptom was nausea, more or less constant, not influenced by food, but increased by mental fatigue. Dull headache and other signs of a secondary neurasthenia were present. Examination shows a normal-sized stomach in normal position, but with atonic walls. Fasting examination revealed the presence of a considerable amount of neutral mucus, without food remains. Test-breakfast was perfectly undigested, with a total acidity of twelve; no free or combined acid, enzymes absent, rennet zymogen active in 1–80 dilution, weak in 1–160.

One case gave the symptoms of hyperacidity.

Case VII.—Male, forty-five years old. About an hour after eating the patient complains of heartburn and moderate feeling of gaseous distention; these are the only symptoms present. Examination showed achylia, even at the time of "heartburn." A course of Kissingen was advised, and in four weeks the acid had returned, the total acidity of test-breakfast being twelve. Coincident with this was the total disappearance of the hyperacidity symptoms. The peculiar feelings in the case, and also noted in Case IV of this series, were probaby due to the excessive dryness of the stomach contents, so characteristically observed in the test meals of achylia patients.

Case VIII.—This case gave no gastric symptoms whatever, but complained of nervous depression and occasional dizzy attacks. Examination showed an atomic stomach, with anacid mucous gastritis; total acidity of test-breakfast 18, no free HCl., combined HCl. 12, stomach not completely emptied six hours after light breakfast. Lavage brings large quantities of mucus, but leaves ½ to ¾ liter residual water that the stomach cannot expel.

Conclusions.—1. In uncomplicated chronic gastritis not of alcoholic origin, if the muscular power of the stomach be good, the only symptom apt to be referred to the stomach is acidity. This occurs in about half of the hyperacid cases, but may be observed in the cases of complete achylia. Cases with normal acidity, and the vast majority of cases of anacidity, give no gastric symptoms.

2. The hyperacidity cases may give a course resembling that of a neurosis in that the symptoms are intermittent and are easily influenced by nervous conditions. It would seem, however, that a long-continued gastric neurosis was exceedingly rare, and that the great majority of such neuroses were rarely the neurotic outbreak of an organic lesion.

3. In gastritis, contrary to the accepted teachings, the following negative facts are to be noted: (*a*) The appetite is good. The few exceptions are observed in advanced atony, where the quantity of food is not well born, and in cases of neurasthenia. In neither case, however, is the gastritis itself the cause of the anorexia. (*b*) Pain occurs in two ways: (1) From acidity, differing in no way from similar pain in cases of nervous hyperacidity; (2) From gas. This latter pain differs in no way from that observed in cases of simple atony without gastritis, so that pain does not seem to be a symptom of gastritis proper. (*c*) Nausea does not occur in relation to meals. Patients with atony, and those who are neurasthenic, may complain of nausea, but the nausea is not related to meals, and does not interfere with a normal appetite. It usually occurs when the patient is tired or nervous. (*d*) Vomiting does not occur in the non-alcoholic cases. (*e*) Unless there be diarrhœa the nutrition is good, and, as a rule, the patients are not anæmic. Exceptions may be made in cases of atony, but in these cases the anæmia may well be the primary condition.

4. If the muscular power be poor, gas is present as a prominent symptom. This is more apt to occur in hyperacid cases, and is probably due to swallowed air. As this same symptom is observed in a similar number of cases of simple atony, the symptom is not directly due to the gastritis.

5. Gastritis may give rise to severe and long-continued diarrhœa and emaciation, which may be mistaken for colitis, or malignant disease of the colon. The diagnosis, however, should present no difficulty if a careful examination be made. These cases are more common than is usually supposed, and occur both in the hyperacid, and in the anacid cases. Between the two a diagnosis is possible only by gastric analysis.

6. Biliousness and its allied symptom-complexes are rarely, if ever, due to a primary functional disturbance of the liver, but are almost regularly due to an intestinal toxæmia, traceable to some derangement of gastric chemistry, whereby improperly prepared chyme enters the intestine.

7. Anæmia and constipation are the chief and only symptoms in a great many cases of even well-marked gastritis, and their continuance without apparent cause should justify an analysis of the gastric contents.

Clinical Department.

POST-OPERATIVE OBSTRUCTION IN A CASE OF SARCOMA OF THE UTERUS AND MESENTERIC CYST, DUE TO INCARCERATION OF THE SMALL INTESTINE IN A HOLE IN THE MESENTERY.

By CHARLES S. HAMILTON, M.D.,
COLUMBUS, O.

Mrs. P., aged forty-four years, white, mother of two children, consulted me on account of menorrhagia of moderate degree. It had existed for a few months past and had not as yet caused much impairment of health. She was able to do her own work. Patient had always felt a "weak spot" in the right ovarian region. She was conscious also of a swelling in the lower abdomen.

She was a slender and rather delicate-looking woman, whose mother and father are supposed to have died from tuberculosis. Her examination was negative, except in so far as the pelvic organs were concerned. The uterus was found retroverted and the body symmetrically enlarged. Its size was such as to indicate strongly the presence of a growth rather than a metritis. To the right of the uterus, occupying a location partly in the pelvic and partly in the inguinal region, was a tense, painless, fluctuating tumor, not very intimately associated with the uterus and of the size of a child's head. A diagnosis was made of a retroverted uterus containing a fibroid in the fundus, with an ovarian cyst of the right side, and an operation was advised.

A few weeks later she entered the Protestant Hospital, and preparatory treatment of the usual character was at once directed. Two days before the time set for operation she was taken with persistent vomiting, accompanied with very little, if any, pain in the abdomen. At the end of eighteen hours the vomiting ceased. I had been unable to account for it, there being no evident cause. She had never suffered from a similar attack before.

The operation occurred under ether anæsthesia on January 8, 1900. Ater opening the abdomen the field was thoroughly shut off from the general cavity by packing with wet towels. The cyst was found to be mesentric. It presented on the interior surface of the mesentery of the ileum within about eight inches of the ileo-cæcal valve. Its relation to the intestine was such as to leave the caliber of the gut entirely free. The cyst was readily enucleated without damage to any large branch of the mesentric vessels, and its bed was entirely covered by stitching the peritoneum of the mesentery over it. The uterus was thne brought into view and the diagnosis confirmed (apparently). Hystercetomy, according to the method of Kelly, was done. The patient bore the operation well and was put to bed in good condition. Two days after the operation the patient's bowels moved readily in response to calomel, followed by a saline. From this time up to about the ninth day the convalescence was not marked by any symptoms out of the ordinary. On the ninth day, however, it was observed that there was slight distension, with occasional cramy-like pains in the abdomen and inclination to vomit. The administration of a physic was not followed by a stool as promptly as one would have expected, nor did the distension subside completely after the stool. By the thirteenth day the clinical picture resembled an incomplete obstruction with rather mild symptoms. In the afternoon of this day I was hurriedly called, because of violent abdominal pain with threatened collapse. I found her almost pulseless, with cold extremities and moderate tympany. Vaginal examination showed a coil of small intestine lying in the culdesac, distended out of all proportion to the degree of general distension that existed. On the ground of a possible adhesion betweenthe intestine and the stump of the uterus, I opened the culdesac and encountered only moderate adhesions, none of them, to my mind, accounting for the obstructive symptoms. Nevertheless the patient seemed to derive some benefit from the manipulations, for after recovery from the shock, which, on account of her weakened condition, was extreme, the bowels acted, though not very thoroughly. On the 14th and 15th days she became still more distended, vomiting was frequent, finally no gas or fæces passed, and there became evident in the right inguinal region a much distended coil, which could be felt through the abdominal wall, and was evidently very near to the region of the obstruction. As by this time (16th day) she was too weak to stand any prolonged operative procedure, an incision was made under local anesthesia and enterotomy performed, without search for the nature and location of the obstruction. The small intestine was opened some distance above the ileo-cæcal valve. Immediately following the enterotomy there was a profuse fecal discharge, but, unfortunately, without any special benefit to the patient. Her strength failed rapidly, and death ensued within eighteen hours.

Report of Necropsy and Microscopic Examination of Specimens by Dr. J. M. Phillips.—The body was somewhat emaciated; rigidity moderately marked; abdomen much distended. The laparotomy wound well united, except near its upper part, where there was a granulating sinus, resulting from a stitch abscess. The artificial anus patulous, a quantity of fecal matter, staining the pad, covering it. On opening the abdomen the omentum was found covering the intestine, but tightly adherent to the under surface of the laparotomy wound. The coils of small intestine were greatly distended, the large intestine collapsed and almost empty. There was no evidence of general peritonitis, but the serous surfaces were moist. The thoracic cavity when opened presented an almost normal appearance, except for numerous minute petechiae. The pericardium contained a little more clear fluid than normal. There were no gross pathological changes in the heart. On the outer and lower surface of the left lung the visceral and parietal layers of pleura were tightly bound together by adhesions resulting from a former pleurisy. The spleen was normal in size and appearance. The liver slightly enlarged, a few petechiae on its surface and a well-marked atrophic depression, "corset atrophy," on its right lobe corresponding to the edge of the ribs. The stomach was greatly distended, extending almost to the umbilicus. The seat of obstruction was found about 18 inches above the cæcum, where a loop of intestine, about three inches in length, had slipped through the mesentery some months before, inasmuch as it was bound to the surrounding intestine by some very firm adhesions, those on the apex being especially firm. This loop was collapsed and somewhat inflamed. Just beneath it a new knuckle of gut had pushed through the same opening in the mesentery and become strangulated. This consisted of that part of the small intestine immediately above and continuous with the gut which formed the old hernia. Above this point the small intestine was greatly distended, while the strangulated knuckle was inflamed, friable and almost gangrenous, with some new, easily separated adhesions surrounding it. The opening in the mesentery had thick rounded edges, and had evidently existed for a long time or was congenital. The entire mesentery was abnormally long. A short distance above the obstruction an enterostomy had been performed. There was only the usual amount of inflammation about the seat of operation.

About eight inches from the ileo-cæcal valve the rent in the mesentery, formed by the removal of the cyst, was found. It was nicely closed.

Cyst.—The mesenteric cyst is about 14 c.m. in diameter, and contained a fluid of the color of thin milk. Histologically, the wall consists of fibrous tissue, covered on both internal and external surfaces with endothelial cells. The wall shows marked calcareous infiltration in places.

Uterus.—The entire uterus is hypertrophied, the walls being about 2 c.m. in thickness. When opened a large sub-mucous tumor, about 9 c.m. wide and 11 c.m. long, is found, springing, for the greater part, from the anterior wall of the uterine cavity. When fresh the tumor was nodular, rather softer than the usual uterine fibroid, pale pink in color and quite vascular in some areas. In places a fairly well developed capsule can be demonstrated, in other portions the tumor is intimately connected with the surrounding uterine tissues.

Histologically, it consists of more or less elongated fibers, running in various directions. In the vascular areas of the tumor the vessels were of two kinds —large vessels, surrounded by thick fibrous walls, and small vessels with very thin walls. Around these vessels there are epithelioid cells, some of which are irregular in shape, but the greater number are oval. Portions of the avascular areas are composed of ordinary fibrous tissue, but they are, for the most part, made up of cells which are distinctly longer than those around the bloodvessels. However, the shorter cells are occasionally found here also. After staining with Van Giesen's stain, none of the fibrillated portion takes the picric acid.

Scattered, irregularly, throughout the tumor, occurring in rows or singly, and in some places in great numbers, are mast-cells of Ehrlich. The tumor is fibro-sarcoma.

Dr. Simon Flexner has kindly examined the tumor and confirmed the diagnosis.

It should be noted that the mesentriccyst was situated 8 degrees from the ileo-cæcal junction, while the mesenteric opening through which the intestine had slipped was only 10 degrees higher up. It would seem as though the latter should have been detected. I ascribe the failure to find it to the thorough packing with moist towels by which everything which was not strictly in the operative field was excluded from it. In any event the occurrence is most interesting, in the light of a recent paper by Howard Kelly, generally advocating systematic exploration of the abdomen at the conclusion of operations dealing primarily with pelvic diseases.

The autopsy reveals the fact that a loop of small intestine had been in the mesenteric opening—but not strangulated—for an indefinite period. This may be inferred from the age and density of the adhesions holding it in place. There is nothing in the history of the case which suggests that the conditions produced symptoms previous to the attack of vomiting from which she suffered two days before the operation, which I had been unable to explain. This may have been associated with the adhesion in question. When the attack of pain occurred on the 9th day after operation, the additional coil of bowel, doubtless, slipped through the hole in the mesentery, and then the serious symptoms began. At no time was the consequent obstruction complete, and the symptoms accompanying it were vague and atypical, until nearly the end. A rapidly performed abdominal section, at an early period, would have revealed the nature of the disturbance and, probably, also have permitted its successful treatment.

REPORT OF A CASE OF TUBAL PREGNANCY DIAGNOSED ONE WEEK PREVIOUS TO RUPTURE, VERIFIED BY OPERATION FOLLOWING RUPTURE—RECOVERY—PRESENTATION OF RARE SPECIMEN.*

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Mrs. X, on February 10 last, gave a history of having missed two menstrual periods, the last one due January 23. Upon examination the uterus was found but slightly enlarged, but the left tube was found enlarged to the size of an orange. A diagnosis of probable tubal pregnancy was made and the patient so informed, though it was difficult to make the patient understand and realize the nature of such a condition. I requested her to call upon me again immediately following the time of expected next period.

February 17 I was called in haste, and found her rallying from an attack of syncope, and in great pain. She stated she had been taken suddenly with an acute and excruciating pain in the left ovarian region, and fainted away. An examination verified the diagnosis made one week previously, with the addition of rupture and hemorrhage. An immediate operation was advised, but the patient strongly opposed it.

Knowing that peritonitis would at least have to be contended with until I could, perhaps, induce her to be operated upon, I at once placed her under treatment.

On March 11 the tenderness had subsided sufficiently to enable me to map out an adherent mass, the size of a small grape fruit, posterior and to the left of the uterine; the uterus, as before, was but slightly enlarged and not tender. This time, upon laying the exact condition before her, of ruptured tubal pregnancy with complicating hæmatocele, and again strongly advising operation she consented. The operation was being performed on March 17, just one month following time of rupture.

Upon opening the abdomen I found the enlarged tube, a slightly cystic ovary, and a mass of dark, clotted blood and fresh lymph filling the pelvic space completely behind and to the sides, especially the left of the uterus. The artificial fixed position of the uterus, as a result of a ventral fixation performed at the German Hospital, New York, three years previously, admitted of a diagnosis more readily than otherwise would have been the case. The adhesions were readily broken up and the mass of clotted blood was removed. When the parts had been drawn into the abdominal opening it was seen that the pregnancy and distension occurred in the distal portion of the tube near the fimbriated extremity, the tube being an unusually long one. Convalescence was rapid. The abdominal sutures of Chinese twisted silk were removed on the tenth day, when it was seen that primary union had taken place throughout. The patient had been delivered of two children at full term some years previously.

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*Read at the recent meeting of the Florida Medical Association.

Heart Strain; Its Result and Treatment.—J. M. G. Carter says that the effect of heart strain is seen in two ways. (1) By, overwhelming disturbance causing immediate faintness, possibly paralysis and death; (2) A more gradual dilatation, from lighter and daily strain. The heart muscles are in the condition of muscles in any other part of the body where the fibrils become unduly stretched and strained; the rhythmic action becomes feeble, tremulous and imperfect. Prophylactic treatment in civil life would require elimination of corsets and belts from ordinary dress; a quiet well-regulated life, avoiding all over-exertion. In military life it requires such an adjustment of accoutrements and exercise as will prevent overwhelming the heart in its efforts to carry on the circulation. The proper advice to such persons is to leave the service. Hygiene and diet must be carefully regulated, all gas-producing foods being avoided. In asthenia digitalis and strychnia are the most important remedies—the addition of tonics will restore the tone of the heart and reduce its rhythmic activity.—*Illinois Medical Journal.*

The Practical Bearing of the Study of Immunity.—J. W. Washbourn asks the question whether the remarkable discoveries made in the line of bacteriology are likely to lead to therapeutic advances, and answers it in the affirmative. It has been found that the infection of a serum containing a lysin leads to the formation of an anti-lysin, a substance capable of destroying the lysin. Is it not possible that we may be able to obtain a serum capable of annulling the effects of the hypothetical lysin which is the cause of the destruction of the kidney cells in chronic nephritis? And is it not possible that other forms of so-called parenchymatous inflammation may come within the reach of treatment within these lines? Moreover, not only the infection of living cells, but also the infection of chemical products, leads to the formation of anti-bodies in the blood. That the study of immunity will continue to advance our knowledge of the treatment and causation of disease is sufficiently certain.—*Treatment.*

The Use of Gelatin as a Hæmostatic.—Y. Miwa asserts that the celebrated San-Han-Ron, a medical treatise written by the Chinese physician, Chian Chiyun Kiyon about 204 A. D., contains a description of the hæmostatic properties of gelatin in all forms of hemorrhage, and he adds that many references to this fact are to be found in Japanese writings of a somewhat later date. The usual form of application was in solution, though insufflations of the dry powder were recommended in epistaxis. In internal hemorrhage the remedy was usually combined with vegetable astringents, and tonic and blood-forming powers similar to those of iron were also ascribed to it.—*Centralblatt für Chirurgie.*

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ERRORS IN THE CHRONOMETRY OF LIFE.

ALL that the late Sir James Paget spoke or wrote is deserving of close attention, not only for the wide range of knowledge therein displayed, but also for the clear and accurate manner that he possessed of presenting any subject, however technical, to his audience, so that it should be easily understood.

Some of his published orations are masterpieces, and no less excellent are a number of selected essays and addresses recently issued.

By no means the least instructive of these is the one mentioned above.

Sir James Paget pointed out—a fact too apt to be forgotten—that there is a chronometry in life, as well as a chemistry or a mechanics, and that, in the study of pathology, we do not sufficiently consider how much of disease or of its variations may be due to disturbance of the time-rate at which the organic processes should be discharged.

The inquiry is also suggested, into the influence of the variability of a time-rate, as one of the conditions upon which may have depended the "selection of species," and the author of the essay goes on to say, "It is not difficult to imagine many terrestrial events in which the 'survival of the fittest,' among species or individuals might depend, chiefly, on the possibility of adjustment of a time-rate in one or more processes. In the ordinary course of nature the time-rates in each creature are adjusted to those of the external conditions most necessary to its life. The development and hatching of the young pigeon keep time with the development of its parent's crop; the development of the mammalian fœtus with that of the mother's mammary glands. Such adapted changes in parents for the sake of their offspring are everywhere to be seen, and so are the instances in which the development of animals of all kinds keep time with those of the plants or other animals on which they live."

It is hardly too much to say that the whole course of nature among living things thus depends on their mutual adjustment in time as well as in all the other conditions of their lives. And if this be so, then any alteration of the time-rate of life in any species might gravely affect its fitness for an unchanging environment, or might lead to the natural selection of a few of the species whose differences from the rest would be transmitted to some of their offspring.

The errors of chronometry or unpunctualities in life are then dealt with at some length, a part of which only can be referred to within the scope of an article.

It is shown that those young persons who develop most rapidly, and present the appearance of being older than their age, are usually healthy and potent in resistance of disease, while a large majority of those who, when young, look less than their age, are weakly, some scrofulous, some syphilitic by inheritance, or rickety; and many more—though not plainly thus diseased—are certainly prone to scrofula, tuberculosis, acute rheumatism, and other diseases of this class.

As to the conditions which have retarded the time-rate of development in the young, the essayist was of the opinion that the health, good or bad, of parents, has small influence on the time-rate of children in early life, and that the children of the old are different in this respect from those of the younger.

The most frequent cause of delayed growth, when any cause for it can be assigned, is an acute illness, such as scarlet fever, diphtheria, or whooping cough. Children's heads and nails are considerably checked in growth after each of their occasional illnesses, while the seemingly rapid growth which often occurs in the young after an especially acute attack of sickness is seldom, if ever, associated with equivalent growth and development of organs, whose size is more important than is the length of the lower limbs and spine. Nor, again, is that strange increase in fatness, which is often observed in the young after serious sickness, significant of high development.

A slow time-rate is frequently found in those children who were prematurely born, and the delays which happen to some in later years, are due to slowness in the degenerative processes of life; and we may fairly guess that this may also explain the many instances of great longevity in persons who, when they are very old, say that they were never strong, never vigorous in their life, exemplifying the homely old saying that a creaking gate generally hangs the longest.

Premature development of parts is also touched upon, and it is shown that this kind of development is only too commonly seen in the teeth. Their time-rate may be faster than that of the jaws, with which they ought to coincide exactly, and in this case they come out crowded, and the more so the more exactly they keep time with one another. Often, however, they do not keep time either with one another or with the jaws; they come out both crowded and disorderly.

The explanation given of prematurely gray hairs is that these are simply a degeneration of the parts, and that analogous untimely degenerations may occur without disease in much more important parts. All parts do not often grow old at the same rate, and as people of the same age, according to the register, are, in many instances, of widely different ages by every other test, so it is with the several organs of the same body. Some may have grown old at a much more rapid rate than have others, and this, not because they have been the seats of any morbid process; their errors may have been merely chronometric; they have not kept time; they have too quickly become gray.

There is much reason in the argument that many cases of failure in health are due to these errors in the chronometry of life, and Sir James Paget concludes by expressing the opinion that our pathology, and sometimes our practice, would be improved if local defects of working power were more often thought of as errors in the time-rate of life in the defective parts; if we would think of the age of each part as not always wholly or exactly expressed by the time that has elapsed since it was first formed; if we would bear in mind that any internal organ may deviate from the general time-rate of the body as much as the teeth, the hair, and the skin, which we so commonly think of as old before their time. We should not be content with asking a patient how old he is; we should ask ourselves how old is his heart, or his brain, or any other part which seems now less healthy than the rest.

THE NEW LYING-IN HOSPITAL AND ITS APPEAL.

THE recent action of the general board of managers of the New York Society of the Lying-in Hospital, in issuing an appeal to the public for additional funds with which to defray the contemplated expense of the coming year, causes no little surprise among professional and lay circles, for, at the opening of the hospital some three months ago, no apprehension was expressed on meagerness of income. The donator, Mr. J. Pierpont Morgan, after bestowing upon the society a gift having an approximate valuation of $1,500,000, considered that he had discharged in full all the voluntary obligations assumed by him in erecting and furnishing the hospital and that the public, or those otherwise interested in the welfare of the society and prosecution of its work, should exert the strenuous efforts necessary to secure sufficient capital for a permanent endowment which would suffice in the future to adequately cover the entailed expenditure of maintenance. The public is apprised through the appeal that the society is in receipt of an income which cannot provide for more than sixty-two beds, or one floor out of the eight comprising the building, and, including the municipal allowance of $12,000, the combined income from all interest-bearing investments, with general contributions, does not exceed in the aggregate $30,000. This sum represents but one-third of the estimated cost of operating only one-half of the hospital, and leaves a deficiency of $60,000 to be accounted for at the end of the fiscal year.

The running of the hospital to its full complement has been apparently abandoned as impossible, even under the most favorable conditions. Accepting these statements under advisement, it is evident that the society is in possession of a magnificently equipped plant with a disproportionate working capital, at the same time is somewhat embarrassed by an unavailable permanent endowment fund. Prior to entering upon the construction of the new hospital, the society must have been cognizant of the limitation of its treasury to handle the greatly increased scope of work, and now, on completion and in partial operation, the subject of future provision may prove a problem of difficult solution, unless those associated with the society are successful in soliciting the requisite amount of money.

It cannot fail to suggest a wantonness of commercial acumen and lack of judgment to assume so large a burden merely on a hopeful and speculative outlook. It may be a fashion, though a deplorable one, for municipalities to enter into extravagant undertakings with the hope that a funded and bonded debt will offset imposed obligations, but for a private association to boldly shoulder prospective liabilities in the maintenance of a hospital, the municipal need of which has never been evidenced by the overcrowding of similar institutions, fails to invite hearty co-operative sympathy.

The completeness of hospital accommodations in New York city for worthy indigent maternal cases is too well known to require other than passing reference in these columns, and it is safe to say that the erection and support of the Morgan Hospital in its immediate neighborhood not only invites but creates a continuance of dispensary and hospital abuse. Many of those applicants seeking admission can comfortably provide for themselves in their own homes; thus, the hospital, in accepting such cases, deprives the physician in the district of a fee to which he is justly entitled. In the absence of the hospital, these cases would seek and pay for medical attendance. The fee, even though small, partially compensates the physician for services rendered, and serves as a stimulating encouragement to continue his practice with doubled effort. This refers, particularly, to the younger physicians, who, within the past five years, have settled on the East Side, and , after their long period of patient waiting and outlay of money in preserving a residence in a promising locality, containing homes of successful wage-earners, are now to compete with this formidable free plant.

Moreover, it has been noted by doctors living within the environs of maternity hospitals that former patients who were well able to pay (and pay promptly) neglect to call them to attend the next accouchement, and, on subsequent inquiry, learn that the case was confined at a maternity hospital, which, in readiness to serve the purpose of its erection, receives applicants after a necessarily brief examination into the true worthiness of the case.

It is unquestionably admitted that a difficult problem confronts hospital authorities in discriminating between the pseudo and genuine need of an applicant, but laxity of inquiry and desire of the institution to have a large service are, in a measure, responsible for the continuance of hospital abuse. Certainly it is very harsh for the young physician to be forced to realize that a hospital or dispensary in a residence district, composed of good wage-earners, unjustly deprives him of professional reward by dispensing medical attendance to unqualified applicants, and, incidentally, creates pauperism by giving much for little or no return. Such a condition as this is not charity, but an educational method of instructing people of moderate, though sufficient, means for substinence, to neglect all provision for sickness and to disregard their individual duty to society at large by relying, in emergency, upon the gratuitous dispensation of aid.

Now that the hospital exists, and funds for its support are needed, it is to be hoped that these will shortly be forthcoming, and that the work of relieving those needy cases who present themselves as applicants for admission may in no way be hampered. Yet it would seem eminently fit that the local physician's interest be a constant subject of consideration by the hospital authorities, so that neither the practitioner nor the worthy mother be discriminated against in the gratuitous dispensing of medical attendance.

SUITS AGAINST HOSPITAL PATIENTS.

The outcome of recent suits brought by Dr. George R. Fowler of Brooklyn against so-called hospital charity patients for professional services rendered, will be watched with a great deal of interest by every medical man who has been defrauded under like circumstances. It is so well known that the physician or surgeon, wherever he may be, is always ready to attend the poor gratis, and that every advantage is taken of his charitable impulses. There is hardly a hospital to be found in which the abuse of charity by patients able to pay for services does not exist, and the physician or surgeon on duty is particularly liable to the imposition. While in most cases the patient is the principal party to the fraud, the hospital itself is seldom backward in condoning the offence, especially when board is paid and private rooms hired. It need not be said in this connection that the semi-private hospitals are as a rule run more on the hotel principle than that of a broad and helpful charity. The man who can fill the greater number of private rooms is the one chosen on the staff. This being the case, there is a natural premium on the board and room question. The unvarnished truth is that the physician or surgeon at a modern American hospital is required to proffer his services for little or nothing, or rather he is expected to fall in with the views of the hospital authorities, in a manner of speaking to efface himself, and to permit his conduct to be guided by what the management considers to be the best interests of the institution to which he is attached.

Patients who can well afford to pay, but who are so mean as to grudge the medical man his just dues, for restoring or endeavoring to restore them to health use the hospital as an easy and convenient means to obtain treatment for nothing, and, as remarked before, so long as the hospital profits, its management is not too eager to look after the interests of the doctor. The hospital authorities as a rule make no effort to discover the status of a patient, but if he comes with money in hand, he is welcome to the best advice and treatment, and the unfortunate medical man too often must grin and bear it.

If a member of the medical staff is sufficiently bold to question the right of the hospital management to dictate his conduct and to stand up for his just claims, he is requested to resign, or, in plain English, he is politely ousted, and a more pliable individual is put in his place.

The original intention of the founders of hospitals was that they should be charitable institutions, conducted solely for the benefit of the poor, and it would assuredly make these worthy men rise from their graves if they could see the manner in which their projects have been frustrated and could witness the grasping commercial principles upon which the hospital of to-day is run.

There is no objection to paying wards in hospitals, in fact, under the circumstances these are necessary, but it is distinctly wrong that an institution of this nature should be utilized by unscrupulous, conscienceless persons to cheat the medical man.

The result of this fraudulent imposition upon the medical profession will be—indeed all signs point that way now—the multiplication of private hospitals as a matter of self-defence.

That Dr. Fowler will win his suit will be the heartfelt wish of every medical man in the country. It is a test case, he is fighting the battle of the profession, and if he is successful, a curb will be placed on such patients as should pay for medical services, but who, through the so-called charitable institutions, defraud the medical man at every turn.

Bacteria in Milk.

There was a time, not far distant, when nothing was known with regard to bacteria in milk. If the supply were fresh, not visibly dirty, and sufficiently plentiful to meet the needs of the population of civilized countries, the majority of the people considered that no more could be expected. At the present time, however, this view of the case no longer prevails. It is allowed on all hands that bacteria abound in milk, and the only ground for disagreement is as to the extent these cause injury to health.

The general public is prone to imagine that all bacteria are disease-bearing, and that the greater number of these a certain milk contains, so much the more dangerous to health must this milk be.

Dr. Veranus A. Moore of Cornell University has written under the auspices of the State of New York, Department of Agriculture, a pamphlet explaining clearly the true nature of the situation.

After pointing out that all bacteria are not harmful, the writer says that the problems arising from a knowledge of bacteria in milk that have already been studied, but which need to be more thoroughly investigated, resolve themselves, very naturally, into three groups, namely:

1. Those which pertain to the manner in which bacteria gain access to the milk.
2. The effects bacteria produce (*a*) on the milk itself, and (*b*) the effect of the changed milk upon the consumer.
3. The methods of handling milk in order to keep the number of bacteria and the products of their growth at a possible minimum point.

As to the manner in which bacteria gain access to the milk, Dr. Moore remarks that the inquiries into the ways and means by which these microorganisms could gain entrance to the milk show that, for the greater part, these external sources consist:

1. Of particles of dirt, laden with bacteria, which fall into the milk utensils before and after the milking process.
2. The dirt and filth which fall into the milk pail, from the skin of the udder and groin of the cow at the time of milking.
3. The dirt otherwise introduced from the hands and clothing of the milker.
4. The bacteria that remain in the utensil from improper cleaning.

There is yet another source from which bacteria can gain entrance to milk, and that is from the milk ducts of the udder itself. Various investigators have experimented in the matter with the result that the bacteria emanating from this source have been identified on many occasions.

With regard to the significance of bacteria in milk, as Dr. Moore aptly says, nearly if not all of the changes that occur in milk subsequent to its escape from the udder are primarily caused by bacteria.

Therefore the object of dairy farmers, and, indeed, of all who handle milk, should be to use the most scrupulous cleanliness, as well as to take every precaution known to science, to keep the number of bacteria in milk within the proper limits.

LAW AS TO PROOF OF DEATH.

Justice Greenbaum of the Supreme Court had before him on Saturday, May 24, a somewhat curious case and one which well illustrates the seeming eccentricities of the law. Margaret Robinson brought suit to recover $2,000 on a benefit certificate on the life of a son from the Supreme Commandery of the United Order of the Golden Cross of the World. A jury gave a verdict in her favor, and a motion was brought before Justice Greenbaum to negative this verdict.

The chief plea of the defence was that Robinson made false statements when admitted to the order and thereby forfeited the insurance. He said that his father had died of pneumonia at the age of thirty-five years, whereas a certificate of death on file with the Board of Health showed that his father had died twenty years ago at the age of thirty-three years from tuberculosis. Section 955 of the Code provides that public records of a class supposed to embrace certificates of death are presumptive evidence of their contents if on file twenty years.

The plaintiff took the ground that the certificate was worthless as evidence to prove the death of the father, because another section of the Code forbids physicians to disclose information obtained in a professional capacity. The plaintiff further wished to call Dr. Walton, who gave the certificate, to testify that the cause of death was not exactly stated in the old certificate, but it was held that Dr. Walton was barred from acting as a witness.

Justice Greenbaum delivered the following opinion: If it be held that Section 955 repealed 834 to the extent that a death certificate made by a physician is competent, then the absurd situation would here be presented of excluding the oral testimony of Dr. Walton, who attended the father of the deceased at the time of his death; and who wrote out the death certificate as to the cause of the father's death, and admitting identical proof from the same source written on a piece of paper called a certificate. The Justice said that the authorities are decided that a physician cannot disclose the cause of death of a patient, and he did not think it was intended to abridge the law sealing the mouth of a physician by letting in evidence his written statement of death because it was filed on record twenty years ago. He was of the opinion that a physician is bound to file such a certificate under the laws, but that the cause of death be established by common law only; he therefore declined to interfere with the verdict. It would appear from this interpretation of the law that a physician's certificate does not count for much, and as he is precluded from giving oral evidence as to the cause of death, the question is, how is the correct cause of death to be discovered?

THE METRIC SYSTEM.

Once again a movement is on the way to introduce the metric system into the United States. A bill is now before Congress to bring about this reform so far as the different departments of the United States Government are concerned. There is a wide divergence of opinion, among the various professions and trades interested, as to the desirability of this course.

Many, perhaps the majority of scientific men, favor the movement, but, on the other hand, many influential bodies strenuously protest against the introduction of the metric system into the Governmental departments. Among those which most vigorously assail the suggested change is the American Society of Mechanical Engineers, which, according to the *Scientific American*, believes that the metric system "will inconvenience and hinder trade and manufacturing, and require an expenditure of time and money that cannot be expressed in figures, sweeping away, as it does, the advantages accruing from the numerous established standards now recognized and universally adopted throughout the country."

Of course, this is one way of looking at the matter, but there is another consideration which is quite as, if not more, important.

The metric system is in use in all countries but the United States and Great Britain, indeed may be called an international system, and is said to answer its purpose excellently. Although the United States and Great Britain own a large slice of the world, they by no means own sufficient to enable them to control the situation, and it would certainly facilitate international trading if all nations used the same standards.

The metrical system is used by pharmacists, and the Pharmacopœia and Dispensatory are both based on it.

On the whole, it would seem that the adoption of the metric system in this country is indicated upon both scientific and economic grounds.

CRUSADE AGAINST MOSQUITOS IN NEW JERSEY.

In a recent issue of the New York *Tribune* Mr. John B. Smith, State Entomologist for New Jersey, gives an account of the methods which will be employed to fight and, if possible, eradicate the mosquito from that State.

An appropriation of $10,000 was made in the last session of the New Jersey State Legislature, for a study of the mosquito problem, but owing to a misconception of the intent of the act—some believing that for the amount appropriated an attempt would be made to rid the State of the mosquito pest—the measure was, in certain quarters, adversely criticised.

The bill really reads "An Act to Provide for an Investigation and Report by the New Jersey Agricultural Experiment Station upon the Mosquito Problem in its Relation to the Sanitary, Agricultural and Other Interests of the State."

It is in the southern part of New Jersey that the mosquito is particularly rampant.

Mr. Smith premises his description of the methods to be employed by stating that the purpose to be kept in view is the permanent eradication of the mosquito. It is easy to kill larvæ by the million with kerosene or other oils; but unless the conditions are changed this killing would have to be done over and over again, and there would be no end to the expenditure of money.

The methods to be employed are as follows: the distribution of the natural enemies of the mosquito larvæ should there be any that are effective. This involves a study of fish, frogs, toads, and other similar creatures, to determine which forms may be made useful in the fight.

Next the matter of drainage, as applied to the immense salt marsh areas, is to be closely studied.

Mr. Smith wishes it to be distinctly understood that the work now in hand is merely a preliminary investigation from which to gather data as to the best means of waging a successful fight against the mosquito.

It is to be questioned whether any scheme other than a thorough drainage of the marshes will have the effect of diminishing the number of mosquitos to an appreciable extent. Naturally, a project so ambitious as this somewhat alarms the Legislature on account of its probable expense, but, even if the sum of money expended were large, the banishment of the mosquito would alone compensate for the expenditure.

In the meantime, it is well to try simpler palliative measures, such as stocking ponds with fish, frogs and toads.

The Housing Question.

In all large cities of the world the problem most difficult to solve is how to house the teeming population in such a manner that health, morality, and decency, may be fitly observed. In New York the difficulty presents itself in its most aggravated form, and figures are daily being gathered testifying to the truth of this statement. In the quarterly issue of *Federation*, the organ of the federation of Churches and Christian organizations in New York city, is an article, by the Rev. Dr. Walter Laidlaw, dealing with the sociological conditions of the Eleventh and Thirteenth Assembly Districts. In these districts 6,369 families, out of 13,657, live in three rooms or less, and only 2,457 have above four rooms. The average is 3.7 rooms to a family. Among the Italians it is 3.2; among the negroes, 3.4 rooms.

There are 50,640 rooms in the apartments, and 17,015 of these have no outside windows.

The total number of private baths is 557; there are twenty-one families with access to a hall-bath and 13,079 tenement families are without bathing facilities. There are but three bath-tubs among 501 Italian families, and the Austrians and Poles have none at all.

Two thousand one hundred and twenty-four families have a private toilet; 4,015 hall toilets, and 7,518 only yard or basement toilets, sanitary conditions which invite both physical and moral pestilence.

One hundred and seventy-one families are without water supply; 1,458 secure water from the ground floor, and only 2,290 have both hot and cold water in their rooms. Various other details are given, but enough has been written to show that the condition of the tenement houses in these districts is extremely bad.

They are, however, typical of the same class of buildings in many parts of the city; indeed, in one or two sections the state of affairs is probably worse.

Sir James Crichton Browne recently delivered an address at Manchester upon "Light and Sanitation," in which the present situation as regards the housing conditions in large cities is eloquently stated.

He said in part: "It is impossible to witness without anxiety the piling-up process that is going on. In the walled towns of yore the houses grew aloft, acrogenously, story on story, because lateral expansion was impossible within the protected area, and in the industrial towns of to-day economic considerations as rigid as stone walls create enclosures within which accommodation can only be found for the crowds that press into them by packing them tier on tier. A general skyward movement is in progress. Artisan dwellings, warehouses, shops, mills, and mansions go on adding cubits to their stature and lengthening and deepening the shades around them. There are streets in London that are like tunnels, courts like damp cellars, rooms innumerable, even in fashionable quarters, that not a glint of sunshine has ever entered. In dealing with that housing problem, which should occupy the most prominent place on the slate of every social reformer, and on the solution of which the best attention should be concentrated, it should be steadily borne in mind that every human habitation or block of habitations should be surrounded by a belt of light as inviolate as the streak of silver sea that surrounds our islands."

The Medical Record has always been an earnest and steady advocate of well-built sanitary dwellings for the poor, for by following this course disease will be prevented, as, probably, it could not be prevented, by any other means.

Tobacco as a Disinfectant.

The subject of tobacco possesses a peculiar and engrossing interest for all sorts and conditions of men. Despite the fact that the general public are continually being warned of the evil effects which will assuredly follow indulgence in the soothing weed, smoking continues in much the same manner as usual. There can be no doubt—as has been pointed out on several occasions in the Medical Record—that smoking to excess, or following the habit when young, is hurtful to the health, and to some people a positive danger. The wisest way is to steer a middle course.

There are, too, enthusiasts with regard to tobacco, and who attribute to the South-American weed all the virtues under the sun. These eulogists, of course, are as much in error as those who deny it any saving grace.

A discussion was raised in an English lay paper of a recent date as to the merits of tobacco as a disinfectant, and much interesting matter was brought forward.

The *Lancet* was called to give, so to speak, expert opinion, and further information on the matter was forthcoming.

The belief that tobacco possesses extraordinary properties in warding off certain diseases of a contagious nature is almost as old as the introduction of smoking into Europe. During the great plague tobacco was largely used for this purpose, and children were encouraged to smoke as a precautionary measure. "In 1888," says the *Lancet*, "Dr. Paul Tassinari of Pisa subjected the germs of various deadly diseases—such as anthrax, cholera, and typhus fever—to the action of dense clouds of imprisoned tobacco-smoke, during periods of 100 to 150 hours, and he came to the conclusion that in most cases, and especially when large cigars had been employed as generators, the development of pathogenic bacteria was either partially or wholly arrested." This experiment, however, by no means proves the case, for, as the *Lancet* says, no one keeps a cigar in his mouth for 100 hours at a time.

Workmen in tobacco factories are often pointed to as examples of the disinfecting properties of tobacco. It is declared that they are immune from epidemics. On the authority of some experiments conducted in France, it would appear that there are some fairly good grounds for this belief, but the investigations have not been carried out to a sufficiently wide extent to justify the passing of any authoritative opinion. The matter is as yet *sub judice*, and will, probably, remain so for an indefinite period. Strong tobacco will keep away insects, and certain mild species of mosquito, but that it will render a person immune to contagion is a theory that will not commend itself to the common sense of a sane man.

News of the Week.

Bacteriological Laboratory of the U. S. Marine Hospital Service.—Plans have been prepared and specifications drawn up for the erection of a bacteriological laboratory in Washington, under the control of the Marine Hospital service. Under a recent act of Congress $35,000 was appropriated for this purpose, and five acres of ground, from the reservation now occupied by the Naval Museum of Hygiene, set aside as a site. The laboratory will be used for experimental research, which has heretofore been carried on under some difficulties on the top floor of the building devoted to the administration of the Marine Hospital service. The new laboratory to be erected is very convenient in arrangement and attractive in appearance. The plan is wisely drawn, so as to provide for future anticipated expansion, the present appropriation being used for the erection of only a part of the projected laboratory. With the proposed amplification of its powers into a national bureau of public health, laboratory facilities, such as are projected, are essential to the proper working of the Marine Hospital service.

The Army Medical Board, which has been in session since April 3 for the examination of candidates for commission in the medical department of the Army, has examined seven classes of twelve men each and found thirteen candidates qualified for appointment. The board will probably conclude its examination of all candidates about the middle of June. There are now sixty-six vacancies in the Army Medical Department, with several more in prospect, caused by retirements from age in the near future.

The Johnston Memorial Hospital in Washington.—A committee has been formed for the purpose of carrying out the plan of making the Columbian University Hospital, in Washington, D. C., a memorial to the late Dr. W. W. Johnston of that city. It will be known as the Johnston Memorial Hospital, and the committee will receive contributions for the construction of this building, in addition to the funds being expended for this purpose by the trustees of Columbian University.

The New Jersey Sanitorium for Tuberculous Diseases.—An organization of the board of managers of this new sanitorium was effected at a meeting held last week at the office of Dr. Charles J. Kipp of Newark. The following officers were elected: *President*, Dr. Kipp; *vice-president*, Austin Scott, president of Rutgers College; *treasurer*, Colonel Edward A. Stevens of Hoboken; *secretary*, Dr. James S. Green of Elizabeth. The New Jersey Legislature recently appropriated $50,000 for the purchase of a site and erection of buildings.

Further Disproof of Koch's Latest Theory.—In a telegram to the New York *Times* of May 24 it is reported that, at the annual meeting of the Royal Agricultural Society of Great Britain, Sir Ernest Clarke, the secretary of the society, announced that tests now completed at the Royal Veterinary College, in regard to the possibility of infecting cattle with human tubercle bacilli, proved that bovines could be so infected, and that such bacilli would multiply. "However," said Sir Ernest, "the risk of cattle becoming infected naturally from consumptive humans was very slight."

Christian Science on the No-cure-no-pay Principle.—A woman was charged recently in one of the city courts with creating a disturbance in the reading room of a Christian science church. She told the magistrate that she had gone to the church to demand that either $78 which she said she had paid for treatment be returned or that treatment be continued until she was cured. The magistrate told the woman that the proper place to seek redress was in the civil courts, and discharged her from custody.

Suing Hospital Patients.—Dr. George R. Fowler of Brooklyn recently brought a number of actions against patients who had received professional services at his hands, and who, when bills were presented to them, declined to pay on the ground that they were patients at the hospitals, and that the doctor's services were rendered as a servant of the institution. Dr. Fowler said that he had merely brought the suits to put a stop to a general imposition on physicians by persons who can but will not pay for medical attendance. The actions were brought in the second District Municipal Court in Brooklyn, and eight of them came up for trial one day last week. The amounts ranged from $50 to $600. Two of the actions were settled by the defendants before they were called. In all of the others either judgment was had for the plaintiff or an adjournment was taken.

Maine Medical Association.—The fiftieth annual meeting of this association will be held in Portland on June 4, 5 and 6, under the presidency of Dr. Frederick Henry Gerrish of Portland. The annual oration will be delivered on the evening of Thursday, June 4, by Dr. James R. Chadwick of Boston, whose subject will be "Medical Libraries."

Inferior High-priced Milk.—In the last weekly report of the Chicago Health Department it is stated that an improvement has recently been noted in the quality of the milk supply, which may be expected to continue as a result of the improved pasturage following the recent abundant rains. A curious feature of the examinations during the past fortnight or so, is that the samples of high-priced milk and cream brought to the laboratory by private individuals have averaged much poorer than those collected by the inspector in various parts of the city. The figures last week were 5.9 per cent. below grade of inspectors' samples and 9.5 per cent. of private samples.

The Queens-Nassau Medical Society.—The annual meeting of this society was held at Mineola, N. Y., on Tuesday, May 27, under the presidency of Dr. William H. Zabriskie.

The American Laryngological, Rhinological and Otological Society.—The eighth annual meeting of this society will be held in Washington, on June 2, 3 and 4, under the presidency of Dr. Charles W. Richardson of Washington. The address of welcome will be delivered by Surgeon-General Sternberg. The secretary of the society is Dr. Wendell C. Phillips of New York City.

Gift to the General Memorial Hospital.—Mrs. Collis P. Huntington has given $100,000 to the General Memorial Hospital for the Treatment of Cancer and Allied Diseases, at Central Park West and One Hundred and Sixth street. This will constitute the "Collis P. Huntington Fund," and the income derived from it will be used to promote pathological research.

A Convert to the Mosquito Theory of Malarial Infection.—Major Buchanan of the Indian Medical Service has recently recounted the history of the conversion of his senior hospital assistant, Joongey Lal, to the belief in mosquitos as the agents for transmitting malaria. Joongey Lal had watched with great interest the dissections of mosquitos, and had observed the development of the malarial parasites in these insects, but still doubted. He asked to be given fever in this way, and then, said he, "I will believe." His request was granted, and he was asked to choose the form he desired. Benign tertian was his selection. *Anopheles* were fed on a case in which gametes of benign tertian were numerous, and, when sample mosquitos were found to contain sporozoites in their salivary glands, Joongey Lal allowed others of the same batch to feed on him. He was bitten by these mosquitos on January 21, 22, 24, and 25. On February 3 he commenced to be unwell, and a parasite was found in his blood. On February 5 and 7 his temperature was over 104° F., and abundant parasites were found and seen by the victim.—*British Medical Journal.*

St. Bartholomew's Clinic.—The new building of this clinic on East Forty-second street was dedicated on Wednesday of last week. The institution is not intended for indoor treatment, but accommodations are provided for patients who may require care in bed for a day or two. The building is six stories in height and has been built in accordance with the latest principles of hospital construction.

Danger in Flashlight Powders.—It is stated in a German medical journal that although the vapor given off by burning magnesium, as used in producing "flashlights" for photographic purposes, is not dangerous, consisting as it does of a mere oxide of the metal, the same cannot be said when the magnesium is combined with chlorate of potash. When this is done, it is stated that the ignition of the compound may give rise to the liberation of chlorine gas or some irritating chlorine compounds, by which severe illness may be caused.—*The Hospital.*

U. S. Examining Surgeons.—A meeting of the U. S. Pension Examining Surgeons will be held at Saratoga Springs, Monday, June 9, the day preceding the meeting of the American Medical Association. All examining surgeons are invited to be present. Those desiring further information may address Dr. William A. Howe, Phelps, N. Y.

Dr. James Rose of Waynesburg, Pa., was killed on May 21 by being struck over the eye with a bottle thrown by a stable boy.

Pathological Society of Philadelphia.—At a stated meeting, held May 22, Dr. G. E. Pfahler read a paper entitled "Indications that Our Present Method of Fumigation Is Faulty," in the course of which he pointed out the inadequacy of formalin as a disinfectant. Drs. M. P. Ravenel and D. J. McCarthy presented a communication entitled "The Diagnostic Value of the Ganglionar Lesions of Hydrophobia," in the course of which they referred to a large number of observations on lower animals, and to several cases in human beings showing the constancy with which invasion by round cells of the capsules of the nerve-cells of the introvertebral and other ganglia takes place, with destructive changes.

Dr. Joseph Sailer exhibited a specimen of aortic and mitral valvular disease, associated with mammoth enlargement of the heart. Drs. W. S. Wadsworth and Wm. G. Spiller exhibited a specimen of multiple hemorrhages of the brain. The specimen was obtained from the body of a man who was found injured on the railroad, and who, without return of consciousness, had general followed by Jacksonian convulsions, with deflection of the eyes to the left side. Operative intervention was discussed, but was deferred for purposes of more accurate localization, but the patient died in the meantime. Post-mortem examination disclosed a large subdural hemorrhage over the right cerebral hemisphere and extravasations of blood into the occipital and frontal lobes. Dr. Wm. G. Spiller exhibited a specimen from a case of cortical deafness, in which atrophy, dependent upon arteriosclerosis, was found in the left temporal convolution. Dr. Spiller exhibited also two brains from idiots. In both of these the cerebrum was small and the convolutions ill marked, and the cerebellum disproportionately large and in part uncovered. Dr. John H. Musser exhibited a specimen of carcinoma of the stomach, in which during life there had been few gastric symptoms, absence of hydrochloric acid from the gastric contents, no anæmia, considerable ascites and an abdominal tumor movable with respiration. Clinically, the possibility of tuberculosis of the stomach was taken into consideration. Drs. Thos. G. Ashton and Coakley read the report of "A Case of Splenic Pseudoleukemia," in which during life there had been an enlarged spleen with marked anæmia.

Examination for Admission into the Marine Hospital Service.—A board of officers will be convened to meet at the Marine Hospital Bureau, Washington, D. C., Monday, June 16, 1902, for the purpose of examining candidates for admission to the grade of assistant surgeon in the U. S. Marine Hospital service. Candidates must be between twenty-one and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character. The following is the usual order of examinations: 1, Physical; (2) Oral; (3) Written; (4) Clinical.

Susccessful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. Upon appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco. After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination as vacancies occur in that grade. Assistant surgeons receive sixteen hundred dollars; passed assistant surgeons, two thousand dollars, and surgeons, twenty-five hundred dollars a year. When quarters are not provided commutation at the rate of thirty, forty, and fifty dollars a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service up to forty per centum after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. Further information or invitation to appear before the board of examiners may be obtained by addressing Supervising Surgeon-General, U. S. Marine Hospital Service, Washington, D. C.

Society of the Alumni of the Presbyterian Hospital.—A dinner of this association was held on May 17, at the Arena. Some forty-five members, with honorary members and invited guests, were present. Following the dinner an address was made by Dr. Briddon, and this was followed by other addresses by members of the visiting and consulting staffs of the hospital and by Dr. Booth, president of the St. Luke's Alumni Society. A letter from Dr. Briddon was read presenting to the society a gold medal to be awarded every two years to that member of the Society of the Alumni of the Presbyterian Hospital presenting the most meritorious original essay on a medical, surgical, bacteriological, or pathological subject. The medal is to be awarded by a committee of three from the medical board of the hospital, and the successful essay is to be published in the Presbyterian Hospital Medical and Surgical Report. In the event of none of the essays being of sufficient merit, the fund for the medal is to be used for the purchase of medical works for the library of the hospital. The medal to be first awarded was exhibited. It contains on its obverse a copy of a Greek bas relief representing Æsculapius greeting his disciples. A vote of thanks was presented to Dr. Briddon for his kind offer, which was accepted.

Naval Medical Service Filled.—With the recent appointment of Drs. E. M. Brown, H. F. Strine, J. P. Traynor, and R. E. Hoyt to be assistant surgeons in the Navy, all vacancies in the naval medical service have been filled. This is the first time since the Civil War that such vacancies have not existed. That they are filled at the present time is due to the fact that about two years ago medical men in the Navy were given the same status as was then enjoyed by medical officers of the Army, and under the improved conditions a larger number of better equipped young medical men have presented themselves for examination. This is an excellent illustration of the fact that the character of the professional qualifications in candidates for positions in the government services varies directly with the rewards and emoluments offered.

A Naval Medical School.—It is understood that Surgeon-General Rixey contemplates the establishment at the Naval Museum of Hygiene, in Washington, D. C., of a school for naval medical officers modeled on the lines of the Army Medical School, which was founded in 1893. Instruction of young medical officers of the Navy in special subjects has, in the past, been given in a short course at the Naval Hospital in Brooklyn; but this course is recognized as being insufficient, and the instruction to be given in the new school, which it is expected will go into operation in the fall, will be on a much broader basis. Besides giving instruction to newly-appointed medical officers of the Navy in the proper performance of their duties, the school will also serve a purpose as a place where medical officers of longer service, returned from a tour of sea duty, can refresh their knowledge on special branches and fit themselves for examinations.

It is also understood that Surgeon-General Rixey expects to establish a school for the instruction of the enlisted men connected with the medical department of the Navy, probably at the Navy Yard at Norfolk, Va. A special board of medical officers has for some time been engaged in securing information on this subject and preparing plans for the proposed institution, which will closely follow the lines of the Army School for Hospital Corps Men, at Washington Barracks, D. C.

Obituary Notes.—Dr. Allen H. Hulshizer died at Philadelphia on May 19 at the age of fifty-one years. He received his early education at Lafayette College and was graduated from Jefferson Medical College in 1878.

Dr. Ida E. Richardson died in Philadelphia on May 9, at the age of fifty-seven years. She was graduated from the Woman's Medical College of Pennsylvania, in 1879, and subsequently became an interne in the Woman's Hospital. At a later period she was appointed Instructor in the Practice of Medicine in the Woman's College. Her practice was confined to gynecology and pediatrics, and she was one of the founders of the West Philadelphia Hospital for Women.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

AERIAL DIFFUSION OF SMALLPOX—LATENCY IN ABDOMINAL CASES—BILHARZIA—AN ACTUARY AND OTHERS ON VACCINATION—THE MEDICAL COUNCIL AND ROYAL COLLEGES —KING'S COLLEGE.

London, May 9, 1902.

Though the epidemic of smallpox has given rise to no panic, there has been considerable anxiety manifested by the public; while in professional circles misgivings have been expressed as to the correctness of the conclusions generally reached respecting the spread of the disease. We have for the most part removed our smallpox hospitals to a distance from populous places and thus diminished the chances of personal communication as well as the influence of aerial diffusion. With regard to this last factor, doubts have been felt by many as to the conclusions adopted from Mr. W. H. Power's investigation, and which have so largely influenced the authorities in the provision for isolation Without denying that the infection may be disseminated through the air, indeed such denial is scarcely possible—it may very well be questioned whether we have not exaggerated the extent of this influence and so far neglected that of other causes. Doubts of this kind seem to have been increasing during the present epidemic, and some public health authorities have given expression to convictions that such is the case. Dr. Thresh, the distinguished officer for the county of Essex and lecturer on Public Health at the London Hospital, brought the question before the Epidemiological Society last month. The hospital ships of the Asylum Board lie in the Thames, just outside his county, and since they were placed there, in 1884, smallpox has been more prevalent than previously in the shore district nearest the ships. His investigations in this and previous epidemics, he says, point to some central continuous focus of infection corresponding exactly in position with the ships, and the most careful inquiry fails to show any means whereby this continuous flow of infection can occur except on the hypothesis that it is air-borne. Further, he holds that the aggregation of a large number of cases on a limited area is bad for the patients, who are surrounded by an intensely infected area likely to retard or even prevent recovery. He would, therefore, advise the scattering of patients over a large area in properly-equipped marquees. Their erection on an outbreak would employ the minimum number of men and cause the minimum expenditure. No tent should contain above forty patients, and so he thinks air-borne infections would be prevented. On this point I would interpose that Mr. Power looked upon nine as a possible source of danger, so that Dr. Thresh's researches tend to minimize the influence of air diffusion.

Dr. Thresh's opinions did not commend themselves to the society. Dr. Newsholme, the eminent M.O.H. for Brighton, said more or less communication, no doubt surreptitiously, took place between the shore and ships. He would have liked to have had a detailed history of the first dozen or so of cases on which the course of the epidemic would probably depend. Mr. Power did not venture beyond a quarter of a mile as his estimate for air infection, but Dr. Thresh had been speaking of a mile. The hypothesis of aerial diffusion and concentration of the poison threatened to reduce to an impossibility, or an absurdity, the provision of isolation hospitals. Dr. L. Parkes believed in aerial diffusion up to about a mile, and thought smallpox behaved differently from other fevers. Dr. Goodall said the susceptibility of workmen about a hospital was a question of age incidence. While Dr. Thresh attributed importance to strong winds, Mr. Power had taught that the infection spread further in calm, foggy weather. He would like to know whether the removal of the hospitals from London had altered the local incidence shown in Mr. Power's maps, or whether the disease still haunted the same localities.

Major W. G. Macpherson gave a statement of his experience in the Gibraltar epidemic of 1893–5. He said he, or his inspectors, visited every case and had been able to trace the infection of every one to its source in Spain or Africa. They were treated in an old building in the center of the city, and afterwards in another only 400 yards outside. But he never had any evidence of aerial infection.

Dr. Richmond, M.O.H. for Hartford, said that out of the two hundred cases in his district there were not forty which could not be accounted for by ordinary personal contact.

More than one member remarked that vaccination and revaccination, properly enforced, would render costly hospital isolation unnecessary. This is, doubtless, the conviction of the profession, and the majority of the public would welcome compulsion. But an invertebrate government has trembled at the noise of fanatics and invented the "conscientious objector."

There is often a deceptive remission of symptoms in the course of acute abdominal diseases so marked that the patient is free from pain and his friends of hope. Too often, however, the relief is only temporary and proves the prelude to rapidly fatal peritonitis. In traumatic cases, with or without rupture of the viscera, this course may be observed as well as in inflammation, ulceration, perforation, or gangrene of the intestines, especially of the appendix vermiformis. Mr. Tubby read a paper at the Medical Society of London on the 28th ult., in which he related cases marked by this period of quiescence. The remission was never a complete cessation of symptoms; one or other would persist and so be a warning of danger. The significance of the pulse has long been recognized, and its ratio to temperature, rigidity or distension studied. Mr. Tubby regarded the presence of leucocytosis as specially indicative of latent mischief, and said blood counts should never be omitted in any suspicious case.

Dr. T. D. Savill said that a pulse-rate over 100 indicated danger, even if the temperature were not raised. Excess of polynuclear cells was surer evidence of suppuration than general leucocytosis.

Dr. J. H. Bryant referred to two cases. One had excess of leucocytes, and there was a large abscess; in the other there was slight leucocytosis, and suppuration did not occur. A high pulse-rate, he thought, indicated operation.

Mr. Hutchinson, Jr., remarked that sometimes a quiescent state had been produced by drugs. He referred to a case of gangrenous intestine, in which there was but the slightest peritonitis, suggesting strangulation of the nerves involved. The evidence of the value of leucocytosis as indicating suppuration was conflicting.

The President, Dr. Allchin, thought the pulse-temperature ratio of great importance in obscure abdominal cases, as pointed out by Dr. Cayley and others.

At the same meeting Lieutenant Lelean, R.A.M.C., gave an account of Bilharzia, illustrating his subject by microscopical preparations and lantern slides. The hatching of the ovarian serum, hitherto considered impossible, he said, he had accomplished, and so removed the chief objection to Sonsino's theory of autoinfection. The adult worm has only been found in the portal system, but the embryos may migrate elsewhere. Invasion may take place through the urethra, but the evidence points rather to the rectum. The disease is rare in women, though they bathe in the tropics as much as the men. Urotropin is useful for the cystitis and hæmaturia, but benzoic acid and methylene blue are the only remedies against the parasite. Lieutenant Lelean gives the urotropin in four-grain doses three times a day for one or two days, follows this up with benzoic acid for three days, and then repeats the methylene.

Surgeon-General Keogh remarked that cases would certainly be coming home from South Africa and might be mistaken for hæmaturia from other causes. Some cases would also be liable to be taken for dysentery.

Colonel Gubbins said he had seen cases invalided home, most of them from Rustenberg district or the Swaziland border.

Dr. Bryant said he had already had three cases. He gave them urotropin without benefit. One improved under carbolic acid.

We have lately had some indications that the educated public is awaking from its apathetic condition respecting vaccination. Dr. T. D. Acland delivered an address on the subject at the Mansion House, at the meeting of the Hospital Saturday Fund.

Mr. A. F. Burridge of the Equity and Law Life Office read an excellent paper on vaccination and smallpox before the Institute of Actuaries on the 28th ult. To increase the popularity of vaccination, he held that every medical man should be recognized as a public vaccinator and be supplied with government lymph. In Lord Cromer's Report on Egypt there is a paragraph on the outbreak of smallpox at Port Said in 1901. The Europeans suffered in an "enormous disproportion," as it was not possible to trace the births of different nationalities and enforce the law. The natives, accordingly, benefited by this law, while Europeans suffered from the neglect of their consuls to notify the births.

There is a prospect that the colleges and medical council may shake hands over their silly quarrel—next session. Dr. Moore's Report to the Senior College is firm as to the rights of that corporation, but not uncompromising as to coming to an understanding between the parties such as would forward the cause of medical education.

I hear that King's College will soon make a similar appeal to that of University College, commented on in my last week's letter. King's College aspires to be as well equipped as its sister. There has always been rivalry between these two institutions. King's College was, in fact, founded expressly to compete with University, which it dubbed the "Godless College," because it was strictly undenominational. King's College was established to compete on a strict Church of England basis.

RESECTION OF A LONG SEGMENT OF INTESTINE.

To the Editor of the Medical Record:

Sir: In the Medical Record of May 3, 1902, among the proceedings of the Section on Surgery of the New York Academy of Medicine, there appears an account of a successful resection of eight feet five and one-half inches of small intestine by Dr. Charles H. Peck, who thought that this was the largest portion of bowel that had been resected in this country. In correction of this assumption I beg to state that, on December 2, 1901, Dr. A. C. Bernays of St. Louis resected nine feet and eleven inches of small intestine for a neoplasm of the mesentery, the specimen being exhibited in Chicago, on December 19, 1901, before the Western Surgical and Gynecological Association. The patient recovered.

Gilbert Geoffrey Cottam, M.D.

Rock Rapids, Iowa.

Progress of Medical Science.

The Boston Medical Journal, May 22, 1902.

Gunshot Wounds of the Knee-Joint by Projectiles of Reduced Caliber.—Louis A. La Garde finds, as a result of his investigations: (1) That the mortality of gunshot injury of the knee-joint in the Civil War was 53.7 per cent., and, as amputation was usually done, all those who recovered escaped with the loss of a limb, unfit for duty; (2) That thirty-three cases of gunshot wounds of the knee, produced by the larger caliber lead bullet in campaign, reported by Reyher and von Bergmann, treated antiseptically, gave a mortality of 11.1 per cent; (3) That sixty-two cases, produced by a variety of missiles, reported by the Surgeon-General since 1898, similarly treated, gave a mortality of 8 per cent., and that 45.6 per cent. of those who recovered were restored to duty; (4) That of nineteen cases in the Santiago campaign, by the reduced caliber bullet, the mortality was *nil*, and that 73.6 per cent. of the wounded recovered fit for duty. It is thus seen that the humane features of the reduced caliber bullet have operated not only in diminishing the mortality in gunshot injuries of the knee from about 8 or 11 per cent. to *nil*, but that it has increased restorations to duty 28 per cent., as shown by comparing the tables of statistics.

Two Cases of Tetanus Following Vaccination.—Lyman Allen reports two fatal cases of tetanus following vaccination in Burlington, Vt. In an endeavor to ascertain the cause of the infection, careful examinations were made of the soil in different places, and the bacillus of tetanus was found. The period of incubation in acute tetanus is from five to nine days, and rarely, if ever, is it as long as twenty-one days, and the longer the incubation period the milder the disease and the more favorable the prognosis. In these two cases nineteen and twenty-one days, respectively, intervened between the vaccination and the onset of symptoms of tetanus, and the rapid course of the disease in each case and the fatal result point to a short period of incubation. It is, therefore, almost impossible that the germs were inoculated at the time of vaccination. This fact, with the positive findings in the animal experiments conducted, makes it practically certain that the disease was caused by lack of care in the after-treatment of the ulcer of vaccination. Vaccination should be considered a surgical procedure and be safeguarded by all antiseptic precautions. The ulcer of vaccination should be protected from infection and trauma as carefully as any other surgical wound, and, to accomplish this, all vaccinated persons should either report regularly to their physician for the proper dressing and cleansing of the ulcer, or be carefully instructed at the time of vaccination as to the precautions necessary to be taken to avoid serious complications.

Journal of the American Medical Association, May 24, 1902.

The Treatment of Inoperable Septic Peritonitis.—Horace G. Wetherill says that the treatment of septic peritonitis by surgical measures on the one hand, or by rational medical measures on the other must be determined in each case first through a carefully-made differential diagnosis as to the source of the infection; second, through an estimate of the apparent virulence and diffusion of the infection, and, third, through consideration of the elapsed time since the infecting material was injected into the cavity. Infections from the intestines, vermiform appendix and oviduct are apt to be dangerous in the order given, because of the relatively greater mobility of the first and then the second and third, and of the greater relative distribution of their contents, which favors and promotes diffusion of infection and prevents plastic closure of the leaking viscus. Physiological rest of the intestines favors limitation of the area of peritoneal involvement and the saving of life, and is best attained by the maintenance of an empty bowel and the avoidance of cathartics; this means lavage, fasting and no salts. If enemata are used for clearing the rectum, as may be required, they must be small in amount and injected with the utmost care from a low bag. Cases of diffuse peritonitis with profound local and general symptoms must be regarded as being inoperable, inasmuch as the interests of the patient and the requirements of good surgery both demand that untimely surgical measures be not employed where better results may be had with simpler and safer ones. Early operation, before diffusion has taken place, is safe, and, in most instances, to be advised if the environment be favorable and an experienced surgeon at hand. Interval operations are certainly advisable after recovery from a diffuse peritonitis from any source.

The Evolutionary Aspect of Infectious Diseases, with Especial Reference to the Local Venereal Diseases.—G. Frank Lydston does not regard the gonococcus *per se* as the sole or, perhaps, even the most important element in the production of a specific urethritis, the conditions governing the evolution of the germ and especially the evolution of virulent properties in a primordially innocuous germ being of far greater moment. And the same applies with equal force to chancroid save that the influence of a definite germ in this disease has not been established. It is the writer's belief that gonorrhœa and chancroid develop *de novo* in the medium afforded by the secretions of the unclean and pathologically contaminated vagina. This development depends upon adaptation changes in innocuous or comparatively non-virulent germs—a spontaneous culture modification. The virulency of the resulting germ production is modified by many conditions, of which the following are most important: (1) Much depends upon the stage of decomposition of the vaginal fluids. The age of the process of germ development is all important; (2) The frequency of coitus; (3) The constitution and habits of the woman; (4) The character of any seminal or other discharge from the male which may be deposited in the vagina; (5) The degree of uncleanliness of the woman. Once elaborated and heteroinoculated upon susceptible soil the results depend upon: (1) The amount and degree of virulence of the infectious germs and their products deposited upon an atrium of infection; (2) The cleanliness, local and constitutional condition, habits and sexual hygiene of the new host; (3) Individual predisposition. This involves individual immunity on the one hand and a tendency to inflammation, suppuration, serpiginous ulceration, phagedena, or gangrene on the other.

New York Medical Journal, May 24, 1902.

Albumin in the Urine—a New Way of Applying Nitric Acid and Other Reagents.—L. Napoleon Boston describes the following plan devised by himself, which has, he claims, several advantages over the usual methods: (1) A pipette is filled for a distance of from one inch to one inch and a half with the urine to be tested. Then this pipette is either carried under a stream of water and then dried by a towel, or all urine is removed from its surface by a damp towel; (2) This pipette, with its contained urine, is placed near the bottom of a bottle containing pure nitric acid, when the pressure of the index finger is lessened and the acid allowed to flow gradually up into the pipette; (3) When the pipette is seen to contain about the same amount of the acid and of the urine, the finger is again pressed firmly and the pipette removed from the bottle and held toward the light, on a level with the eye, and, if albumin is present, a distinct white cloud, in the form of a ring, appears at the zone of junction of the urine and acid. This ring is often intensified by placing the pipette in different lights or against a dark background. The hand when placed back of the pipette and carried slowly above and then below the level of the ring, serves this purpose.

Tracheal Injection in the Treatment of Bronchial and Lung Diseases.—Larne D. Rockwell, premising that the prevailing therapy of pulmonary and bronchial affections is unsatisfactory, recommends as more rational the direct application of remedial agents to the mucous membrane of the air passages by means of intratracheal injections. He says he has employed this method in a variety of cases, and is convinced that it is a safe and valuable means of treating diseases of the lungs. He reports two cases. The first was in the person of a man of fifty years, whose occupation exposed him to the inhalation of fine sawdust. After an attack of influenza in the summer of 1900, he suffered from an annoying and persistent cough, which refused to yield to any of the ordinary remedies exhibited in the usual way. The writer advised the tracheal treatment, and using a syringe with a capacity of 4 c.cm. and a tube of the proper length and curve, threw into the larynx three successive syringefuls of a solution of oil of eucalyptus, oil of thyme, oil of cassia and iodoform, in sterilized olive oil. The solution descended directly into the trachea without producing any irritation or cough, and was followed by a good night's rest. The treatment was repeated daily (with frequent interruptions of a day or two), for seven weeks, giving the patient comfortable nights, constant improvement in strength, and finally disappearance of the cough. The second case was that of a man of sixty-three years, who had suffered from asthma and winter cough for eight years. He was subjected to treatment by daily intratracheal injections of a solution similar to the one above mentioned, continued throughout the winter with marked betterment in every way.

Medical News, May 24, 1902.

How Shall We Treat Sepsis Following Abortion or Labor?—W. O. Henry summarizes this treatment as follows: (1) Remove early with the finger, sharp curette and flushing all débris, decidua, blood-clots and sloughing tissue which may be infected, from the uterus and from all raw surfaces of cervix, vagina and vulva; (2) Dry all of these raw surfaces and freely apply to them the 95 per cent. carbolic acid, washing away the surplus with sterile water; (3) Unless hemorrhage require, leave no tubes or packing of any kind in either vagina or uterus; (4) Have a simple carbolized, 2 per cent., vaginal douche used twice a day; (5) Open the bowels freely with calomel, ⅓-grain, every hour for four hours, to be followed by Rochelle salts until sufficient action has occurred; (6) Give quinine, 3 grains, every four hours, followed by tincture of the chloride of iron, 15 drops in water; (7) Give good nourishment, with milk, eggs and stimulants every four hours; (8) Let this be the routine *early treatment*; (9) When fixation of the uterus occurs and infiltration takes place in Douglas' culdesac or in the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina; (10) If multiple abscesses occur in the uterine walls, if the walls become badly infected, or if necessary in order to secure perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route.

The Treatment of Puerperal Eclampsia.—William E. Parke advocates prophylactic treatment in the albuminuria of pregnancy. The physician should not wait till convulsions occur. The theory, now almost universally accepted, attributes the convulsions of eclampsia to the presence of some toxic agents in the blood. The formation of these toxins should be prevented or, if they have already appeared, their elimination should be favored. Milk is an excellent food for this condition. The bowels, the skin and the kidneys, and even the lungs should all be stimulated to eliminate waste products. Phosphate of soda, a drachm or two daily in a tumbler of hot water before breakfast, and fractional doses of calomel at night, once or twice a week, are indicated. Hot baths for the skin and plenty of water for the kidneys should be taken. Bashaani's mixture is a good diuretic. Exercise in pure air is helpful. If, in spite of all these measures, there is evidence of increasing toxæmia labor should be induced at once. For the treatment of convulsions, venesection is of the greatest value. Inhalations of chloroform can be used to avert the attack. Veratrum viride seems to be helpful in eclampsia. A very weak pulse, however, would contraindicate its use. Chloral and bromide are valuable adjuncts, normal salt solution, either under the skin or injected into the bowel, dilutes the poison in the blood and increases the activity of the kidneys. Two or three drops of croton oil induces prompt action of the bowels. As to the child, after it becomes viable, it is probable that *accouchement forcé* will save more babies than allowing the labor to proceed during convulsive seizures in the natural way.

Philadelphia Medical Journal, May 17, 1902.

The Importance of the Lacrymal Reflex in the Diagnosis between Organic and Hysterical Anæsthesia of the Face.—This interesting observation is made by William G. Spiller. By the term lacrymal reflex he refers to the secretion of tears produced reflexly by irritation. He has examined two cases of hysteria in which the scleral conjunctiva was insensitive, but in which irritation of the conjunctiva did cause the flow of tears, although it did not cause the eyelids to close. Gilles de la Tourette and Pitres have also observed the preservation of the lacrymal reflex in hysterical anæsthesia of the conjunctiva. In order to test the diagnostic importance of this phenomenon, the writer examined two other cases in which anæsthesia of the conjunctiva had existed for some time as a result of the removal of the Gasserian ganglion. During the irritation of the lacrymal apparatus—the most satisfactory method proving to be by irritation of the nostril—little or no increase in the lacrymal secretion was observed. Although the writer does not believe that these few cases establish fully the importance of the lacrymal reflex in diagnosis, he reports them with the hope that others may give the results of their investigations on the subject, and that from the examination of many cases this point may be determined.

Some Reasons for Considering the Vermiform Appendix as a Gland.—Clarence L. Killbourn, in speaking of the development of the appendix, says that it is first seen at the sixth week as a part of a lateral diverticulum, which also forms the colon. This is about the time that the diverticulæ are given off to form the other glands. In the structure of the appendix, far more important than either serous or muscular coats is the submucous layer. It forms the greater part of the appendix and is the bulk or body of the whole structure. This predominating tissue is lymphoid in character. Histologically, the appendix resembles the tonsil, and a microscopical section looks not unlike a tonsil surrounded by a thin muscular coat, and penetrated by a central canal. The appendix may be regarded as an inverted or involuted tonsil. In location and structure the appendix bears the same relation to the pancreas as the tonsil does to the salivary glands. The germicidal properties of the tonsils and their protection of the pharynx are well realized. And in the appendix we must recognize an organ having a similar structure and capable of doing a similar work in its own territory. Its situation is particularly adapted to act upon the contents of the colon, its secretion being able to act immediately on the food as it passes through the cæcum. In considering the pathology of this organ, similarities are noticed toward the diseases of the recognized glands. The writer thinks that the appendix should be accorded a rank equal to that held by the tonsils or salivary glands.

Philadelphia Medical Journal, May 24, 1902.

Note on the Occurrence of Ascites in Solid Abdominal Tumors.—William Osler thinks that the association of solid abdominal tumors with abdominal dropsy is not sufficiently recognized. He reports several of these cases. According to Eden, ascites is the rule with solid tumors of the ovary, and so rare with fibroids of the uterus that its presence almost serves to exclude them. Other forms of tumor may be associated with ascites. The writer has seen a case of leukæmia with recurring ascites. In a case of a solid tumor of the mesentery there was an ascites of moderate degree. The question of operation is an important one. The solid ovarian tumor is usually benign, and recovery after operation may be expected.

The "Fourth Disease" of Dukes, with a Report of an Atypical Outbreak of Scarlet Fever.—J. Hall Pleasants concludes, from his study of this question, that: Dukes has not established the existence of a new exanthematous disease. Under the so-called "fourth disease" he has included cases of undoubted scarlet fever, and probably also cases of rubella. In certain epidemics scarlet fever may present an atypical picture, with many of the classical symptoms absent, rendering a diagnosis difficult or impossible in isolated cases. The short period of infectiveness claimed for the "fourth disease" is alone sufficient to make the question one of practical importance. A perfectly satisfactory classification of the exanthemata can hardly be hoped for until more is known of their etiology. The writer believes that in the meantime we should be slow in accepting so-called new diseases in this group, when the claims for recognition rest upon superficial points.

On a Possible Cause of Meteorism and Partial Intestinal Obstruction, with Remarks on the Use of Eserine in Intestinal Atony.—Frederick A. Packard reports the case of a woman sixty years old with evident malignant stricture of the bowel. There was intense tympanites, but in spite of many fluid movements, no flatus had passed for many days. The writer believed that the explanation of this condition was that the patient had a stricture of the small intestine at a point where the fæces were still fluid, and that on the proximal side of this stricture there was a loop of bowel, so placed that it acted as a trap similar to that employed by plumbers to prevent the entrance of sewer gas through the drain-pipes. This patient was given, hypodermically, 1-150 of a grain of eserine salicylate. This was repeated in two hours. After the second injection a large quantity of fluid fecal matter was passed, together with a large expulsion of gas, and the abdomen became flat and soft. At autopsy the loop, instead of being found in the small intestine, was in the upper part of the sigmoid flexure. The arrangement suggested above had taken place in the colon. It is easy to see how such a loop might readily form in the transverse colon. Perhaps one of the functions of the longitudinal band of fibers in the large bowel is the prevention of such loop formation. Such loops might follow adhesions resulting from any inflammatory condition of the lower abdominal cavity. They might remain symptomless until a weakening of the intestinal walls persisted to such an extent that the resistance offered by the contents of the limbs was sufficient to cause accumulation. Such a loop might also follow the liberation of an incarcerated hernia or the matting together of two adjacent segments of the small bowel through tuberculous peritonitis. The condition mentioned above would be aggravated by the administration of any remedies tending to render fluid the intestinal contents. It is possible that hydragogue cathartics might even cause the formation of such a loop if the bowel were paretic. The various reports of the use of eserine in cases of intestinal atony show the happiest results. According to von Noorden, salicylate of eserine (physostigmine) is best to use, because it can be well preserved in a dry state, and is readily soluble in five parts of water. He states that it is best given in powder with milk sugar.

American Medicine, May 24, 1902.

The Vermiform Appendix as a Cause of Intestinal Obstruction.—J. E. Summers, Jr., believes that intestinal obstruction as a complication of appendicitis is a not common occurrence. It may happen that part of the bowel most concerned in the immediate neighborhood of the inflammation may become paretic on account of the inflammation. A knuckle of small intestine may be so angulated by adhesive inflammation, either to the appendix or parts of the bowel or omentum which are inflamed, as to cause narrowing of its lumen. Peritonitis may cause the ballooning of intestine above the angulation until paralysis of peristalsis ends in complete obstruction. After drainage by incision of an appendiceal abscess, or its discharge into the lumen of the bowel, or the subsidence of all acute symptoms, bands of adhesions may form, so as to make compression of the intestine sufficient to produce obstruction. Then there is post-operative obstruction, dependent upon the formation of adhesions or bands between peritoneal surfaces. A long appendix may become attached by its tip by adhesive inflammation to some point of the peritoneum, so as to form a band or arch, and thus produce intestinal obstruction. The writer reports a case in which a long vermiform appendix surrounded the intestine. The end of the appendix had adhered to the mesentery close to the ileum and curled itself into a constricting ring, completely occluding the bowel.

Alkaline Serum Albumin.—John Aulde draws attention to the germicidal properties of alkaline serum albumin and also to its clinical importance as a factor in the transmission of nerve impulses. No doubt many patients derive benefit from medicines given for some other condition, as when pepsin is ordered with an alkali, when sodium bromide is taken for ovarian neuralgia, or potassium iodid for syphilis, or sodium bicarbonate for acid dyspepsia, since in all these cases the alkali plays an important part in restoring the physiologic equilibrium and making the cells work. A very important point in the question of the expediency of administering stimulants or sedatives as a means of favoring the elimination of waste products, including cytotoxins, is the blood reaction. There has been much persistency in the use of acids, especially in the treatment of digestive disorders. Blood serum loses its germicidal properties when the alkalinity is neutralized. In regard to the second point, the transmission of nerve impulses, it is known that certain molecular changes take place in protoplasm as a result of electric action, chemic action, or the action of light and heat, and that these forces are concerned in the transmission of nerve impulses. The maintenance of the normal alkalinity of the blood is most important, as otherwise the cellular structures would be incapable of functionating. The question of the character and functions of electrons will, undoubtedly, be developed in due time.

Symptomatology, Diagnosis, and Differential Diagnosis of Neuritis.—Sydney Kuh declares that if there is any one symptom which is absolutely pathognomonic for neuritis, it is perceptible enlargement of parts of the nerve-trunk, usually spindle-shaped and often multiple. Generally, both the sensory and motor fibers are affected in disease of the nerves, but sometimes only one of these groups suffers. Pain is most frequently the earliest symptom. It is not, as a rule, superficial, but is rather localized in the deeper tissues. It sometimes precedes paralysis and atrophy of the muscles by months or years. Commonly, the nerve trunk is sensitive to pressure. Both excess and defect of motility may occur in neuritis, though the former is rare. Paresis or paralysis is one of the most frequent signs of disease of the peripheral nerves. Paralysis may have a very sudden onset. Even before weakness of the muscles becomes evident, certain changes in the electric irritability of muscle and nerve can sometimes be demonstrated. In some cases disturbance of coordination is met with. The cutaneous, reflexes are generally normal. As to mental disturbances, the patient while remembering more remote occurrences, forgets the most recent events. There is also, sometimes, falsification of memories. These symptoms are most marked when the patient is tired. Constitutional symptoms are usually absent in mononeuritis. When there is intense pain, insomnia results. The diagnosis of disease affecting a single nerve is seldom difficult, and is based principally upon the localization of the symptoms and the sensitiveness of the nerve trunk to pressure. Rheumatism or disease of the bone or periosteum should not be readily mistaken for neuritis. Hysteria is easily distinguished from organic disease of the nerves. The presence of reaction of degeneration, or absence of deep reflexes, is an important indication of organic disease, and stigmata of hysteria an equally valuable sign of functional disease. In neuralgia both pain and sensitiveness are more or less distinctly intermittent; in neuritis both symptoms are, as a rule, permanent. In cerebral disease the unilateral occurrence of paralysis of motility and of sensibility, the spasticity and increase of deep reflexes, preclude a possibility of an error. In spinal disease with symptoms of spasticity this symptom alone would exclude all thoughts of neuritis. Acute anterior poliomyelitis is rare in adults at the age at which multiple neuritis is most likely to occur. Chronic poliomyelitis is also rarely seen in adults. In tabes not complicated by disease of the nerves the latter are not sensitive to pressure, the muscles react normally to electricity, are neither paralyzed nor atrophic. Muscular dystrophy develops very slowly, is progressive, and affects several members of one family.

Deutsche medicinische Wochenschrift, May 1, 1902.

Osteal Tendon Transplantation.—Julius Wolff recommends, in tendon transplantation, osteal instead of periosteal insertion, since this more nearly approaches the natural insertion of tendons. The author has carried out osteal insertion in four instances and has obtained better results than by the periosteal method. Furthermore, the most satisfactory correction of deformities is obtained by a transplantation of the tendon of the muscle, which by its action is chiefly responsible for the malposition. For example: in radial paralysis the tendon of the extensor carpi ulnaris is removed from its insertion at the base of the fifth metacarpal bone and inserted, by the osteal method, into the base of the second metacarpal bone, the hand being placed in a position of marked supination and dorsal flexion.

Pathology of Chronic Lead Poisoning.—A. Seeligmüller, in the first of a series of articles devoted to this topic, considers the causation of chronic lead poisoning, as illustrated in several cases which have come under his observation. Among these is a case which developed from the use of snuff which had been packed in tin foil which contained a large proportion of lead. Most of the patients, however, were persons who, on account of their avocations, were daily brought into contact with this metal. One of these is interesting because of the prominence of cerebral symptoms early in the course of the poisoning. This patient gave a syphilitic history and at first the diagnosis was not entirely clear. The subsequent clinical history and the effect of treatment clearly established the case as one of chronic lead poisoning.

Berliner klinische Wochenschrift, May 5, 1902.

Treatment of Sciatica.—L. Brieger emphasizes the value of the combination of hydrotherapy, massage, and exercise in the treatment of sciatica. When the measures are employed singly the results are unsatisfactory, but their combined employment usually effects a permanent cure. As routine treatment, hot baths, accompanied by massage and followed by a cold douche, give the greatest relief. The hot baths are to be taken at 40° C (104° F.) and should last fifteen minutes. They should be repeated daily. Exercise should be practised between the baths. Such exercise should be at first very light and subsequently gradually increased. The necessary duration of this treatment varies greatly in different cases. Many are completely cured in two to four weeks; frequently, however, a longer period is necessary. A detailed description of eight cases is submitted.

Hemiplegia.—Max Rothmann concludes that hemiplegia with its sequelæ, in man, is not due alone to an interruption of the pyramidal tract, but that other cerebrospinal tracts are also involved. In the exclusion of the extremity centers in the cerebral cortex, or the complete destruction of the posterior portion of the internal capsule, the hemiplegia is the result of the total interruption of the motor impulses from the cerebral cortex. The tracts of the corpora quadrigemina and their union with the optic thalmus, which remain intact, are not able, at first, to transmit the motor impulses, but only serve to maintain the tendon reflexes. The partial restitution of active movements which take place after several weeks is not due to a return of function in the pyramidal tracts or to a compensatory action of the cerebral cortex of the opposite side, but is produced by the gradual development of the motor function of the optic thalmus and corpora quadrigemina centers. The contractions, which occur in man in contrast to apes, resulting from the restitution of certain groups of muscles and the permanent paralysis of their antagonists, are due to the peculiar distribution of the muscular innervation in the upper and lower extremities of man on account of his erect position. Since the return of motion is due to the development of new motor tracts, exercise of the paralyzed muscles should be begun as soon as possible after the appearance of the paralysis. This exercise in certain cases is greatly facilitated by tendon transplantation.

Münchener medicinische Wochenschrift, May 6, 1902.

The Value of the Precipitin Reaction in the Differentiation of Albuminoids.—Rostoski says that the precipitin reaction is of no value in the differentiation of the various albuminoids. It is, however, of service in ascertaining the *origin* of the albuminoid. Thus, the serum of rabbits, inoculated with horses' blood, contains precipitins for all the albuminoids of the horses' blood, and it is impossible in this manner to differentiate the albumin from the globulin. Such rabbit serum, however, does not contain precipitins for the albuminoids of the blood of other animals or man. Hence, the reaction differentiates albuminoids of different origin. The same holds true for the Bence-Jones' bodies. The intensity and rapidity of the precipitation is lessened by an alkaline and increased by an acid reaction. A marked concentration of the albuminoid solutions hinders the formation of the precipitate. Furthermore, the presence of salt is necessary for the production of these reactions.

Senile Cutaneous Angioma.—In order to determine the frequency of cutaneous angioma at various periods of life, Julius Raff has examined 500 persons sick with various diseases; 36 per cent. of these showed cutaneous angiomas in greater or less number. Previous to thirty years of age they are somewhat rare; thus in 123 persons between twenty and thirty years of age they were only present in 18.7 per cent; after forty years of age they become frequent, and after the fiftieth year such angiomas are present in the majority of all persons. They were found in 75 per cent. of the persons examined between sixty and seventy years of age. Leser has recently claimed that the presence of cutaneous angiomas is of importance in the diagnosis of malignant growths. It is apparent that the results of the above observations do not bear out this claim. The histology of these tumors has been much discussed, and at the present time cannot be regarded as entirely definite. It seems certain, however, that in the majority of instances they are to be classified as true angiomas, and not as nævi.

Leucocytosis in Some Surgical Diseases, with Especial Reference to Appendicitis.—M. Wassermann says that in acute appendicitis a total leucocytosis of 25,000, and above, is diagnostic of the presence of pus. A study of ten cases show this to be the case, independent of the clinical symptoms present. The absence, however, of such a leucocytosis is not absolute proof of the absence of pus, since two of the cases showed the presence of pus with a relatively low leucocytosis. In such cases the low leucocyte count is, in all probability, chiefly due to two factors: (1) An encapsulated abscess; (2) Diminished resistance on the part of the patient. The leucocytosis of appendicitis is essentially polynuclear neutrophilic in character and differs in no manner from that present in other inflammatory conditions. Apparently, no relation exists between the bacterial basis of the appendicitis and the intensity of the leucocytosis. In most other abscesses (nephritic, glandular, prostatic, mastitic and phlegmonous) the leucocyte count is markedly below that present in purulent appendicitis. In mastitis and phlegmonous abscesses, however, when general infection takes place, a leucocytosis of a very high grade develops. Likewise, general septicæmia and erysipelas uniformly show a high leucocyte count.

French Journals.

Arsenical Poisoning.—A. Lutaud declares that although arsenic is not found in the human organism it is a very common substance. It is the frequent cause of professional or accidental poisoning. The number of criminal cases has diminished considerably in the last thirty years. This appears to be due to the administrative measures taken against its sale and to the progress of science which has developed methods of determining its presence in the organism. In order to cause serious results or death it is necessary to take from 2 to 10 centigrams of the poison. It is always possible to determine its presence in the body even in the smallest doses. Arsenical poisoning, especially chronic poisoning, causes special lesions, chief among which is fatty degeneration of the liver.—*Journal de Médecine de Paris*, April 27, 1902.

Disinfection of the Hands by Alcohol.—Schaeffer, after experimenting with the various methods of hand disinfection which have been employed up to the present time, has arrived at the following conclusions: The best results are obtained from washing the hands with hot water, and then with alcohol. Next in value is the method of Miculicz, with tincture of soap. Antiseptics do not destroy, to a sufficient degree, the germs on the hands. Soap with marble dust (Schleich's method) gives results no better than washing the hands with plain hot water and soap. Schaeffer advises washing the hands first with very hot water and green soap, scrubbing the hands vigorously with a brush for five minutes. The nails are then to be cleaned and the hands rubbed with a sterilized compress. Finally, brushing the hands for three or five minutes in absolute alcohol. It is a good plan after that to place the hands in a solution of corrosive sublimate.—*La Tribune Médicale*, April 30, 1902

The Dangers of Internal Antisepsis.—Albert Robin believes that the impregnation of the organism with mercurials does not prevent the bacillus of Eberth from infecting the tissues, nor does it attenuate its virulence. Contrary to the opinion of various investigators, the writer is convinced that the employment of mercurials in the treatment of typhoid fever does not bring about intestinal or internal antisepsis. Calomel alone may be employed medicinally in exceptional instances—it may be as a purgative, as a stimulant of the biliary secretion, or as a diuretic when there is indication for any of these effects. But the general mercurials have the serious effect of diminishing the oxidizing functions of the organism—just what we are most in need of in this disease, in order to make the powers of resistance greater against autointoxications. Therefore, the writer believes the use of the general mercurials in typhoid fever are not only without benefit but positively harmful.—*Bulletin Général de Thérapeutique*, April 30, 1902.

Laryngeal Tuberculosis.—Vues states that this affection is one of the commonest of throat diseases. Owing to the researches in this subject in recent years, the diagnosis is not difficult. Nevertheless, its prognosis is not very good. Tuberculosis of the larynx may be primary or secondary. The latter is consecutive to tuberculosis pre existing in other organs. Infection may take place in two ways, from within outward, by the lymphatic or blood route; from without inward, by inspiration of the organisms in the air; they, probably, attack the larynx through a break in the epithelium. Injections of tuberculin aid in the diagnosis in suspected laryngeal tuberculosis, when there are no lesions in other organs. Gazzia advises histological examination of fragments of the ulcer taken from the larynx. During the period of infiltration the voice becomes hoarse, the cough is rough and causes pain. Later appear dysphagia and laryngeal dyspnœa, sometimes necessitating tracheotomy. The general health suffers very much. The treatment may be medical or surgical. Tracheotomy is only a palliative measure, useful in cases of laryngeal stenosis.—*La Policlinique*, May 1, 1902.

Annals of Surgery, May, 1902.

Hour-Glass Stomach.—J. M. Elder reports a case of this nature occurring in a married woman of forty-nine years. The main symptoms were inability to retain food and progressive emaciation. A diagnosis was made of pyloric stenosis, probably due to a malignant growth, and an exploratory laparotomy was advised. An " hour-glass " stomach was found, with a band extending from the central constricting ring up to the right rectus muscle. The band was as wide as the finger, and apparently encircled the stomach. A gastroplasty was done according to the Heinicke-Mikulicz method of operating on the pylorus. The results were successful.

Subcutaneous Injury of the Brachial Plexus.—P. R. Bolton reports two cases of total paralysis of the brachial plexus. In one case a man had fallen from a height, and in the other had been struck by a locomotive. Operation showed in each case that the nerve trunks were included in granulation tissue, the latter then becoming cicatricial tissue, and, associated with this, and possibly due to the increased compression to which the nerves were subjected, degeneration of them and their probable cessation of function. In both the above cases the removal of the cicatricial tissue would have left the nerve ends so widely separated that suturing would have been impossible. The wounds, therefore, closed and healed without incident.

The Curative Effect of Trephining Per Se.—C. J. Aldrich reports two cases trephined for intracranial disease. One was cured, and the other markedly benefited. The first case was one of hemispasm, with loss of consciousness, due to a severe head injury. The second was one of severe headaches following a similar injury six years before. In addition, the patient staggered, became morose, and talked of suicide. There was general failure of the mental powers, but there was no paralysis or failure of sight, taste, or smell. No anæsthesia developed. Both patients were trephined, but in neither was a lesion found, nor were the operations made over areas which the symptoms suggested might have been diseases. The good effects following operations in such cases are, in the opinion of the authors, due, first, to relief from intracranial pressure, and, second, to a marked psychic effect.

A Contribution to the Surgery of Spina Bifida.—Van Buren Knott reports four cases treated by excision. In all the operation was successful. He presents the following conclusions: (1) Owing to the distressing nature of the affliction, the high mortality should not prevent attempts at surgical relief; (2) Meningoceles, meningomyeloceles, and syringomyeloceles may be considerably benefited by operation; (3) The improvement in function cannot with certainty be estimated before operation, and pronounced evidences of nervous disturbance are not a contraindication to excision; (4) Asepsis is absolutely essential, and, though difficult to secure, may be maintained by exercising extreme care; (5) The plan of having the suture lines of the meninges and the overlying tissues on different planes will, in the majority of instances, prevent leakage of cerebrospinal fluid; (6) The suggestion of Pearson, to prevent the escape of this fluid during a prolonged operation, by stuffing the canal with gauze, is valuable; (7) Large bony defects may be effectually closed by muscle much easier than by osteoplastic methods; (8) It is not necessary to keep the child off its back during the healing of the wound, as frequently advised; (9) Children with hydrocephalus, accompanying spina bifida, should not be subjected to operation.

Thoracic Injuries Involving the Lungs.—W. G. Le Boutillier reports two cases coming under his care. The headings of the cases are, respectively, "Rupture of Lung without Fracture of Rib; Distending Pneumothorax Not Relieved by Aspiration," and "Pistol-Shot Wound Penetrating Lung; Excision of Rib for Hæmothorax; Death from Infection with Bacillus Ærogenes Capsulatus." The author reviews the literature of this class of injuries, and concludes: Operative interference is not only justifiable, but imperatively called for (1) In distending pneumothorax from whatever cause; if aspiration or the introduction of a trocar does not give relief, thoracotomy should be done, and the lesions thus ascertained treated in appropriate ways; (2) In large hæmothorax, in cases of fractured ribs, contusions of the thorax without external wound, and penetrating wounds of the thorax without regard to the nature of the weapon producing the injury; (3) In extensive and progressive subcutaneous emphysema after thoracic injuries. The nature and extent of the measures to be resorted to must be determined according to the needs of the particular case. Exploratory operations may be proper in order to determine whether wounds in the lower part of the thorax have penetrated the diaphragm or peritoneum; or to satisfy oneself as to the integrity of the heart or pericardium, as well as of the internal mammary or intercostal arteries; or to provide proper drainage in wounds where infection is suspected.

Archives of Pediatrics, May, 1902.

Spindle-Cell Sarcoma of the Thorax in a Child.—Louis Fischer reports the case of a boy of eight years who presented a growth occupying the region of the thorax usually occupied by the heart. It was removed by operation and found to be a spindle-cell sarcoma in a rather active state of growth. The child died soon after the operation. The chief points of interest about the case were: (1) Displaced heart—the heart being immediately behind the right nipple. The pulsations and the apex beat could be distinctly felt and seen about two finger-breadths behind the right nipple; (2) The intense dyspnœa caused by the presence of the tumor; (3) Constant cyanosis and œdema of the limbs, due to interference with the return circulation to the right side of the heart.

Diphtheria of the Conjunctiva Treated by Antitoxin.—L. Emmett Holt found diphtheritic conjunctivitis in a child of six months, and administered 2,400 units of antitoxin. Ice compresses were applied, and a solution of atropine dropped into the eye. The progress of the case was rapid and uneventful. In twenty-four hours the temperature had fallen to 100.8° from 102°, and in forty-eight hours to normal. Improvement in the eye began almost immediately, and in twenty-four hours a very decided change was seen. On the third day the swelling had so far diminished that the child could open the eye, and the membrane was nearly gone. It did not disappear entirely until the sixth day. Diphtheria bacilli were found by cultures as late as the seventh day, but on the tenth day the eye was entirely well.

A Case of Primary Intestinal Tuberculosis.—M. Nicoll records the case of a little girl of two years, who suffered from ulceration about the eye, and who was poorly nourished; she died very suddenly, and the autopsy showed that the death was due to acute pulmonary congestion, bronchopneumonia and inanition. The point of interest in the case was the discovery of an ulcer about two inches above the ileocæcal valve, which was found to be tuberculous, although there was no evidence of tuberculosis elsewhere, except in the lymph nodes of the immediate neighborhood. It cannot be doubted that death alone prevented the occurrence of a general miliary tuberculosis. This case constitutes the sixth example of undoubted primary intestinal tuberculosis occurring at the New York Foundling Hospital among many autopsies performed by the author and three other physicians.

The Journal of Tropical Medicine, May 1, 1902.

A Peculiar and Undescribed Affection of the Nose.—J. C. Mitchell of Cape Colony describes a condition which begins with the formation of small hard nodules under the skin, which gradually enlarge; a serous fluid exudes from the surface of the older ones, but there is no ulceration at first. At a later stage there is ulceration with much loss of tissue. The condition in the early and late stages is not painful, and the nodules are almost anæsthetic. In none of the cases reported was the mucous membranes of the mouth, fauces or pharynx affected, though that of the anterior part of the nose was. There was no history or sign of syphilis in the cases. There was marked resistance to iodide of potassium. The writer asks whether the affection was rhinosclerosis.

A Theory to Explain How Man and the Anopheles Originally Became Infected with the Malarial Germ.—Albert J. Chalmers thus summarizes his ideas on the subject. By the action of the digestive juices the protozoa which enter the digestive tract of higher animals find themselves weeded out into those which can resist the juice with immunity and those which cannot. Those of the latter which do not seek further protection die out, the others seek protection by getting under cover of the lining cells of the digestive tract. Those which pass under the cells into the mucous membrane find new foes, to avoid which they enter the red blood cells. The gnat now swallows the red blood cell containing the parasite. The parasite again finds itself in a digestive tract with juices, and again protects itself by passing under the mucous membrane, and to reproduce its species breaks up into a large number of blasts.

Smallpox and Vaccination in Bangkok.—P. A. Nightingale says that the Asiatics resident in the capital of Siam form a striking object lesson to the "conscientious objector" in Britain. Though there is no law dealing with the subject, the upper classes almost invariably employ European medical men to vaccinate their children during the cooler months of the year, while the middle classes save up their money and buy the lymph themselves—the mother or Buddhist priest performing the operation. For the lower and coolie classes the Government is beginning to open free vaccination stations. Of course, smallpox is always endemic, and from time to time epidemic in Bangkok, but, judging from the yearly number of cases which come under one's personal supervision, it is, undoubtedly, dying out, although the general sanitation connected with the lives of the lower classes is not improving at the same rate.

The Subcutaneous Injection of Quinine.—Charles A. Bentley, in an experience of hundreds of injections of quinine, has only once seen any ulceration following the injection, and that was in a case when he was obliged to use an old hypodermic syringe which could not be rendered antiseptic. Before giving the injection the skin is well rubbed with a 1 in 20 carbolic lotion. Immediately after filling the syringe with the recently-boiled quinine solution, the author plunges the needle into pure carbolic acid, and then thrusts it deeply into the tissues. After withdrawing the needle and rubbing in the injection, he touches the point of entrance with a camel's-hair brush or small swab, dipped in pure carbolic acid, and finishes by an application of carbolic oil. He uses a solution of quinine sulphate, made as follows: Quin. sulph., 160 gr.; acid tartaric, 80 gr.; water to 1 oz. Of this he gives 20 minims to adults, and 10 or 15 to children. In many cases he finds that quinine given by the mouth even in extreme doses is apparently not absorbed in sufficient amount. In such conditions hypodermic medication is a necessity for economic as well as therapeutic reasons.

The Edinburgh Medical Journal, May, 1902.

On the Symptoms and Diagnosis of Carcinoma of the Hepatic Flexure of the Colon.—A. Ernest Maylard thus concludes in regard to the symptoms which may be taken as suggestive of disease in this particular region: (1) The prominence of digestive derangements, in association with other symptoms indicative of colon disease; (2) The order in which these symptoms arise, first in connection with the bowel, and secondarily in connection with the stomach; (3) The symptoms associated with attacks of hepatic flexure obstruction are acuter than those connected with obstruction more distally situated, and do not usually occur until the patient has already shown signs of constitutional disease; (4) Pain is a commoner and more acutely felt symptom in disease of the cæcum, ascending colon and hepatic flexure, than when the growth attacks other segments of the large bowel. Further, the pain is usually felt over the seat of the disease; (5) While the symptoms may suggest disease of the colon, up to and including the hepatic flexure, the absence of any tangible growth in the right iliac and lumbar regions will point to implication of the flexure.

The Use and Abuse of Ether as a General Anæsthetic.—R. J. Probyn-Williams believes ether to be much safer than chloroform in the majority of cases, but considers its abuse under the following heads: (1) It is given to unsuitable subjects, as those suffering from advanced atheroma, or from thoracic aneurysm, or to those with the mucous membrane of the respiratory tract in a delicate or inflamed condition; (2) Ether is unsuitable as an anæsthetic in certain operations, as when the secretion of much mucus and saliva would be a great hindrance to the operator, or when it is desired that the part should be as bloodless as possible. For the performance of some abdominal operations the deep and free breathing embarrasses the surgeon; (3) Pushing the drug beyond all necessary limits and soaking the patient is one of the gravest forms of abuse of ether; (4) Perhaps the commonest form of abuse of ether is that in which its administration, though eminently suitable for the beginning of the operation, is continued too long. By this means the patient may gradually become "water logged" with secretion, and be in a very favorable condition for the supervention of bronchitis on his return to consciousness. Again the stimulating effect of the ether may mask the shock which a prolonged operation is really causing. The bronchitis and bronchopneumonia which occasionally follow the inhalation of ether may almost always be avoided by keeping the patient warm in bed and out of reach of all draughts of cold air.

Iodine as a Specific Remedy for Surgical Tuberculosis.—Margarethe Hermansen holds that a permanent cure might be obtained in tuberculosis if iodine were given rationally in large doses, and for a very long period, at regular intervals, several times a year, the treatment being repeated should there be the least sign of recurrence. In nine cases of surgical tuberculosis, in which operative treatment had had no effect in arresting the disease, the improvement obtained was very marked. Whether the cure is permanent it is not as yet possible to decide as not more than one to one and a half years has elapsed since the first patients stopped the treatment. The iodine was given in the old form, often used against scrofula; Inf. rhei alkalini; sol. pot. tartrat., tinct. cinchon. comp., āā, gram 30; sol. iod. spirit. (5 per cent. iodum), gram 15; tinct. pomi ferratæ, gram 20. One teaspoonful of this mixture was given three times a day, but so that the patients began with half teaspoonful doses, reaching the larger doses in the course of three or four days. The treatment was continued for two to six months, abandoned for a time, taken up again for two to three months, and so on until the disease seemed to be extinguished.—*Medical Press and Circular.*

Book Reviews.

CONTRIBUTIONS TO PRACTICAL MEDICINE. By Sir JAMES SAWYER, Knt., M.D. (Lond.); F.R.C.P. (Lond.); F.R.S. (Edin.); F.S.A.; Senior Consulting Physician to the Queen's Hospital; formerly a Professor of Medicine, Professor of Materia Medica and Therapeutics, and Professor of Pathology in the Queen's College, Physician to the Birmingham and Midland Hospital for Sick Children, President of the Midland Medical Society, Vice-President of the New Sydenham Society, and President of the Clinical Board of the General and Queen's Hospital, etc. Third Edition: Revised and enlarged. 209 pages. Birmingham: Cornish Brothers, 1902.

IN the third edition of this work we note a few changes, chiefly the addition of some new articles, the omission of a few, and a general revision of the whole. The author's aim is to give some practical aid to the practitioner, and to let him benefit by his large clinical experience. Among the chapters we find useful advice on such live topics as Insomnia, Habitual Constipation, Backache, Hemorrhoids, Eczema, Chorea and Asthma. The text is concise and to the point, and, above all, eminently practical. In other words, it is a collection of essays such as an active clinician would select as representative of his most useful writings.

TEXTBOOK OF ANATOMY AND PHYSIOLOGY FOR NURSES. Compiled by DIANA CLIFFORD KIMBER, graduate of Bellevue Training School; Assistant Superintendent, New York City Training School, Blackwell's Island, N. Y.; formerly Assistant Superintendent Illinois Training School, Chicago, Ill. Pp. 276. New York: The Macmillan Company, London: Macmillan & Co., Ltd., 1902.

THE recent advances in histology and physiology have rendered necessary a revision of the above volume, the first edition of which appeared about seven years ago. The chapters on the Nervous System and Special Senses have been altered to a great extent, while minor changes occur elsewhere. The recasting has necessitated the incorporation of a number of new drawings, and there have been wisely added to the English weights and measures their metric equivalents. The descriptions are brief but clear, and contain what is of special importance to nurses, and cover the subjects treated in a sufficiently complete manner. The author has availed herself of the assistance of physicians specially interested in these branches, and in so doing has placed the stamp of authority on the text. The work can be safely recommended as one which is accurate, concise and fitting the uses for which it is intended.

TRANSACTIONS OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS. 1901. Copies may be had bound, $1.50; paper-covered, $1.00, by application to the Secretary, Dr. Wm. P. Spratling, Craig Colony, Sonyea, N. Y.

THE first annual meeting of this body was held at Washington in May, 1901. The volumes of transactions indicates the status of epileptics in many countries. There are papers from Mexico, Brazil, England, Germany, Belgium, Switzerland, Sweden, Russia, Italy, Turkey, India, Japan and Australia, as well as papers telling of the progress made in the care of these unfortunates in various States in America, Ohio, New York, Massachusetts, New Jersey, Texas, Pennsylvania, Missouri, California, Illinois, Connecticut, Virginia and North Carolina. The world-wide interest taken in the movement and its extent are well illustrated by a reference to the following list of papers: President Letchworth's Address; Ohio Hospital for Epileptics, Address of General Roeliff Brinkerhoff, Address of Mr. I. F. Mack; "Epilepsy," by Frederick Peterson, M.D.; "One Point of View," by Sarah Dall Munro; "An Ideal Colony for Epileptics and the Necessity for the Broader Treatment of Epilepsy," by William P. Spratling, M.D.; "State Care of Epileptics in Massachusetts," by William N. Bullard, M.D.; "What New Jersey Has Done for the Epileptic," by Henry M. Weeks, M.D.; "The Founding of a State Institution for Epileptics in Texas," by B. M. Worsham, M.D.; "The Condition of Epileptics in Pennsylvania," by Wharton Sinkler, M.D.; "Emmaus," by W. J. Alexander, M.D.; "The State Care of Epileptics in California," by Antrim Edgar Osborne, M.D.; "Sketch of the Project to Establish a Colony for Epileptics in Illinois," by Miss Julia C. Lathrop; "The Present Status of Epileptics in Connecticut and the Future Outlook for Their Proper Care and Treatment," by Max Mailhouse, M.D.; "The Present Status of Epileptics in Virginia," by William Francis Drewry, M.D.; "Epileptics in North Carolina," by C. B. Denson; "Report on the Treatment of Epileptics in Mexico," by Secundino Sosa, M.D.; "Treatment of Epileptics in Brazil," by W. Haoelburg, M.D.; "Notes Regarding the Treatment of Epilepsy in Brazil," by Jwar Carlos Fixeui Brandao, M.D.; "The National Society for Employment of Epileptics, England," by G. Penn Gaskell; "The Care of Epileptics and the Outlook in the British Isles," by William Aldren Turner, M.D.; "Bethel, near Bielefeld," by Pastor Siebold and Dr. Huchmeirer; "The Care of Epileptics in Belgium," by Jules Morel, M.D.; "The Care and Treatment of Epileptics in Switzerland," by Professor F. Kolle and Dr. Th. Kolle; "Report from Sweden," by Professor Oskar Medin, M.D.; "The State of Epileptics in Russia," by Professor Paul Kovalevsky; "Report from Italy," by Professor Giovanni Mingazzini; "Report from Turkey," by Dr. S. C. Zavitzianos; "Report from India," by Dr. Arnold Caddy, F.O.C.S.; "Report from Japan," by W. Norton Whitney, M.D.; "The Outlook in Australia," by Miss Alice Henry; "Minutes and Discussions." The volume contains half-tone illustrations of the Craig Colony, the Massachusetts Hospital for Epileptics, and Chalfont St. Peter, with maps of the New Jersey State Village for Epileptics and the Epileptic Colony at Abilene, Tex. The next meeting of this association is to be held at the Academy of Medicine in New York City early in November of this year, under the presidency of Dr. Frederick Peterson.

SELECTED ESSAYS AND ADDRESSES OF Sir JAMES PAGET. Edited by STEPHEN PAGET, F.R.C.S. 8vo, pp. 445. London and New York: Longmans, Green & Co., 1902.

THE title of this work is in itself a more than ordinary promise for the reader. Within the compass of a comparatively few pages is grouped a varied and entertaining collection of addresses and essays, which must appeal in a very direct way to the thoughtful scientific student. Sir James Paget was not only a painstaking pathologist, a successul surgeon, a careful student, but an accurate observer of Nature's processes in health and disease. The body for him was an open book in which he searched for such facts as could be utilized by the man who wished to think for himself and to apply his knowledge in a direct and practical way. Thus the descriptions of diseased processes are wonderfully accurate and expand themselves suggestively in numerous and widespread directions. Dealing with general principles, he was always broad in his applications and logically accurate in his deductions. No one can read this volume without being strongly impressed with the idea that the author of the different essays was a master in his way, constantly advancing new ideas and throwing new light on old ones. Twenty-five practical topics are discussed, each and all of which are worthy of careful reading. Particularly is this the case with those on Senile Scrofula—the cases which bone-setters cure—Stammering Bladders, Sexual Hypochondriasis, Diseases of the Mammary Areolar, Osteitis Deformans, Periostitis following sprains and errors in the chronometry of life. At the risk of making an invidious comparison, there would appear to be more of thought and suggestion in this admirable essay than in all the others combined. But in this matter the student can judge for himself, after a careful perusal of the student work, any patron of which will be likely to interest and edify him. It is one of those volumes which a practitioner can read with profit at any time and for recreation at all times.

THE FOUR EPOCHS OF WOMAN'S LIFE: A STUDY IN HYGIENE. By ANNA M. GALBRAITH, M.D., Author of "Hygiene and Physical Culture for Women," etc., with an introductory note by JOHN H. MUSSER, M.D., Professor of clinical Medicine, University of Pennsylvania. Pp. 200. Philadelphia and London: W. B. Saunders & Company, 1901.

THIS useful little book is divided into four parts. The first, including five chapters, dealing with maidenhood, treats of the anatomy and physiology of the female generative organs, anomalies of menstruation and marriage. Part II, on marriage, deals with a delicate subject in a plain, straightforward way, which is highly commendable. The author does not mince her words, but the most prudish cannot object to her words. The chapters in maternity deal with pregnancy, parturition, the puerperium and the new-born infant, and her clear, but concise Part IV, on the menopause, presents an excellent resumé of this important subject. The concluding chapter, entitled "Hints for Home Treatment," may be read with profit by physicians as well as by the laity. We confess that we opened this unassuming volume, expecting to find only another of the many popular household guides which flood the market. For entertaining this preconceived notion we offer our sincere apologies. On the contrary, it is a first-rate book, and if its maxims were generally heeded, the sphere of gynecology would be greatly contracted. The author must be not only a wise physician, but a good woman.

Society Reports.

NEW YORK PATHOLOGICAL SOCIETY

Stated Meeting, Held March 12, 1902.

JAMES EWING, M.D., PRESIDENT.

A Rare Tumor.—Dr. CYRUS W. FIELD presented this specimen. The patient was a woman, fifty-six years of age, a widow with three children. The history of the case was negative, except that for some time she had suffered from a hacking cough, and her stomach had always been weak. She had been losing strength for two years. Pulmonary symptoms afterwards developed, but there was at this time no vomiting or gastric disturbance. The woman had been admitted to the Presbyterian Hospital on December 20, 1901, after having been affected by naseau and diarrhœa for three weeks. A physical examination, made on January 27, showed marked adhesions over the whole of the right lung. The patient contiued to grow worse and died soon afterwards, having previously vomited a large quantity of bloody serum.

At the autopsy a very thorough examination was made of all the organs, and it was found that the pleura was very much thickened, apparently by a tuberculous lesion. On sectioning the thickened mass, however, it was found to be a new growth of alveolar type, probably to be classed with the primary endotheliomata of the serous cavities. There was also found a tumor, involving the optic nerves, which was of the same morphological type. The only indication of this new growth, from a clinical point of view, had been headache, of which she complained while in the hospital. The exact site of the oriigin of the new growth was, therefore, somewhat difficult to ascertain, but it seemed probable that the pleural tumor was primary and that of the optic nerve secondary, though the existence of two tumors, developing simultaneously, was not impossible.

Dr. JOHN H. LARKIN remarked that, from microscopical examination, he thought it probable that the tumor might be primary in the optic nerve, but the exact decision of the question was so difficult that he suggested that the sections should be referred to the committee on microscopy.

A Case of Anthrax.—Dr. L. T. LEWALD reported this case. The patient, an Italian, fifty-eight years of age, had been employed as a stevedore, and in this capacity had been engaged in unloading sheeps' hides. He had been admitted to the erysipelas pavilion, Bellevue Hospital, on March 1, 1902. Three days before he had noticed a small pimple on the submaxillary region. On the following day he was seriously ill, and unable to go to work. On the third day he was admitted to the hospital. His temperature then was 102°, and it rose rapidly to 108° F. Afterwards it dropped to subnormal, but the man continued to grow worse, and died on the day following his admission. When he was admitted the only lesion which was noticed was a small ulcerated area, about half an inch in diameter, with a dark eschar in the center, surrounded by a number of small blebs and a diffuse redness. There was considerable œdema of the face and neck, and this spread rapidly to the chest, and also to the forehead, to such an extent in the latter direction that it completely closed the right eye. Afterwards, signs of cyanosis developed, and death occurred about twenty-four hours after the man had been admitted. A smear was made from the wound in the neck a few hours before death, and the examination made at the laboratory confirmed the diagnosis of anthrax. The autopsy was obtained forty-eight hours later, and showed the following conditions: The body was well nourished, and rigor mortis marked. On the right side of the neck, in the submaxillary region, thee was a small ulcer covered by a slight scab. In the surrounding tissue there were a number of small blebs containing a slightly serous fluid. There were marked swelling and œdema of the face and chest. The brain showed intense congestion. The heart was of normal size. The left ventricle was contracted; the right ventricle dilated. The lungs were congested, and the liver showed remains of a few old adhesions. The kidneys showed a slight degree of chronic nephritis. The spleen and pancreas were normal. The stomach was dilated, and the mucous membrane showed signs of chronic gastritis. The epiglottis was markedly œdematous, in fact, sufficiently so to account for death. Smears, taken from the left ventricle of the heart, showed a considerable number of large bacilli of the anthrax type, and the culture from this source developed anthrax. Cultures from the spleen also showed anthrax bacilli, as did likewise cultures and microscopic examinations of stained sections of the liver. There was very slight parenchymatous degeneration of the liver and of the kidneys on microscoic examination. The lungs and spleen showed acute hyperæmia. The subcutaneous tissue surrounding the areas of infection was almost narcotic.

The points of special interest in the case were the mode of infection, apparently derived directly from the handling of hides; the widespread œdema, starting in the immediate vicinity of the wound of entrance, and resulting by direct extension in œdema of the larynx and death; the absence of acute hyperplasia of the spleen, or other ordinary evidence of a severe septicæmia, although anthrax bacilli were found in the liver and spleen at the autopsy.

Dr. CONNER said his experience had been that anthrax was much less infequent in this city than was commonly supposed; and this just seemed to be the type of men among whom the disease developed, *i. e.*, 'longshoremen whose duty it was to handle hides. Within the last three or four years four or five cases had come into the dispensary of the Hudson Street Hospital. Singularly good results had been obtained from early, radical excision. As the prognosis depended largely on early recognition of the disease, it was well to emphasize the fact that cases of the kind were not uncommon, and that they were likely to be met with in the dispensary rather than in the hospital ward.

Dr. EWING asked if any bacteriological examination of the blood had been made.

Dr. LE WALD replied that no such examination had been made during life.

Dr. EWING remarked that it was desirable that the blood should be tested with a view to ascertain whether or not the disease was a form of septicæmia. It was all the more important to determine the presence or absence of the bacilli in the blood because of the various conflicting reports which had recently been published.

Congenital Stenosis of the Aorta at the Isthmus.—Dr. LIBMAN presented this specimen, which, he said, was a striking example of a type of congenital cardiac lesion compatible with long life. According to Vierordt, there were about one hundred and thirty cases of the malformation on record, it being second in frequency to pulmonary stenosis. The average duration of life was thirty-four years, though one person so afflicted had lived to be ninety-two years old. The stenosis usually occurred at the isthmus, the ductus remaining more or less open or being closed. The exact site was at the opening of the ductus, just below or above it. The stenosis might be ring-like or funnel-shaped. All degrees of contraction occurred down to complete occlusion, fourteen cases of occlusion being on record. The collateral circulation was carried on mainly by branches of the subclavian arteries, communicating with the intercostal arteries, and with some of the branches of the external iliacs. The develoment of large anastomosing arteries under the skin of the chest and abdomen was a natural result. The diagnosis could be made in adults rather readily, but hardly in young children, in whom the large subcutaneous arteries were well developed. The diagnostic signs were: hypertrophy of the left ventricle; a systolic murmur heard over any part of the heart, usually loudest at the base or at the apex; the disparity between the pulsation of the arteries of the upper and lower extremities; and the presence of pulsating vessels under the skin of the chest and abdomen in which the wave was from above downwards. This last reservation was made because of the existence of a case published by Türk, in which all the signs of aortic stenosis were found, but the pulsation in the subcutaneous vessels was from below upwards, and the arterial pulsations in the lower extremities were more marked than in the upper. A diagnosis was made of obstruction of the large vessels arising from the arch of the aorta, due to specific arterial changes. This was confirmed by the autopsy.

The specimen presented had been obtained at the post-mortem examination of a man, sixty-three years of age, who had been admitted on November 1, 1901, to the service of Dr. Rudisch in the Mount Sinai Hospital. The family history was negative. For five years he had suffered from dyspnœa and palpitation. There was no history of syphilis or gonorrhœa. There was a marked tobacco habit and a moderate alcoholic habit. For five months he had suffered from dyspnœa, palpitation, œdema of the legs, and diminution of the volume of urine, and had been treated at various hospitals without relief. He was then coughing and expectorating much mucopurulent material.

The finger tips were cyanotic. There was marked general œdema. Subcrepitant râles were present over both lungs, with friction râles at the right base. The apex-beat of the heart was at the fifth space, two and one-half finger breadths outside the mammillary line (16 cm. from the median line). The left border was 17 cm. from the median line, and the right border, 4 cm. to the right of this line. There was a systolic murmur at the apex, not transmitted to the left, heard very well in the fourth space to the left of the sternum. It was not audible in the vessels of the neck. The pulse was 90. There was moderate sclerosis of arteries. The liver and spleen were enlarged. The urine was diminished in quantity; was clear, acid, and had a specific gravity of 1,022. It contained 1 per cent. of albumin, and hyaline casts. The subsequent history was the usual one in cases of disturbed compensation from other causes. The patient died from an intercurrent erysipelas on February 1, 1902.

On post-mortem examination there was found marked œdema of the entire body. Under the skin of the anterior thoracic and abdominal walls was a mass of varicose arteries, varying in size from ½ to 1 cm. in diameter. The walls of these arteries were thickened, and some were completely occluded. In the anterior mediastinum was an accessory thyroid. The heart weighed 730 grams. The well of the right ventricle measured 1.2 cm. in thickness. The pulmonary artery was notably dilated. The wall of the left ventricle measured 2.4 cm. in diameter. The aorta, at its origin, measured 5.8 cm. in circumference; at the origin of the large vessels, 14 cm.; at the isthmus, 6 mm. in diameter; beyond the isthmus, 9½ cm. in circumference; at the lower part of the thoracic aorta, 6 cm. The abdominal aorta at its upper part measured 5 cm. in circumference; at the lower part, 4.8 cm. The right iliac measured 2.9 cm. in circumference; the left, about the same. The innominate artery at its origin measured 14 cm. in circumference; the left carotid, 5 cm.; and the left subclavian, 4 cm. It would be noted that there was considerable stenosis at the isthmus, with dilatation in front, of the isthmus and below it. The left carotid and subclavian arteries were dilated to twice their normal size. The arch of the aorta at its origin showed but moderate atheroma, as did also the coronary arteries. Directly in front of the stenosis was a thick spur of calcerous material and in the dilatation beyond the stenosis the aorta showed very marked atheroma. The remainder of the aorta and the peripheral vessels showed moderate atheromatous changes. The spleen was much enlarged, weighing thirteen ounces, and the liver, which presented the changes of chronic congestion with some cirrhosis, weighed four pounds.

As a counterpart to this case, Dr. Libman showed a specimen of stenosis of the isthmus of the aorta from a child one and a half years old, which died in the service of Dr. Koplik some eighteen months age. In that case the isthmus of the aorta was contracted only to about half its normal size, and there were no atheromatous changes present. There was no subcutaneous collateral arterial circulation yet evident.

Dr. CONNER inquired whether dilatation below the stenosis was at all common. It seemed a strange and inexplicable condition.

Dr. LIBMAN said that in these cases various conditions of the aorta below the stenosis had been found. It had either been normal, stenosed, or, as in this instance, dilated. He imagined that the cause of the dilatation was the effort of the blood to get back into the arch of the aorta. It seemed probable that little or no blood could be propelled into the thoracic aorta, and, therefore, the collateral circulation through the intercostal arteries might be carrying enough blood into the thoracic aorta to dilate it. To corroborate this view he pointed out that the intercostal arteries, which arose from the dilated portion, were much larger than those arising from the lower part of the thoracic aorta and from the abdominal aorta, and said that the valvular arrangement on the distal side of the stenosis indicated distinctly that the stenosis was not due to cicatrization of atheromatous ulcers, a condition which one might be expected to exclude in such a case.

A Case of Hodgkin's Disease.—Dr. E. L. Dow presented this case. It was one which had been observed in the wards of Bellevue Hospital, and regarded as a typical case of Hodgkin's disease, remarkable for the unusual ulceration of the tonsils. The patient was a laborer, forty-five years old, who had suffered from no disease except pneumonia some eighteen years previous to his admission. There was no history of syphilis. For the past five years he had not been as strong as usual nor able to carry out his regular work. The year before his admisson to the hospital he had noticed a small swelling under the angle of the right jaw. This had slowly increased in size, and seven months later he had noticed other hard swellings on the left side of the neck and in both groins. With the appearance of these groin tumors he had noted some difficulty in breathing. The tumors were painless. For the past seven months they had been rapidly increasing in size, and were then very large, filling up the entire lateral aspect of the neck, and forming large masses in the groin. Swallowing was difficult and painful. The expectoration had been, at times, blood-tinged and mucopurulent. He had not lost flesh up to the time of his admission to the hospital. When admitted, the tumors were found to be circumscribed, irregularly spherical masses, quite uniformly firm and elastic, without any evidence of suppuration. The skin was freely movable over them. In the neck they were situated immediately under the lower jaw, on the floor of the mouth, and below the ears, pushing the chin up so that opening of the mouth was limited. In each groin the tumors were of a similar character, with discrete nodules the size of a large fist. In the axillæ were similar swellings the size of an English walnut. Indistinct masses could be palpated through the abdominal wall in the iliac and lumbar regions. The patient appeared fairly well nourished but anæmic. The dyspnœa was extreme and the breathing stridulous. The jaws could not be separated sufficiently for a pharyngeal examination. The heart, lungs, liver and spleen showed no marked abnormalities. On admission his temperature was 101.6°F; pulse, 120; respirations, 30. During his stay in the hospital he had an irregular temperature, varying from 100° to 103°. Examination of the blood after admission revealed 3,600,000 red cells and 2,900 whites to the cubic centimeter. The number of leucocytes remained low until his death. The urine was normal. The sputum examination showed no tubercle bacilli. While in the hospital the dyspnœa and difficulty in swallowing became so great that he took no food voluntarily. Death was due to pulmonary œdema.

The autopsy, six hours after death, showed a fairly well-nourished body, and slight œdema of the legs. In the cervical, inguinal, iliac, lumbar and mesenteric regions were found the tumors previously mentioned. The secondary and tertiary lymphnodes were not involved. Each of those in the inguinal regions weighed ten ounces, and was composed of numerous lymph nodes enlarged and bound tightly together. Everywhere the nodes were discreet. In the iliac chain they showed little fibrous structure. No evidence of suppuration existed, though some of the nodes broke down under pressure. The anterior mediastium contained a few large lymph nodes; the posterior mediastium contained many nodes, the size of English walnuts, which extended 'round the roots of each lung, forming masses the size of a fist. The bronchi, trachea, and larynx were intensely congested. The tonsils were deeply ulcerated and hyperplastic, and the entire pharyngeal lymphoid tissue was markedly hyperplastic. Chronic changes were found in the kidney. The intestines showed hyperplasia of Peyer's patches and solitary lymph nodes. One Peyer's patch projected a centimeter into the lumen of the intestine, looking very much like a small mushroom. The surface was ulcerated and there was a postmortem invagination of this portion of the intestine. Microscopic examination of the ulcerated tonsils and lymph nodes revealed only round-cell growth, with hyperplasia in all but the iliac, lumbar and mesenteric nodes. There was no evidence of tuberculosis.

The deep ulceration of the tonsils apparently occurred more frequently in those cases running an acute course. A number of observers had noted such a condition in connection with acute inflammations of the throat.

Dr. WOOD observed that in some of the recent textbooks it was stated that the lymphocytes in Hodgkin's disease were relatively increased, while in cases of tuberculosis simulating Hodgkin's disease no such increase was present. In the cases of Hodgkin's disease, however, which he had been able to examine, no such relative lymphocytosis had been seen. He wished to know if Dr. Dow had noticed this point in his case.

Dr. Dow replied that he had not noticed any such change.

Dr. FIELD remarked that, in view of the recent discoveries in regard to the pathology of Hodgkin's disease, it was important that all such cases should be put through a careful examination for tubercle bacilli.

Dr. EWING said that he would like to add, not only for the tubercle bacillus, but for other bacteria as well.

Dr. Dow said there was no evidence of tubercle bacilli in the tonsils or in the lymph nodes. He would like some expression of opinion from the members of the society as to whether the ulceration of the tonsils was a primary condition, or whether it was secondary to the hyperplasia. If secondary, why should it occur in the tissues of the tonsils rather than in the hyperplastic lymph nodes?

Multiple Embolisms of Mesenteric Arteries.—Dr. PHILIPS reported this case. The subject of it was a physician, thirty-three years of age, who had always been healthy and who had never had venereal disease or gout. He gave a vague history of attacks of pain, five years before, in the right inguinal region, lasting two or three days. The patient was quite alcoholic, drinking beer and whiskey, and an immoderate eater. For three or four nights before the onset of the present trouble he had been intoxicated. He had awakened in the morning about 4 o'clock complaining of severe abdominal pain, which was constant and general. He rapidly developed tympanites, and the entire abdomen became generally painful on palpation. There was no localized tumefaction or increased resistance to pressure. He had considerable hiccough and vomited a few times, but there was no blood in the vomitus. It was impossible to get a movement of his bowels by cathartics or high rectal enema. The pulse rate was between 80 and 90, and he had no fever. During the first twenty-four hours he passed but eight ounces of bloody urine. About forty-eight hours after the onset of the symptoms he was operated upon by Drs. Bull and Coley. The abdominal cavity contained about 1500 c.c. of sero-sanguineous fluid, with some flakes of fibrin. The small intestine was much cyanosed and markedly distended with gas, and here and there were small hemorrhages under the peritoneum. The omentum was much swollen and contained also many hemorrhagic foci. There was no obstruction of the intestine found. The patient died four hours after the operation, and an autopsy was performed by Dr. Harlow Brooks, who furnished the following notes:

On opening the peritoneal cavity about 300 c.c. of creamy pus escaped and the parietal and visceral layers of the peritoneum were covered with a thin layer of fibrinous pus. The entire gut was distended with gas, particularly the cæcum. The peritoneal capillaries were much injected both on the walls and over the intestines. The omentum was very short and thick and literally studded with small, spherical, injected gangrenous nodules, which appeared not unlike Delaware grapes. Evidently they represented minute embolisms of the omental vessels. The omentum was much walled together, as from previous disease. The mucosa of the stomach showed evidence of chronic gastritis and numerous old healed ulcerations of small size. The appendix was sharply folded on itself and surrounded by œdematous adipose tissue and old adhesions. It was about 2 cm. long, and had evidently ruptured with complete loss of the distal two-thirds. There were no evidences of recent inflammation. The mucosa of the small intestine, as a whole, was much congested, but in places was ischæmic. There were a few minute emboli of the submucous vessels, but more frequent and larger lesions of the same character on the peritoneal surface, resulting in small gangrenous patches. The mesentery of the lower folds of the ileum showed a very marked congestion, with the presence in the small vessels of minute emboli. This condition became more frequent in the upper folds of the mesentery where the emboli were larger. The mesenteric vessels, as a whole, showed the most marked evidence of recent endarteritis, while here and there were portions of the intima which were calcified. The pancreas was riddled with fat infiltration. The caliber of the artery was about that of the auxiliary, with enormously thickened intima. The pancreatic duct was gangrenous in part, apparently from thrombosis of its nutrient artery. There was extensive infiltration of the pancreatic interstitium, apparently inflammatory. The liver was moderately fatty and considerably congested. The kidneys showed evidences of acute nephritis, with very evident fatty degeneration. The heart was large, and the muscle showed extensive fatty degeneration. The valves were thin but competent. In the right auricle was a preformed clot, evidently of two or three days' duration. It was distinctly laminated, very firm, and on the surface was covered with small granulomatous masses. It was firmly adherent to the superior external wall of the auricle and showed beginning organization. The coronary muscles were much thickened and atheromatous. The aorta was of small caliber but atheromatous throughout. The lungs were congested and showed here and there small recent hemorrhagic infarctions. The cause of death was multiple infarction of the pulmonary and mesenteric vessels from thrombosis of the right auricle, a condition occurring in acute alcoholic toxæmia.

In reply to questions, Dr. Philips said that no cultures had been taken. There had been no symptoms of bacterial infection of any kind during life, nor did the autopsy suggest this as the probable cause of death.

The Significance of Intramedullary Degenerations.—Dr. M. G. Schlapp read a paper on this subject. He said that, at a recent meeting of this society, he had presented sections through the spinal cord, medulla, pons and the region of the nucleus of the third nerve, in a case of tumor of the right hemisphere of the cerebellum. These sections had been presented in order to show degenerations in the posterior columns, which had been described by other writers, and similar degenerations in the intramedullary fibers of the sensory cranial nerves, while the latter had not, to his knowledge, been described before.

The specimens now to be presented were in addition to the aforesaid sections of the cerebellar case: (1) Transverse sections of the spinal cord of a case of crushed cord; (2) sections of a case of transverse myelitis in the cervical region, and (3) sections of a case of alcoholic polyneuritis, in combination with mental disturbances, as described by Korsakow. In the first case the spinal cord was crushed in the region between the sixth and seventh dorsal vertebræ, absolutely destroying the cord in this region. The sections were taken from the lumbar and sacral regions, and showed a marked degeneration of the posterior root-zone of Flechsig. This degeneration could be followed to a point where the posterior root leaves the spinal cord, sometimes a little beyond. This degeneration always stopped, with the exception of a very few fibers, where the sheath of Schwann began. These degenerated fibers were all ascending fibers and short ones, because they soon entered the grey matter, where they seemed to end. In the second case, as in the first, the posterior root-zone was markedly degenerated in the dorsal, lumbar and sacral regions. In the third case the degeneration was also well marked in the posterior root-zone, but was also found in other parts of the spinal cord.

In all these four cases (including the case of cerebellar tumor) a marked lesion was found in the posterior root-zone. In the alcoholic case the nerves were involved; in the cases of transverse lesions of the cord, the descending tracts were all involved below the lesion; in the brain tumor case the degeneration was almost entirely confined to the columns of Burdach, and, especially in the posterior root-zone, a few degenerated fibers in the columns of Goll. The tendon and skin reflexes were missing below the lesion in the cases of transverse lesion of the cord. In the alcoholic case they were missing in the legs and lower part of the body, while in the arms they were very much diminished, and were missing shortly before death. In the brain tumor case they were entirely missing a few weeks before death.

Commenting upon these cases, Dr. Schlapp said that much had been written about the condition of the reflexes in cases of transverse lesion of the spinal cord. Bastian had been the first, he thought, to call attention to the absolute loss of the tendon reflexes of the legs in cases of transverse lesion of the cord in the cervical or upper dorsal regions. His explanation of the loss of the reflexes in the above conditions was that, in a complete lesion of the cord, the fibers which were constantly transmitting a stimulus from the cerebellum to the motor cells in the anterior horns of the spinal cord, whereby the muscles were kept in a normal tonic condition, were cut, and this constant stimulus could not reach the motor cells lying below the lesion; hence, the muscles connected with these cells were not in a normal tonic state, and, consequently, the reflexes which depended upon this tonic state were lost in the muscles involved. Recently cases had been described in which there were absolute transverse lesions of the cord in the cervical and dorsal regions, with reflexes present or exaggerated below the lesion. The case of Kausch was especially important in demonstrating this fact. So the hypothesis of Bastian could not be accepted. The degeneration of the nerve fibers in the posterior root-zone of Flechsig no doubt explained the absence of the reflexes in these cases. In the alcoholic polyneuritis, the changes in the nerves could, in themselves, be sufficient to cause the loss of the reflexes, but the degenerations in the nerves were not so marked as the degenerations in the posterior root-zone of Flechsig. It seemed that the short fibers, entering the cord through the posterior roots, or reflex fibers, were the ones in which the degeneration first took place—in other words, they could not withstand the effects of toxic substances or imperfect circulation as well as the fibers that carry the sensory impressions to the higher centers. This was also supported by clinical observations; that is, the absence of the reflexes was usually the first symptom of a disease in which the posterior columns were affected—*e. g.* tabes dorsalis, ergot poisoning, brain tumor, etc. If the cause producing these degenerations continued long enough, of course, the fibers transmitting the sensory impressions to higher centers would also degenerate, and there would then be a disturbance of sensation.

A Lymphocytozoon of the Guinea-Pig.—Mr. L. B. Goldhorn read this paper. He said that while examining the blood of a certain guinea-pig he had found, in the cytoplasm of a large number of lymphocytes, highly refractile, round or ellipsoid, immotile bodies, which, when stained with ordinary methylene blue, looked like vacuoles. As the nucleus of these cells was considerably displaced and undergoing karyorrhexis, according to the size of the vacuoles, it was suspected that a parasite was present. Upon staining smears with polychrome methylene blue a brilliantly stained body was seen, varying in size from a barely visible dot to more than the size of the nucleus of the lymphocyte. While it frequently filled the space in the lymphocyte completely, it would as frequently appear surrounded by a sharply-defined achromatic zone. This latter appearance was rather constant with the small forms. It was reasoned that if this body was a parasite it might be transmitted by transfusion, and an intravenous injection was made into one young guinea-pig, while a second one received an equal amount of blood intraperitoneally, and a third one had a subcutaneous injection made. One control pig was kept with these young ones, and all were isolated from the old infected pig. The transfused blood was suspended in physiological salt solution. All the animals were first carefully examined for abnormalities in the lymphocytes, with negative results. It was thought best to take young animals because old ones appeared to show the bodies above described in nearly half the number examined. At first blood examinations of the injected pigs were made daily, with entirely negative results. At the expiration of three weeks very diminutive bodies, surrounded by a clear space, were seen in the cytoplasm of the lymphocytes of the pig in which the injection had been made intravenously. The nucleus of such lymphocytes did not show any degenerative change. Three weeks later the size of the parasites had increased to twice the size, but, numerically, they were not increased. At the very best few could be found. The animal on which these observations were made showed as many infected lymphocytes as normal ones. It was a pregnant female, and the two young ones did not show at birth, nor had they shown to this day, lymphocytes containing parasitic bodies. The lymphocytes showed frequently more than one parasite. The only way of telling the small forms from the metachromatically-staining bodies so frequently seen in the cytoplasm of lymphocytes was by observing the clear space surrounding the parasitic bodies. In multiple infection of one cell one parasite was not infrequently observed to be larger than others in the same cell. Two parasites, maturing side by side, were seen from time to time. He had not succeeded in demonstrating anything in the clear space surrounding the very small forms, but it was different with the large ones. In the first place, it was noticed that the latter frequently had a more compact central body. The largest forms would consist of a loosened chromatin body, surrounded by a meshwork, which occupied frequently the entire achromatic zone mentioned. He had come to the conclusion that this clear zone represented at all times a substance, as he had succeeded in finding two extra cellular bodies, surrounded by a sharply-defined envelop, corresponding in width to the achromatic area of half-grown intracellular forms. In other instances, lymphocytes, injured in spreading the blood, discharged their parasite, which was found lying free in the plasma, surrounded by a meshwork. It was probable that Kurloff's cells with vacuoles were those described in this paper, and therefore he would give in full the quotation by Ehrlich, since the original by Kurloff was in Russian. Ehrlich said: "This is quite a peculiar group, characteristic for the blood of the guinea-pig. It shows transitions in the blood from large mononuclear to transitional and polynuclear forms, but is marked by the lack of any kind of granulation. Instead of the latter we find in these cells a roundish, nucleus-like form in the protoplasm, which also takes the nuclear stains, and possibly is to be considered an accessory nucleus. We have received the impression that we have here to deal with a vacuole filled with substance secreted by the cell. In a large series of preparations it is possible to obtain some elucidation of the development and fate of these appearances. They first appear in point-like granules in the protoplasm, bearing no relation to the cell-nucleus; they gradually increase and acquire a considerable circumference. When they have attained about the size of the cell-nucleus they, or rather their contents, appear to break through the protoplasmic membrane and to leave the cell. The number of the vacuole-containing-cells is 15 to 20 per cent. of the colorless blood-corpuscles." Continuing, the speaker said that cells with wide meshes in their cytoplasm, simulating vacuoles, were not infrequently seen in smears, but they were altogether unlike the bodies in question. To regard this body as an accessory nucleus was out of the question. It was seen at times outside of the cell, as already stated, and was then frequently sharply outlined by a more or less achromatic zone. Moreover its affinity for stains was altogether unlike that of the nucleus of the lymphocytes, and it stained best metachromatically. The statement that vacuole-containing cells of the normal guinea-pig number 15 to 20 per cent. of the colorless corpuscles was an error if Kurloff's vacuoles were identical with the bodies described, because there were many guinea-pigs, if not the majority of them, that were free from such bodies. If they were really parasites it might be desirable to examine the blood of guinea-pigs which were to be used for serum reactions to determine if they were heavily infected, as they then might occasionally alter such reactions.

Mr. Goldhorn said that he would be thankful for suggestions on the nature of these bodies. A microscopic examination of the tissues from guinea-pigs, whose lymphocytes contained these bodies, showed that there were in the alveoli of the thyroid gland what appeared to be foreign bodies, sometimes closely resembling encysted parasites, and that between the epithelial cells lining the alevoli smaller foreign bodies were seen. Future investigation would show how constant were these changes. The bone marrow was seen to contain the bodies in lymphocytes in large numbers.

The technique was as follows: "Fix smear in wood alcohol for 15 to 30 seconds; wash in water until water adheres to smear. Stain in polychrome methylene blue (Goldhorn) for a few seconds, or long enough to have the smears look grayish or bluish, and wash thoroughly in clean water. Stain in 1 per cent. eosin for from 15 to 30 seconds, and wash again. Short eosin staining will leave the red corpuscles greenish, while longer eosin staining will give pinkish red corpuscles. Dry in air; mount in balsam."

Dr. Ewing said he had previously seen the specimens now exhibited and had had an opportunity of examining them, but he was unable to say whether they were parasites or not, though from their appearance he was inclined to think they were.

The Technique of the Determination of the Freezing-Point of Body Fluids by Means of the Beckmann Apparatus.—Dr. F. C. Wood gave this demonstration. The apparatus consists of a thermometer, with a very finely divided scale and two small glass vessels, one of which acts as container for the solution to be tested, the other as an air-jacket to equalize the action of the freezing-mixture, in which the vessels and the thermometer are placed. The thermometer can be read to a thousandth of a degree if a lens is used, and must be adjusted and tested before use by freezing some distilled water, thus determining the zero of the instrument. While the cooling of the fluid is taking place, constant stirring must be done with a small platinum wire, which extends down through one of the corks, closing the inner freezing vessel, which contains the fluid to be tested. The whole apparatus is placed in a large jar, with a mixture of ice and salt, containing enough salt to reduce the temperature about one to two degrees below zero Centigrade. This requires only a moderate amount of salt, but the mixture should contain a good deal of water. The whole is wrapped in a thick felt cover, to prevent sudden changes of temperature. As the liquid in the freezing chamber cools down the thermometer is noticed to sink gradually below the freezing point of the fluid, and if now rapid stirring be begun, and especially if the stirrer be allowed to strike the bottom of the vessel, small particles of ice will be formed and will be whirled up through the rest of the fluid, at which instant the thermometer will be observed to rise rapidly for a few tenths of a degree, and finally remain constant at a given point, which point cannot be altered by stirring. This is the desired freezing point of the liquid. Dr. Wood said that the rise of temperature was due to the fact that the fluid had become undercooled—that is, had been cooled below its freezing point. When the ice separated, the latent heat of the water was set free and the temperature of the mixture rose, in the case of pure water, to zero, C., and in the case of one of the animal fluids to the freezing point of that fluid. These observations must be repeated three or four times, and the average taken of the readings. They should not vary more than a few thousandths of a degree from each other. The determination of the freezing point of distilled water—in other words, the zero of the instrument—must be made every day, for when the thermometer rose to room temperature the glass of the bulb took a set, which prevented the thermometer returning accurately to zero when it was suddenly cooled. The accurate zero was only reached after the thermometer had been cooled for some time. In making a series of observations it was well to keep the thermometer in an ice-box, so that the zero would not vary, in which case it would not be necessary to adjust the zero every day. The under-cooling should be limited to about three or four-tenths of a degree, and if, as was frequently the case, the fluid refuses to form ice at this temperature, it was necessary to inoculate the mixture by raising the stirrer up to a level with the small side tube, with which the freezing tubes were equipped, and then to touch this stirrer with a small particle of ice or a frozen portion of the substance which was being tested. This caused a small quantity of ice to form on the platinum ring of the stirrer, and when the latter was dropped again into the fluid the formation of ice would immediately begin, and the thermometer would rise to the freezing point desired. The apparatus might be simplified somewhat for clinical purposes, by using, instead of a freezing-mixture of salt and ice, a closed vessel, containing ether, through which, by means of a small water pump, is drawn a current of air. The rapid bubbling of the air causes evaporation of the water and a rapid reduction of the temperature of the freezing vessel containing it. With this apparatus it was often possible to make a determination in ten to fifteen minutes; with the Beckmann apparatus, owing to the large size of the bulb of the thermometer and the necessity for its adjustment, it usually took about two hours for each determination. Time might be saved by using a thermometer with a fixed zero instead of the Beckmann thermometer, in which case the mercury bulb could be made much smaller, but the results obtained were, as a rule, not so accurate as those furnished by the original form of the Beckmann apparatus.

The thermometers should be standardized by comparison with some known instrument, or, what was better, carry a certificate of the Reichs Anstalt that they are accurate.

The importance of the determination of the freezing point of animal fluids was that it gave a physical method of determining, with very considerable exactness, the molecular contents of the fluid, and with it the osmotic pressure which that fluid exerts. The basis of the whole matter had been originally observed by the English physician, Blagden, in 1788. He discovered that the freezing point of a solution was lower than that of the pure solvent, and that this lowering of the freezing point was proportional to the amount of substance contained in solution. This observation remained unused until within the last few years, when, with the development of physical chemistry, it was found that the molecules of a substance dissolved in a fluid acted just as the molecules of a gas act, and that the osmotic pressure, when measured directly, was proportional to the amount of substance dissolved in the fluid, just as the pressure of gas is proportionate to the number of molecules contained in a given volume. These facts were true, without further consideration, when the solution was of a certain nature, such as benzol, but in determining the osmotic pressure of an aqueous fluid, it was found that the proportion between the quantity of substance present and the pressure was not exactly the same. This had led to the further hypothesis, that when substances were dissolved in water they underwent a partial decomposition into ions, and that these ions acted as free and independent molecules, thereby raising the osmotic pressure of the fluid proportionally. This occurred only in dilute solutions, such as were found in the human body. Inasmuch as the direct measurement of osmotic pressure was very time-consuming and very difficult, the freezing point method had found general application in the determination of a number of conditions. It had been found, for example, that, in cases in which the permeability of the kidney was in any way injured—and the best instance of this was a chronic nephritis—the number of molecules in the blood was increased, owing to this inability of the kidney to excrete the molecules into urine. This molecular retention in the blood caused only very slight changes when measured in the ordinary way by specific gravity, but gave a marked increase in the lowering of the freezing point as compared with normal blood. If we took the normal freezing point of the blood as .56°C., the presence of a marked obstruction of the kidney would often lower this point to .60° or .70°C., and thus indicate a retention of molecules in the blood. The method did not give any clue as to the nature of the substance retained, but this might be obtained by chemical analysis. It did, however, give a measure of the amount of substance retained, and as it was fairly easy to obtain, while chemical analysis required days for its results, it had been hoped that this method would afford a rapid and accurate means of diagnosing inefficiency in the excretory power of the kidney. This hope had been partially realized, notably by Koranyi, who had found that not only in experimental nephritis in animals, but in nephritis in human beings, this rise in the molecular contents of the blood could be sufficiently demonstrated. Unfortunately for the practical application of this method, there were many complicating circumstances, the chief one being the fact that cyanosis increases the freezing point of the blood just as does a kidney inefficiency. The method, therefore, did not give true results when cyanosis was present. A great deal of work had been done in the determination of the freezing point of urine, in the hope that this might give a clue to the kidney work, but up to the present no definite conclusions had been reached. Casper and Richter had shown, however, that if the secretions of the kidneys were collected separately by catheterization of the ureter, and then the freezing point of the urine received from each kidney determined, a proportional value would be obtained, which would give the relative capacity of each organ. If then, from the reduction of the freezing point in the blood below 56°C., it was suspected that the kidneys were inefficient, by obtaining the freezing point of the urine from each kidney the efficiency of each could be determined, and in this way it could be ascertained which kidney was diseased, and whether, if one were removed, the other would have sufficient excretory power to handle the products of the bodily metabolism.

An interesting observation of the care necessary to carry out these determinations was shown by the work done by Krönig and Fueth, which had recently been published as a criticism of a paper by Veit. The latter had obtained different results when he determined the freezing point of the mother and of the new-born child, and the difference was such as to represent a pressure difference between the fœtal blood and that of the mother of five pounds to the square inch. It was difficult to understand how so delicate a partition wall as the chorionic membrane could withstand such a pressure, so Krönig and Fueth undertook a re-examination of the entire subject. After a very careful series of observations they showed that the presence of the blood-corpuscles in the fluid to be frozen made no difference in the result. They also determined by a long series of observations the average error of the thermometer used. This error, between two standard instruments, was about nine one-thousandths of a degree. Then, allowing for this error, a series of freezing-point determinations were made with the blood from the mother and the child, and they were found to be the same within the limits of error of the instruments.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON PEDIATRICS.

Stated Meeting, Held May 8, 1902.

R. G. Freeman, M.D., Chairman.

A Case of Acute Leukæmia.—Dr. Sara Welt-Kakels reported this case. She said that to Ebstein belonged the credit of having first clearly defined this disease. She had found on record twenty-four cases of leukæmia, occurring in children under ten years of age. The case now reported was that of a child of eighteen months, first seen last October. The mother had first noticed about one month before that the child was growing very pale, and occasionally some blood or pus was passed from the bowel. On examination the pallor of the skin was very striking. There was no evidence of rachitis. There were numerous purpuric spots all over the body and extremities, varying in size from that of a pin-head to a five-cent piece. The mucous membrane of the mouth was inflamed, the gums were bleeding, and the breath fetid. The post-cervical, axillary and inguinal glands were enlarged. There were soft, blowing systolic murmurs at the base and apex of the heart. The abdomen was very slightly distended. The spleen extended about one inch and a half below the free border of the ribs. The body temperature was 101° F. in the rectum. A drop of blood taken from the ear appeared to the naked eye to be very pale. The proportion of red blood-corpuscles to the white was nearly one to three, and a differential blood count showed 94 per cent. of lymphocytes. The eosinophiles were very scanty. There were 682,000 leucocytes to the cubic millimeter, an enormous number. Usually the large form of leucocytes predominated, but in this instance the small were three times more numerous than the large. The urine contained some albumin, but no sugar or blood. On October 18 the child became comatose, and died the same day, or four days after first coming under observation. A post-mortem examination was not permitted. The causes of death in this case were probably asthenia and hemorrhage into the brain. In classifying this disease it should be called, the speaker thought, acute, not so much because of its short duration, but because of the suddenness of its onset and the early occurrence of hemorrhages, which in chronic leukæmia occur at a far more advanced stage. From the frequency of the early involvement of the submaxillary glands, Fraenkel was of the opinion that the mouth and nose were the favorite portals of infection. The prognosis of acute leukæmia was absolutely fatal, death resulting either from sepsis following secondary infection, from asthenia following great loss of blood, or from coma arising from hemorrhages into the brain or meninges.

Dr. Charles Herrman said that in a recently published case of acute lukæmia in a child an enormous thymus gland had been found. There were certain things about this affection which reminded one of the constitutio lymphatica.

Summer Diarrhœa of Infancy.—This was the general subject for the evening's discussion.

Etiology and Prophylaxis.—Dr. Henry Heiman opened the discussion with this paper. He said that the term summer diarrhœa was plainly a misnomer in the light of our present knowledge of this affection. All evidence pointed to the inseparable relation between bacteria and summer diarrhœa. So positive was this evidence that it was now acknowledged that several intestinal microorganisms might become virulent under special conditions. It should not be forgotten that there existed in the intestinal tract certain bacteria which performed physiological instead of a pathological function, their office being to split up certain substances and so aid digestion. It was known that among certain intestinal bacteria there was an antagonistic action, and this explained the presence of large numbers and different kinds of bacteria without any pathological consequences. A fairly good classification of the diarrhœas under discussion was into infectious and non-infectious, the first variety being subdivided into inflammatory and non-inflammatory. That heat, and especially humidity, was largely reponsible for the diarrhœas in children, was beyond doubt. These metereological conditions favored intestinal putrefaction. By far the most frequent exciting cause of these diarrhœas was faulty feeding. In his dispensary practice he had noted that summer diarrhœa was becoming less frequent each year, and this he attributed to increased knowledge as to the best methods of infant feeding. In children fed on a mixed diet the use of unripe or decayed fruit was a very common cause of diarrhœa. The aim of the physician should be to secure pure milk for bottle-fed children. The great menace from both bottle and breast feeding lay in over-feeding. A good prophylactic during hot weather was to diminish the quantity of food, substituting boiled water and a cereal for some of the proteids and fats. Prophylaxis should extend beyond the work of the physician, and should consist in securing by legislation properly built tenement houses and providing parks and other breathing spaces for children who cannot leave the hot cities.

Renal Complications.—Dr. J. Lovett Morse of Boston read this paper. He said that thrombosis of the renal veins with hemorrhage had been found not very infrequently, and degenerative lesions of a granular type were quite common. The tubules contain casts of various sorts and sometimes blood. Similar, though less marked, changes were found in Henle's loops and in the straight tubes. Fatty degeneration was unusual and occurred only in the chronic form. Glomerular changes were rare. Microorganisms were usually not present. In other words, the alterations in the kidneys in the acute diarrhœas of children were mainly degenerative in type, showed nothing characteristic, and were similar in every way to those found in other affections, both in children and in adults. Most observers attributed these changes to the absorption of toxic substance from the intestine. It was probable that other factors than the bacteria played a part in these renal affections. The quantity of the urine was more or less diminished, in part due to the dehydration from the diarrhœa and the diminished ingestion of liquids. Albuminuria was usually present, but not in large amount. Degenerated epithelial cells were numerous, but blood was uncommon. There was an excess of uric acid or urates. Similar changes were observed in cases that recovered. This class of cases was best described as acute degenerative nephritis.

In his own cases no relation could be discovered between the presence of albumin in the urine and the symptoms present. Koplik claimed that the chief symptoms of this affection were persistent vomiting, restlessness, and œdema of the thighs, legs and feet. Holt said that he had only met with one autopsy in which the nephritis had been sufficiently marked to have taken direct part in the fatal result. This nephritis, he thought, should be regarded in a general way as an indication of toxæmia. Acute pyelitis and pyelonephritis might occur as complications of acute enteric diseases. They were usually mild in type, and were almost always the result of infection with the colon bacillus. They had practically no effect on the prognosis. The treatment of renal complications consisted in relieving the irritation of the kidneys and endeavoring to remove the primary disease.

Treatment.—Dr. Charles G. Kerley read this paper. It should be remembered, he said, that primarily the intestinal contents were involved, and not the intestine itself. Realizing that the physician had a poisoned child to treat, the indications were clear. Every case, whether mild or severe, should be given castor oil or calomel, the former being preferred. Regardless of the source of the milk, it must be stopped at once, for the reason that it furnishes an exceedingly favorable culture medium for bacteria. It did not do the slightest good to dilute the milk, or to pasteurize or sterilize; indeed, heating the milk distinctly aggravated the condition. A substitute diet was, of course, to be selected, and a carbohydrate diet had given him the best results. Children soon tire of this, and hence it was well to change the taste by adding small quantities of beef juice or chicken broth, well salted. These must be used sparingly, however, as they often give rise to infantile diarrhœa. The free use of brandy or whiskey, as practiced by many, seemed to him a mistake, as it tended to destroy the feeble powers of digestion and tended to irritate the kidneys. He had used egg albumen water freely, but had abandoned it because he had found that many sick infants did not well digest it. The diet of fever patients should contain a liberal supply of carbohydrate, and in summer diarrhœa there is usually a good deal of fever. The substitute carbohydrate diet should be given at intervals of two hours, and in such quantity as milk had been given previously. Boiled water should be given freely at any time. The child should be kept in a large airy room, and the milk diet should not be resumed until the fever had gone and the stools had become normal, and the return to milk diet should be effected very gradually. One drug seemed to him of special value in these cases, and that was the subnitrate of bismuth, given in large doses, ten to twenty grains every hour or two. There was no use in giving this remedy except in sufficient quantity to cause black stools. Opium was also useful, but must be employed with great caution. It should never be given unless there were more than four or five stools a day, for this number was necessary for proper drainage. He preferred Dover's powder, one-quarter to one-half a grain every three or four hours for a child of one year old. For heart stimulation, strychnine and strophanthus were preferable. Irrigation of the colon was of much service where the stools contained much mucus and blood, but for other cases irrigation accomplished little but an increase of the irritation of the rectum. Ordinarily, not more than two irrigations should be given in the twenty-four hours, and normal salt solution should be used. For the purpose of irrigation he made use of an ordinary rectal tube, No. 17 of the American scale. The tube should be introduced nine inches, and the reservoir should not be more than three feet above the child's body. Ordinarily, the fluid should be lukewarm, but when the temperature of the body was very high the use of water at 70° F. would help to reduce the body temperature. In cases on the verge of collapse, the use of very hot saline solution acted as a valuable stimulant.

Dr. William L. Stowell said that he had never found it necessary to pay special attention to the occurrence of renal complications in connection with summer diarrhœa. On going over the statistics of the Demilt Dispensary for the past three years and a half, he had been surprised at the small number of deaths from summer diarrhœa. He had been in the habit of using antiseptics in these cases, especially salol, and also of using intestinal irrigation, not only to remove irritating substances, but because of the effect on the child obtained by varying the temperature of the saline solution. He had tried a great many remedies, and was inclined to believe that too much attention should not be given to the fine selection of remedies—in other words, the drug treatment was a very subordinate part. He was positive that there was much less summer diarrhœa now than a few years ago, and the cases were of a milder type. This he attributed to a better understanding of the subject of infant feeding.

Dr. B. Van Doren Hedges of Plainfield, N. J., said his attention had been called to the bad effect of chronic over-distention of the stomach. The habit of giving infants quantities of food entirely too large for the size of the stomach tended to weaken the muscular walls, and in this way predisposed to disease. Dr. Kerley had preached the true and only gospel as to the treatment of summer diarrhœa. Personally, he had always been very chary about giving opium in the acute stage of the disease unless the case could be very carefully watched. The administration of opium would often reduce the number of the stools, but unless this was associated with an improvement in their character the opium was doing harm. It was also important to insist that the stools should be saved for the physician to inspect. He had found bismuth particulary soothing and beneficial.

Dr. Walter Lester Carr said that he had noted in some cases of diarrhœa complicated by renal disease a very rapid pulse, an unusual amount of dyspnœa and persistent vomiting. He had usually found œdema wanting, except in protracted or intermittent cases. He had been surprised at the very small quantity of albumin present in the urine of these children. Quite possible it was because of this and the mildness of the affection that it was often overlooked altogether. At one time he had experimented quite extensively with salol, and had obtained good results, but in later years he had practically abandoned the use of all intestinal antiseptics, and felt that the children did just as well by employing the general principles so well outlined by Dr. Kerley.

Dr. L. E. La Fetra said that a rather rare type of summer diarrhœa, not yet referred to, was that in which the intoxication of the intestine was a local instead of a general one. In these cases, instead of there being diarrhœa, there was really constipation, associated with fever and symptoms of intoxication. It had been his misfortune to have had one such case, which had gone to a fatal issue. The case emphasized the importance of maintaining intestinal drainage and the need for the physician to imitate nature's methods. In such cases a saline cathartic would be found especially useful.

Dr. E. Libman said that he had usually found a parenchymatous degeneration of the kidneys, such as had been described by Dr. Morse. He did not recall having found a typical acute nephritis in connection with infantile diarrhœa. The very fact that there was diarrhœa allowed of the elimination of the toxins. It was probable that by the older methods of treatment, the use of opium and astringents, the eliminaton of the toxins being interfered with, the effect on the kidney was more marked. The speaker deplored the tendency to ignore scientific classification of these cases, and being content to speak of them by the very general term of summer diarrhœa. The streptococcus cases could be readily separated, and they should be, for these children sometimes die from systemic infection. The pyocyaneus cases also could be easily diagnosticated and separated. He did not, however, mean to say that the treatment of these different divisions was different.

Dr. J. Finley Bell of Englewood, N. J., said that in 1899 and 1900 he had seen in the village of Easthampton, Long Island, many cases of diarrhœa during August and September, characterized by a very high temperature, convulsions and vomiting. Bacteriological examination of the stools showed most of these cases to be streptococcus diarrhœas. In looking for the cause, it was found that as soon as milk diet was resumed relapse was much more frequent than was usual. Inspection of the herds supplying most of the milk to the village showed that three out of eight of the cows had an eruption on the teats and udders. A culture from one of the pustules showed staphylococci and streptococci. Dr. E. F. Brush saw the animals and asserted that they were suffering from cow-pox. Further investigation showed that three out of four of the herds supplying the village were similarly diseased. The animals were quarantined and the epidemic of diarrhœa ceased almost immediately. For several years previously the summer diarrhœas had been very prevalent and exceedingly fatal in the neighboring town of Sag Harbor, and one of the physicians practising there stated that these diarrhœas were of the streptococcus variety. This led to an investigation of the milk supply, with the result that the animals were found to be infected with streptococci.

Dr. W. L. Baner commended very highly the paper of Dr. Kerley, which, he was sure, would be the means of popularizing the very rational treatment of summer diarrhœa there detailed. He would be inclined to substitute for the bismuth the administration of sulphate of sodium in doses of fifteen grains every three or four hours to a child one year old.

Dr. J. J. Walsh said that a good many of the coal-tar products were used rather freely with the idea of counteracting the germs in the intestine. Even the administration of small doses of salol to these sick children was pretty sure to do harm. It was very probable that the skin and the intestine occupied correlative positions as regards the blood supply, and this explained the effect of changes of temperature in producing diarrhœa, whether the change was from hot to cold or *vice versa*. To avoid sudden changes of temperature, children should be given two or three baths on very hot days, or should be allowed to play for a considerable time in the bath. This was one of the best prophylactic measures against diarrhœa during very hot weather.

Dr. H. Heiman remarked that a great point in the treatment of these diarrhœas was to secure to these little sufferers rest in the open air.

Dr. **Morse** thought it was far better to speak of the acute enteric diseases of infancy than to refer to summer diarrhœas. These affections could be roughly divided into three classes, viz.: (1) A class in which there was merely increased peristalsis or simple diarrhœa; (2) Those in which there were organic changes, and (3) A class in which there might or might not be organic changes. The last class constituted the great bulk of the cases. He firmly believed that it was necessary to withdraw milk for a time, though, perhaps, not so long as Dr. Kerley thought necessary. He believed brandy was contraindicated, and that the bismuth was the most useful drug. He would only give opium in those cases in which the peristalsis appeared to be unduly increased. In this same class the astringents were indicated, the best of these being tannigen and tannalbin. He felt that irrigation of the bowel had been overdone, and that it was only indicated in a comparatively small class. The subcutaneous injection of salt solution was most useful in the very severe cases of infantile diarrhœa.

Dr. **Kerley** said that salol was not beneficial, and as it almost surely disturbed the stomach it should be avoided. He had seen the case referred to by Dr. La Fetra, and had been greatly interested in it. There had apparently been a paralysis of the bowel, and it certainly refused to yield to treatment.

Dr. R. G. **Freeman** said that while bismuth was apparently very successful in private practice, none of the physicians at the New York Foundling Hospital had been impressed with its value in infantile diarrhœas. More recently they had been using there two or three drops of castor oil with each dose of bismuth, and the result had apparently been much better. Reference was made to the advantage of having small wards in children's hospitals, so that the little sufferers would not be disturbed by the crying of the others.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending May 24, 1902:

	Cases.	Deaths.
Measles	564	12
Diphtheria and croup	337	45
Scarlet fever	414	37
Smallpox	36	11
Varicella	98	..
Tuberculosis	276	134
Typhoid fever	26	5
Cerebro-spinal meningitis	..	4

The Biological Chemistry of Egg Albumen.—F. Obermayer and E. P. Pick have studied the precipitin-producing properties of the various chemical constituents of egg albumen when such are inoculated into various animals. They show that the formation of precipitins produced by immunization with the various albuminoids of egg albumen, is not directly dependent upon the variety of the albuminoid thus used, but is produced by a substance which can only be separated with great difficulty from such albuminoids. This formation of precipitins is not, therefore, specific in so far as the different albuminoids are concerned. The precipitinogen (immunizing substance) and the egg albumen precipitins are not albuminoids. The egg albumen precipitin is not destroyed by heating in neutral or acid solutions or by trypsin-digestion in alkaline solutions. Pepsin-digestion destroys the action of precipitinogen and egg albumen precipitin. From the above it is apparent that the "biological reactions" is of no value in the identification of the various albuminoids.—*Wiener klinische Rundschau.*

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending May 24, 1902:

SMALLPOX—UNITED STATES.

		Cases.	Deaths.
California, Los Angeles	May 3–16	3	
San Francisco	May 4–11	4	
Colorado, Denver	May 3–10	7	
District of Columbia, Washington	May 10–17	1	
Florida, Jacksonville	May 10–17	2	
Illinois, Belleville	May 10–17	2	
Chicago	May 10–17	19	1
Freeport	May 10–17	4	
Galesburg	May 10–17	4	
Indiana, Indianapolis	May 10–17	23	
South Bend	May 10–17	3	
Terre Haute	May 3–17	4	
Kansas, Wichita	May 10–17	5	
Louisiana, New Orleans	May 10–17	1	
Massachusetts, Boston	May 10–17	46	6
Brockton	May 10–17	1	
Chelsea	May 10–17	2	
Everett	May 10–17	1	1
Fall River	May 10–17	3	
Lowell	May 10–17	3	
Malden	May 10–17	6	
Newton	May 10–17	1	
Somerville	May 10–17	..	1
Michigan, Detroit	May 10–17	2	
Ludington	May 10–17	24	1
Minnesota, Winona	May 3–17	4	
Missouri, St. Louis	May 11–18	43	
Montana, Butte	May 4–11	6	
Nebraska, Omaha	May 10–17	26	
New Jersey, Camden	May 10–17	3	
Hudson County including Jersey City	May 4–18	74	17
Newark	May 10–17	54	9
Plainfield	May 10–17	..	1
New York, Elmira	May 10–17	2	
New York	May 10–17	46	7
Ohio, Cincinnati	May 9–16	7	
Hamilton	May 10–17	1	
Toledo	May 10–17	1	
Pennsylvania, Columbia	Apr. 28–May 5	21	
Erie	May 10–17	12	
McKeesport	May 10–17	1	
Philadelphia	May 10–17	12	1
Pittsburg	May 10–17	9	2
Scranton	May 10–17	2	
Rhode Island, Providence	May 10–17	1	
Tennessee, Memphis	May 10–17	2	1
Washington, Tacoma	May 4–11	1	
Wisconsin, Green Bay	May 11–18	5	

SMALLPOX—INSULAR.

Porto Rico, Arecibo	Apr. 19–May 3	75	
Caguos	Apr. 19–May 3	36	
Camuy	Apr. 19–May 3	56	
Hatillos	Apr. 19–May 3	7	
Ponce	Apr. 19–May 3	30	
San Juan	Apr. 19–May 3	40	

SMALLPOX—FOREIGN.

Austria, Prague	Apr. 12–May 3	19	
Belgium, Antwerp	Apr. 19–May 3	25	2
Ghent	Apr. 5–May 3	..	3
Brazil, Pernambuco	Mar. 15–Apr. 15	..	52
Rio de Janeiro	Apr. 6–20	..	11
Canada, Halifax	May 3–17	4	
Winnipeg	Apr 26–May 10	11	1
China, Hongkong	Mar. 29–Apr. 12	6	6
Colombia, Cartagena	Apr. 21–27	2	
Panama	Apr. 29–May 12	80	
France, Paris	Apr. 5–12	..	2
Paris	Apr. 19–26	..	1
Great Britain, Dundee	Apr. 26–May 3	2	
Glasgow	May 3–9	2	1
Liverpool	Apr. 19–26	3	
London	Apr. 19–26	367	42
London	Apr. 26–May 3	250	43
North Shields	Apr. 19–26	23	
South Shields	Apr. 19–26	9	
India, Bombay	Apr. 15–22	..	5
Calcutta	Apr. 12–19	..	10
Karachi	Apr. 13–20	7	2
Madras	Apr. 12–18	..	5
Italy, Palermo	Apr. 12–May 3	65	16
Rome	Mar. 22–29	..	1
Mexico, Vera Cruz	Apr. 26–May 3	1	1
Russia, Moscow	Apr. 12–26	10	6
Odessa	Apr 12–May 3	19	2
St. Petersburg	Apr. 12–26	16	2
Warsaw	Apr. 5–12	..	1
Straits Settlements, Singapore	Mar. 15–29	..	1
Switzerland, Geneva	Apr. 5–19	2	
Uruguay, Montevideo	Apr. 15–22	75	2

YELLOW FEVER.

Brazil, Pernambuco	Mar. 15–Apr. 15	..	1
Rio de Janeiro	Apr. 6–20	..	67
Costa Rico, Port Limon	May 1–7	2	cases susp
Mexico, Vera Cruz	Apr. 26–May 3	10	7

CHOLERA.

China, Hongkong	Mar. 29–Apr. 12	56	50
India, Bombay	Apr. 15–22	..	3
Calcutta	Apr. 12–19	..	153
Straits Settlements, Singapore	Mar. 15–29	..	17

PLAGUE—INSULAR.

Hawaii, Honolulu	May 7	..	1
Honolulu	May 8	..	1

PLAGUE—FOREIGN.

Brazil, Pernambuco	Mar. 15–Apr. 15	..	34
China, Hongkong	Mar. 29–Apr. 12	5	5
India, Bombay	Apr. 15–22	..	608
Calcutta	Apr. 12–19	..	588
Karachi	Apr. 13–20	161	132

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Original Articles.

THE RÔLE OF INHIBITION IN THE NORMAL AND IN SOME OF THE PATHOLOGICAL PHENOMENA OF LIFE.[*]

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NEW YORK.

Introductory.—Three years ago I read a paper on "Inhibition" before the Academy of Medicine, in which I gave an account of our knowledge of this phenomenon as met with in animal life. The great number of facts I presented there led up to the brief conclusion that inhibition is present in and essential to each and every mechanism of animal life. As disease is a disturbance of some or many life mechanisms, we may well expect to find that inhibition is also an essential factor in many forms of disease. As a matter of fact, however, pathology has not even as much as taken serious notice of this biological phenomenon. Except, perhaps, for an occasional reference to the well-known effect of the vagus upon the heart, inhibition is not even mentioned in many leading textbooks on pathology.

With the conviction that inhibition is a fundamental factor in the phenomena of normal and abnormal life, I again come forward to do missionary work for the recognition of this much-neglected and little understood life-force. The chief aim of my paper to-night is to discuss inhibition in its relation to some forms of disease. This, however, will have to be preceded by a discussion of the place inhibition occupies in the functions of normal life, a discussion which, I believe, is not made superfluous by my previous paper on the same subject.

I shall begin with a brief review of the functions, organs, tissues, etc., in which the presence of inhibition has been firmly established.

THE RÔLE OF INHIBITION IN NORMAL LIFE.

Cardiac Inhibition.—The perceptible manifestations of animal life imply motion, secretion, or sensation. Of these the motor phenomena are the most striking, and the best studied. So inhibition, too, is best studied in functions and organs of the animal body, in which active motion is an essential and visible factor. We shall discuss first and more extensively motor inhibition, beginning with the peripheral organs. Here we meet, in the first place, the inhibitory effect of the vagus upon the heart, the discovery of which, as is well known, opened up the entire subject of inhibition, and which still represents its most instructive example. Stimulation of the peripheral end of the vagus causes the following effects upon the heart: (1) It diminishes the number of beats, or abolishes them entirely; (2) It diminishes the height and the force of the contraction; (3) It decreases or abolishes the tonus of the cardiac muscle; normally, the heart even in diastole is not entirely relaxed; it has a tonus; stimulation of the vagus inhibits this tonus; (4) It diminishes the excitability of the heart muscle; during an efficient excitation of the vagus, direct stimulation of the heart muscle causes no contraction; (5) According to Gaskell, stimulation of the vagus abolishes also the conductivity of the heart muscle. The last two effects are most remarkable. Excitability and conductivity are the most fundamental properties of living tissue, yet we see them here abolished through the stimulation of a nerve; (6) Finally, we have to note the discovery of Gaskell, that the heart muscle shows a "positive variation" of the electric current during the vagus stimulation—that is, the direction of the current is opposite to that which takes place when a muscle contracts.

It is of great interest to know that the accelerator or augmentor nerve shows effects upon the heart exactly opposite to those of the vagus. Stimulation of the accelerators causes: (1) An increase in the number of heart beats; (2) An increase in their height and force; (3) An increase of the tonus of the heart; (4) An increase of the excitability of the heart muscle; (5) An increase of its conductivity, and (6) causes a negative variation of the muscle current.

Accordingly, the heart muscle stands under the control of two antagonistic agencies; one increasing its motor manifestations, the other inhibiting them.

Vascular Inhibition.—Similar conditions prevail in the vascular system. All the small arteries of the body (including, probably, also those of the lungs and the brain), stand under the control of the vasoconstrictors and vasodilators. The vasodilatation is accomplished through the inhibition of the tonus of the circular muscle-fibers of the blood-vessels. Vasodilators are to the blood vessels what the vagi are to the heart—they are inhibitors. Generally both kinds of nerve-fibers are present in one and the same nerve-trunk, and for reasons which we shall discuss later, artificial stimulation of such a nerve brings out, chiefly, constriction. A number of methods have been developed, however, by means of which the presence of vasoinhibitors has been demonstrated for nearly every region of the body. The special characteristics of the vasodilators are, of course, studied best when they are found in a nerve-trunk alone or, at least, with very little admixture of their antagonist. The chorda tympani, for instance, represents such a nerve. The extensive studies of the vasomotor mechanism have demonstrated that the motor conditions of the blood vessels are at all times, and in any region of the body, a resultant of the two antagonistic agencies—the vasoconstrictors and vasoinhibitors.

Inhibition in the Alimentary Tract.—Regarding the movements in the alimentary tract, we can now state that the entire canal stands under the control of motor and inhibitory agencies. The inhibitory effect of the splanchnic nerves upon the intestines has been known for more than forty years.

Within the last two or three decades the motor conditions of the alimentary canal have been studied by many investigators and it can be considered as settled that every section of the tract is provided with inhibitory mechanisms. With every act of deglutition a wave of inhibition sweeps over the œsophagus, running ahead of the peristaltic movement (Kronecker and Meltzer). A bolus introduced in the lumen of the intestinal canal causes a constriction above and an inhibition below the bolus (Bayliss and Starling). The more or less strong tonic contraction of the cardia, the pylorus and the anal sphincters, the different forms of the movements of the stomach, of the small and large intestines and the moderate tonicity of the walls of the gastro-intestinal canal when at rest, all are under the conjoined management of the motor and inhibitory nerve fibers, contained partly in the vagi, partly in nerves emanating from the thoraco-abdominal sympathetic.

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[*] Read before the New York Academy of Medicine, February 6, 1902.

I shall not speak in detail of the inhibition in the bladder, the iris, etc. I shall only state briefly that inhibition was discovered to be present in nearly all organs which have some degree of motion due to the presence of smooth muscle fibers.

Inhibition in Striated Muscles.—The organs we have spoken of so far have this in common, that the movements are accomplished, as was just mentioned, by smooth muscle fibers; however the heart already presents to a certain extent an intermediary form between smooth muscle tissue and striated muscles. Regarding the manifestations of inhibition in the latter, the facts at hand are not yet numerous. Inhibition was found to be present in the retractor penis muscle of the dog and hedgehog, which consists of striated fibers, and contains no nerve cells, but contracts only involuntarily. A beautiful example of inhibition was found in the crayfish, in the motor nerves of the muscles of its claws. We shall have occasion to mention it later. It is, however, quite difficult to prove the existence of inhibition in the skeletal muscles of the vertebrates, as there is no tonicity in the nerve-muscle preparation, and apparently each effective stimulus brings out only a contraction. There are, however, already a number of experiments on record which show unmistakably the presence of inhibitory fibers in the motor nerve. I shall quote one experiment as an illustration: A tetanus is brought on in the muscle of a nerve-muscle preparation if the central end of the nerve becomes dry. When the tetanus has passed off no stimulus applied to the intact part of the nerve or to the muscle itself can bring out a contraction. Stimulation, however, of the muscle as well as the nerve is immediately effective as soon as the dried end is cut off. The drying of the nerve end apparently exerts an inhibition upon the nerve-muscle preparation, which cannot be overcome by any stimulation of another part of the nerve or the muscle. The number of physiologists who declare themselves in favor of the theory that the skeletal muscles are provided with inhibitory nerve-fibers is, indeed, continually increasing. Most of them, however, seem to look at the end-plates of the motor nerve as the place where the inhibition takes place. The experiment just mentioned, however, seems to me to demonstrate that the inhibition can take place also in the muscle tissue itself, because if the inhibition due to drying of the central nerve-end would affect only the motor impulse in the end-plate of the nerve, there would be no reason why the muscle substance itself should not respond to a stimulation just as a muscle, the end-plates of which are poisoned by curare, responds to a local stimulus. As yet, however, the question of existence of inhibition in the muscle substance has hardly been seriously studied by anyone. So far as I know, there is only one experiment which concerns itself with this question—it is as follows: A veratrinized muscle shows a very slow relaxation after a contraction. If during this slow relaxation a stimulus is applied to the muscle, the relaxation is rapidly finished, which means, according to Biederman, that the tonicity of the muscle, due to the effect of veratrin, is inhibited by the applied stimulus. Now the same phenomenon occurs also in a curarized muscle, which fact Piorkowski considers as a proof that inhibition takes place also in the muscle substance itself.

From the foregoing we can safely draw the conclusion that all peripheral organs which are endowed with some form of motion are also endowed with agencies inhibiting this motion. We shall now proceed to examine briefly the presence of inhibition in the central organs.

Inhibition of Respiration.—When the central end of the laryngeal superior nerve is stimulated with a moderate electrical current, or any other form of stimulus, the respiration stands still. The same can be accomplished, although less promptly, by stimulation of the second branch of the trigeminus or the central end of the splanchnic nerve.

The respiratory standstill in these cases means simply a cessation of the rhythmic contraction of the inspiratory muscles—an inhibition of inspiration. As the cause of the inspiration is located in the center of respiration in the medulla oblongata, no matter whether this cause is of automatic or of reflex origin, the inhibition, accordingly, takes place within the respiratory center. In other words, this effect of the laryngeal superior nerve is a clear example of central inhibition.

Another example of central inhibition is the prompt and uniform effect of the depressor nerve. There is in the medulla oblongata a center which keeps all the blood vessels of the body at a certain degree of constriction. When the central end of the nervus depressor is stimulated the blood pressure falls considerably; the tonus of the center is depressed—is inhibited.

Inhibition of Reflexes.—There are a great number of instances of inhibition of general reflexes. I shall not enter into a detailed description of these phenomena, but shall summarize them in the following general statement: If any part of the body manifests tonic or clonic, rhythmic or irregular contractions of central origin, be they brought about by peripheral stimuli applied to the cortex, or by anæsthesia or by removal or division of certain parts of the central nervous system; these reflex contractions can often be diminished or entirely inhibited by stimulation of certain other parts of the body, and sometimes even of the same region or contracting parts. Anybody who is familiar with these special studies will find that this statement covers about all the facts known in this line of investigation. At present nobody seems to doubt any longer that this abolition of the reflex contraction means inhibition which takes place within the central nervous system.

I would like to call to mind here the distinction which is to be made between inhibition of reflexes and reflex inhibition. In the latter case the inhibition takes place in a peripheral organ, while the process in the central organ is of the same nature as that of a reflex motion, except that the centrifugal nerve is not a motor but an inhibitory nerve. The well-known strike-reflex (Klopfversuch) illustrates our point. Striking the abdomen of a frog causes an inhibition of the heart beats, which means that the striking of the abdomen sends impulses to the center of the vagus in the medulla oblongata, by means of which the tonus of the cardiac inhibition is increased. The inhibition takes place at the heart, while there is an increase of excitation in the central organ.

On the other hand, the impulses which are sent to the central organ in the cases of inhibition of reflexes cause there a decrease—an inhibition of the existing tonus.

An instructive illustration of central inhibition is to be found in the fact that the inhibition involved in each act of swallowing spreads rapidly from the center of deglutition not only to neighboring centers within the medulla oblongata, but also to distant centers in the lower part of the medulla spinalis.

The process which depresses or inhibits any tonic state within the central nervous system has to occur in the same elements in which the tonic state or reflex activity takes place, and that is, according to the prevailing view, in the nerve cells.

In other words, inhibition in the central organ means inhibition in the nerve cells. Now the character of the excitation in a nerve cell, even if it is the immediate cause of motion, has certainly nothing in common with motion as such, and is therefore simply excitation.

Central inhibition means therefore simply inhibition of the excitability within certain groups of nerve cells in the central nervous system.

Inhibition in Nerve Fibers.—This leads us to a consideration of another tissue in which excitability (and conductivity) are practically the only signs of life—I mean the nerve fibers. So far as I know, no experiments have ever been made with a sole view of ascertaining whether nerve fibers are capable of responding to stimulation by inhibition. There is, however, a well-known phenomenon which throws sufficient light on our question—it is the extensively studied phenomenon of electro-tonus. When a galvanic current is applied to a nerve it is found that there is an increase of excitability at the closing of the current around the kathode and at the opening of the current around the anode; and that there is a decrease of excitability and conductivity at the closing of the current around the anode and at the opening around the kathode. This decrease of excitability and conductivity in the nerve, due to stimulation by the anode, can mean nothing else but inhibition. We can therefore state the above in other words: the negative pole causes in the nerve, in the area of its application, excitation at the closing and inhibition at the opening of the current, and the positive pole causes inhibition at the closing and excitation at the opening of the galvanic current.

The excitation of nerve or muscle is accompanied by the appearance of an ingoing electric current —the negative variation. We have seen above that, according to Gaskell, the cardiac inhibition is accompanied by an opposite current—positive variation. The same was observed by Biederman to take place at the inhibition of the muscles of the claws of the crayfish. There are facts in the electrical phenomena involved in the electro-tonus which permit the interpretation that the inhibition in the nerves is also accompanied by the appearance of currents of the positive variety. We shall, however, not enter into a discussion of these intricate problems.

We should recall here that the phenomena of the electro-tonus are observable also in a curarized muscle, which shows us again that the muscle tissue itself is capable of responding to stimulation by inhibition.

We shall now consider briefly the occurrence of inhibition in the other perceptible phenomena of animal life, viz., secretion and sensation.

Inhibition of Secretion.—Secretion depends, to a great extent, upon the blood supply of the secreting gland. And as the supply depends upon the activity of the vasomotors controlling the blood vessels of each gland, when an inhibition of secretion takes place it is obviously difficult to prove that this is due to an inhibition of the process of secretion itself and not only to a decrease in the blood supply of this gland, owing to an increased activity of the local vasoconstrictors. The experimental proof is still more hampered by the fact that in many instances the vasoconstrictors and the inhibitory nerve fibers of secretion are both found to be in the same nerve-trunk, as an artificial stimulation applied to the inhibitory nerves stimulates simultaneously the vasoconstrictors of that gland. Nevertheless, reliable proofs have been brought forward for the presence of purely inhibitory fibers for secretion in many of the body glands. Pawlow and his pupils have established the existence of purely secretory and inhibitory nerve fibers for the secretion of the pancreas. The gastric secretion, too, apparently stands under the control of secretory and inhibitory nerves. Inhibitory effects have been observed upon the secretions of the sweat, lachrymal, milk glands, etc. Although not yet positively proven, it can be safely assumed that the cervical sympathetic nerve contains inhibitory nerve fibers for the secretion of the submaxillary gland. It is an interesting and instructive fact that the stimulation of the sympathetic is accompanied by a positive variation of the electric current in the submaxillary gland, a phenomenon which, as stated above, was found to accompany inhibition in muscles.

Inhibition of Sensation.—As to the experimental studies of the rôle of inhibition in the mechanism of sensation there is as yet not very much to report. For obvious reasons it is confined to observations made on human beings. Occasional observations have been made that the application of one stimulus diminishes the intensity of a sensation produced by another stimulus. Biting the teeth to stand a pain, scratching to relieve itching, hitting one part of the body to diminish a pain in the same or another part, and many similar instances probably belong to the chapter of inhibition of sensation. Recently the subject was studied methodically by Haymans. He states that stimuli of the same kind applied to different localities or stimuli of a different kind applied even to the same place inhibit one another according to certain proportions found by him in his extensive painstaking experiments. However, this part of psychology and physiology of the senses is still in its infancy, and I shall not discuss it here any further. I shall only say that the excitability and conductivity of nerve-fibers and nerve-cells which serve as elements for sensation are probably just as much subjected to inhibitory influences as are the excitability and conductivity of the nerves and cells which serve as elements, for instance, in reflex actions.

The Relations of Inhibition to Irritability.—The foregoing review of the facts concerning inhibition demonstrates conclusively the omnipresence of this phenomenon in the animal body. It is present in the phenomena of motion, secretion, and sensation; it is present in peripheral and central organs; it is present in nerve-cells, nerve-fibers, and in smooth and striated muscle tissue. It can be definitely stated that from all parts of the body from which by stimulation a certain vital activity can be brought out, an inhibition of this activity can also be brought out by stimulation. Later we shall discuss what conditions it depends on whether a stimulation is responded to by an excitation or by an inhibition.

Since Haller we speak of irritability as the chief characteristic of living tissues, and we understand by irritability the capacity of the tissue to respond to stimulation with one of the vital reactions. We formerly knew only one kind of reaction, and that was the activity of the vital tissues, therefore irritability, excitability and the specific activity of the tissues were all used synonymously. We know now that all irritable tissues can respond also with an inhibition of an existing vital activity. Inhibition, then, too, has the same extent as irritability. But, as inhibition and excitation are antagonistic phenomena, excitation certainly cannot be synonymous with irritability. These and other considerations lead me to formulate the following general biological law of irritability:

All living tissues are irritable, *i. e.* they respond to stimulation with a vital reaction. This reaction can be either the manifestations of their specific activity, and we shall henceforth term it excitation; or it can be an inhibition of an existing activity.

Rest a Function of Inhibition.—Hand in hand with the dominating conception that activity is the sole expression of irritability, and therefore the sole sign of life, goes implicitly the opinion that rest of a function is no vital part of it. A muscle, for instance, according to the current conception, is at rest because it is not stimulated. Rest is a sort of temporary death without stimulation and without any vital reaction. This view is derived from the every-day conception of the nature of rest in the physical world. A body does not move, it is believed, because there is no cause for such motion. However, even here it is an erroneous conception. What appears to the common mind as rest is, in reality, a resultant of two exactly adjusted opposing energies. The rest of the rock is simply a resultant of the gravity of masses of the rock, exactly opposed by the cohesive power of the masses under it. When both opposing energies are exactly even then the result is absolute rest. When there is a difference then there is a motion which is proportionate to this difference. This applies also to the antagonistic energies of excitation and inhibition. I claim that during the life of the normal animal rest is just such a vital manifestation as activity;* the difference between activity and rest consists only in the fact that excitation predominates during activity and inhibition predominates during rest. Between these two extremes there is a great variety of intermediary states, but they are all only resultants of the two antagonistic vital energies. All the living tissues are continually subjected to the effects of stimulation, which is continually going on in the living body. Certain conditions and mechanisms, which we shall speak of later, determine which of the forces and to what extent it shall respond to each stimulation. In other words, during the normal life of the animal each living tissue is continually stimulated, each and every phase of life is a vital process, and each and every state is a resultant of the two components of life.

As to the agents which keep up this continual stimulation of the living tissues, there is no lack of them around the body and within it—the continual stimulations of the senses by the changes in the surrounding atmospheric air, its temperature, pressure, and humidity, the stimulations of sound, light, the ever-present mechanical vibrations and other external factors; then the chemical changes within the tissues, the chemical and mechanical processes in the digestive canal, the electrical currents of the active organs, etc. I have repeatedly insisted in former papers on the value of the heartbeat as a mechanical stimulus to all parts of the body. Furthermore, we have to keep in mind that our knowledge of the value of the stimulus and its limitations is derived from laboratory experimentations, and that, however, nature can and does make extensive use also of such stimuli which in the artificial laboratory methods would be considered as subliminal and ineffective.

The Restricted Function of Irritability.—The views which I advocate here are, in the main, in accord with the theories of Hering, Gaskell, Biederman, and a few other physiologists. Hering and Gaskell, however, assumed further that excitation is identical with dissimilation or catabolism and inhibition is identical with assimilation or anabolism—that, for instance, the accelerator nerves control the catabolic processes and the vagi control the anabolic processes of the heart muscle. While it is, indeed, true that for instance with each contraction of the muscle some of its stored up material becomes transformed, dissimilated, and by inhibition of a contraction some of the material is saved, and the muscle therefore gains by rest, we have no reason, it seems to me, to go so far as to assume that inhibition is directly implicated in the process of anabolism, and still less that the inhibitory nerves control the entire process of anabolism. Neither is it absolutely necessary to assume that excitation of the muscle has anything to do with its contraction as such, or with the dissimilation of the material, and still less have we reason to claim that the motor nerves control the entire catabolism which, in all probability, takes place continually within the muscle. It seems to me that the great number of facts we know regarding excitation and inhibition of living tissues possessing different specific activities can be more satisfactorily explained by the assumption that excitation and inhibition concern themselves neither with the creation of the specific material of each tissue nor with the specific forms of the expenditures; but that the point of attack of the two components of irritability, which is common to all living tissues, is solely the mechanism of the conversion of the potential into kinetic energy. To illustrate this conception of the mechanism of irritability, I should compare it to a stop-cock in a tube coming from a reservoir which contains, let us say, illuminating gas.

When the stop-cock is so turned as to permit the gas to escape and the gas is lit, the reservoir loses gas which is burned up, dissimilated. But the turning of the stop-cock has nothing to do with the burning up, with the dissimilation, of the gas. Neither does the turning back, the closing of the stop-cock, which stops the escape of the gas have anything to do with the generation of the gas. The excitation caused by stimulation of the motor-nerve opens the stop-cock, it permits or facilitates the conversion of the potential energy into such kinetic energy which is specific to that organ, and that is contraction; inhibition turns back the stop-cock; it prevents the conversion, thus economizing the consumption of the potential energy of the muscle. But neither does the excitation have anything to do with the nature of the kinetic energy, nor does the inhibition have anything to do with the creation of the potential energy of the muscle. The tube bearing the stop-cock may be connected with a reservoir containing other materials than illuminating gas, the contents might be, for instance, steam, chloroform vapor or some other substances. The opening of the stop-cock in these cases might be the indirect means of producing heat or motion or anæsthesia or anything else. In all of these different cases the mechanism of the stop-cock might be exactly the same, but in none of them does the opening or closing of the stop-cock have anything to do with the generation of the materials within the reservoir, nor with the effects of these materials when permitted to escape through the tube. So the processes of the potential energies in the muscles, the glands, the nerve cells, or the nerve fibers are, probably, in each case of a different character. Of the kinetic energies of these tissues we know that they are of a different nature; it is contractility for the muscles, secretion for the gland cells, sensation for some of the nerve-cells and, possibly, conductivity for the nerve-fibers. The nature of the irritability, however, remains in all these different tissues the same, the excitation facilitates the conversion of the potential into the kinetic energy, and inhibition hinders this conversion. We have for the present no means of recognizing excitation or inhibition except indirectly, *i. e.* by the effects of the activities of the tissues, by the appearance or disappearance of the specific kinetic energies; hence the confusion of irritability with its effects.* (Possibly the appearance of the ingoing or outgoing electric currents —negative and positive variation—is, indeed, a phenomenon accompanying directly excitation and inhibition. It occurs in the same manner as the different activities of the different tissues. This theory would also explain the fact that when a muscle is stimulated the current appears at the beginning of the latent period and not coincident with the onset of the contraction.)

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*I do not, of course, speak here of such conditions of rest as paralysis, atrophy, etc.; they are due to some loss of vitality and do not belong to normal life.

The view which I have presented here does not preclude the possibility of the existence of trophic nerves. If they do exist, they too, as all nerves for other functions, will consist of exciting and inhibitory nerves. However, I am not discussing this question here. I only maintain that the nerves for excitation and inhibition have directly nothing to do with the processes of catabolism and anabolism. At the same time it is quite obvious that the inhibition of the expenditure of potential energy will have, indirectly, trophic influences. We can thus well understand why, after a prolonged standstill of the heart due to a stimulation of the vagus, the heart contracts more energetically for some time; the muscle has at its disposal a surplus of unexpended potential energy. On the other hand, unrestricted excitation with increased expenditure of potential energy, perhaps out of proportion to its normal production, ought to lead in the end to atrophic changes of the organs. We can thus explain the fatty degeneration of the heart observed to take place after section of the vagi as being due simply to overaction of the heart without recurring to the assumption that the vagus is the trophic nerve of the heart. Besides the larger expenditure of potential energy, the overaction leads to an overproduction and abnormal accumulation within the heart muscle of catabolic products which will assist in the disintegration of the muscle tissue.

The Relations of the Antagonistic Forces† to Stimulation.—Let us now examine the manner in which both antagonistic forces (or energies) respond to stimulation. Between the extreme conditions of activity and rest there are innumerable intermediary states, all of which we claim are resultants of simultaneous stimulations of excitation and inhibition. By what manner of stimulation is this great variety of states accomplished? Why are stimulations responded to at one time by an excitation, at another by an inhibition? If all stimuli would affect at all times and under all conditions both forces in exactly the same manner and to the same extent, it is obvious that stimulation could affect no perceptible change. It is, therefore, safe to assume that there is some difference in the way each responds to stimuli. The simplest solution of the problem would appear to be to assume that each force is affected only by a certain kind of stimuli. However, to my knowledge, there is as yet in the entire biology not a single fact which can with certainty be interpreted as indicating an absolute specific stimulation of either of the forces. On the contrary, wherever there is an occasion for either of the forces to be reached separately by a stimulus it is found that all known stimuli are effective for either force.

A study of the relations of inhibitory nerves to their antagonists in the small group of mechanisms in which both kinds of nerves are to be met with separately, throws light upon our question. I am now going to discuss these relations:

The vagus is the inhibitory and the accelerator is the motor nerve of the heart. Electric stimulation of one causes inhibition and of the other acceleration of the heart beat. When, however, vagus and accelerator are stimulated simultaneously with the same electric current we then observe during stimulation nearly only the inhibitory influence; this effect is only a trifle less than that which would have resulted if the vagus had been stimulated alone. We see here a stimulation of both antagonists producing an effect in favor of inhibition. The predominance of inhibition is so great that we could have been led to the belief of the absolute neglect or suppression of the excitation had it not been for the following very important circumstance. Vagus and accelerator differ in their after-effects. When the vagus alone is stimulated the inhibitory effect disappears very soon after discontinuation of the stimulation. If, however, the accelerator alone is stimulated, its effect lasts for quite a considerable time after the stimulation has been discontinued. Now, when both nerves are stimulated together, we see after the cessation of the stimulation the after-effect of the stimulation of the accelerator coming out in the same manner as if it had been stimulated alone. These facts are very important for us. Although the effect of inhibition is manifestly favored during stimulation, excitation is neither suppressed nor neglected, but is stimulated just as strongly as if there had been no inhibition; and its effect comes to the surface as soon as inhibition is removed. The difference in the length of the after-effects is here the means of the discovery of the presence and activity of one force during the predominence of its antagonist. By this method it was discovered that the vagus of some animals contains also some accelerator nerve fibers. There are other small differences between the antagonistic forces which can be and have been utilized for the same purpose—for instance, the difference in their relations to fatigue. The inhibitory nerve fibers become exhausted more easily and sooner than the accelerators. When, therefore, vagus and accelerator are stimulated together with a strong current for a long time we see the inhibition which sets in first, gradually changing to acceleration, owing to the exhausted condition of the vagus, while the accelerator still remains intact for some time.

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*The comparison with the stop-cock should only serve to bring out my chief contention that inhibition and excitation are not to be confounded with the generation of materials or their expenditure. I do not wish, however, to be understood to claim that the mechanism of excitation and inhibition is simply that of a stop-cock. While I shall not attempt to offer a theory as to the exact construction of this mechanism, I am sure it is not as simple as that of a stop-cock.

†Energy would here be probably a more correct designation than the often abused term of force. It seems to me, however, that energy, with the meaning attached to it here, is too technical a term to employ in a paper not written for physicists. But in employing the term force here in connection with vital processes, in order not to be misunderstood I wish to state explicitly that my views laid down here have nothing to do with the old or new forms of belief in vital forces.

Similar, but reverse, conditions exist between the antagonistic vasomotor nerves of the submaxillary gland. The sympathetic carries the vasoconstrictors and the chorda carries the vasodilators. Here excitation is the favored force during stimulation and inhibition has the long after-effect. When chorda and sympathetic are stimulated together constriction prevails during stimulation, but strong vasodilatation sets in after discontinuation of the stimulus as a result of the masked but undiminished simultaneous stimulation of the chorda. Furthermore, here the inhibitors—vasodilators—fatigue sooner than their antagonists. Another differential point between the cardiac as well as the vascular antagonists is the length of their latent period. But, again, in the vascular mechanism it is the inhibitory nerves, while in the cardiac mechanism it is the exciting nerves which have the longer latent period.

We learn from the laws governing these two pairs of antagonists that although the representatives of both forces are simultaneously stimulated by the same agent it is often practically the effect of only one force which is manifest during the stimulation, and that it is neither always inhibition nor always excitation which is more favored by the stimulus; and that no matter which of the forces shows its predominating effect during stimulation the activity of the antagonistic force is only masked, but is in no way destroyed or even impaired. Some differences in the properties and the behavior of both antagonists toward certain conditions serve to unmask the full activity of the less favored antagonist. We have learned some of these differences: the longer latent period, the longer after-effect, and the greater resistance to fatigue, none of which, however, are special properties of inhibition or excitation. We shall not omit to bring out the fact that during the simultaneous stimulation of the two antagonists, the visible effect, though apparently dominated by only one force, is nevertheless, in reality, a resultant of both forces, the influence of the opposing force, though comparatively small, can always be demonstrated.

We have also to bear in mind that our knowledge of the overshadowing influence of one force was obtained in artificial stimulations of both nerves. The conditions are apparently less extreme where normal impulses are concerned, as can be seen by the facts that an artificial stimulation of the chorda overwhelms the tonus of the sympathetic or an artificial stimulation of the accelerator overwhelms the normal tonus of the vagus.

The two pairs of antagonistic nerves, the relation of which we have just discussed, nearly exhaust the number of mechanisms of the body in which both antagonists can be found to exist in two separate nerve trunks. However, the extensive studies of the presence of the vasomotor antagonists in many of the nerve trunks of the body brought to light a number of other differences in the behavior of the antagonists which are of assistance in their recognition and separation when running together in the same nerve trunk. Here are some of these differences: When a nerve trunk is cut the vasodilators in it degenerate later and regenerate earlier than the vasoconstrictors. Vasodilators resist the influence of cold longer than the constrictors. Vasoconstrictors require for their stimulation stronger and more frequent electric shocks than the dilators, *i. e.* lighter or less frequent electric shocks might bring out the activity of the vasodilators alone. The maximum effect of stimulation is reached later and kept up longer than the stimulation of the dilators. These differences, too, like those mentioned above, are not simply stable relations between inhibition and excitation in general; they have their validity for the vasomotors alone, and have to be especially tested when any other function is studied.

The variability of such characteristics is strikingly demonstrated in the behavior of both antagonistic muscles of the claw of a crayfish toward the strength of the stimulus. Biederman found that a moderate stimulus inhibits the adductor and a strong one contracts it; while it is the reverse with the abductor: a moderate stimulus contracts it and a strong one inhibits it. The lighter stimulus favors inhibition in one and excitation in another muscle. These observations are very instructive. The moderate stimulus which inhibits the adductor excites at the same time the abductor. The stronger stimulus inhibits the abductor and excites the adductor. By this arrangement it is possible for the different stimuli to cause the contraction of the muscle without the interference of the antagonistic muscle. Here we see that the greater susceptibility to a stimulus is not a specific property of either of the antagonistic forces nor of the antagonistic muscles. It is simply a part of a complex mechanism to facilitate the proper working of a complex motion.

The same holds good for the other differences between the antagonistic nerves which we have recorded above. The predominence of the effect of one force during stimulation, the long after-effect, the long latent period, the resistance to fatigue, etc., are not peculiarities of inhibition or excitation, neither do they belong to one class of tissues or organs.

They are devices employed in all the mechanisms of the body for the purpose of properly accomplishing certain functions and their employment differs according to the necessities of each mechanism. Excitation and inhibition, probably, are in all normal tissues in a given animal the same, and both, probably, would respond in the same way to a stimulus of the same character and the same strength. However, on account of the necessity of its specific activities of various functions, in each case specific devices are attached, by virtue of which one force predominates during stimulation, the other after its discontinuation—one responds to a lighter stimulus or responds later or fatigues easier, etc. We may, therefore, say that the great variety of conditions and states met with in the animal body is due chiefly to the variety of the constructions of these devices, of which, probably, we do not yet know all.

Some years ago I tried to explain the self-regulation of respiration and heart beat on the principle of the predominence of one force during stimulation and of the other force after the discontinuation of stimulation. I shall not discuss this subject here.

Neither shall I attempt to discuss the applicability of our new point of view to many other well-known physiological facts. I wish, however, to discuss here the behavior of the skeletal muscles in the light of the relations set forth above. A skeletal muscle responds to a stimulus applied to the motor nerve or to the muscle itself with a rapid contraction and a rapid relaxation. We stated above that the muscle possesses inhibitory nerves and also that the muscle tissue itself can respond with inhibition. Why do we never notice the activity of the inhibitory forces? My answer is that the relations of the antagonistic forces within the motor nerve and the muscle are exactly the same as those which we have seen to exist in the vascular mechanism of the submaxillary gland, *i. e.* excitation predominates during the simultaneous stimulation, but inhibition possesses here a longer after-effect, which appears unrestrained after the cessation of the stimulation. In the muscle, too, the inhibitory force possesses a longer after-effect than the motor power; but during stimulation the motor force is the favored one. Therefore each stimulus causes a contraction, which, perhaps, would be even stronger if it were not for the moderating effect of the masked but present inhibition. As soon, however, as the stimulation is discontinued, the after-effect of inhibition, now unrestrained, causes the rapid relaxation of the muscle.

This represents the normal condition. We might, however, assume that there could be such an influence which would cause the stimulation to favor the inhibitory force and give the long after-effect to the excitation, then the conditions might be reversed and become similar to those of the cardiac mechanism, *i. e.* inhibition predominating during stimulation and contraction after the cessation of the stimulation, which means that the muscle would remain relaxed or even become more relaxed during stimulation, but would respond with a contraction at the discontinuation of the stimulation. Now to my mind this is, indeed, the condition which we observe to take place in the following experiments: When a muscle is stimulated with a strong galvanic current we see at the point of the anode no contraction, but we see a tetanus following after the opening of the current. This is the so-called Ritter's tetanus. I would explain it as follows: The anode stimulates excitation and inhibition, but it favors inhibition; therefore quiet reigns during stimulation, but at the interruption of the stimulus the unrestrained after-effect of the excitation causes the tetanus, which is here similar to the increase of the number of the heart beats after the discontinuation of the simultaneous stimulation of vagus and accelerator.

The second experiment I wish to quote was reported by Aklund. When the leg of a curarized frog was irrigated by a solution containing 0.5 per cent. of sodium chloride and 1 per cent. of sodium phosphate no movement of the leg took place during irrigation, but after the irrigation was discontinued a tetanus set in. I explain it as above. Sodium phosphate stimulates both, but favors inhibition; therefore, the rest during irrigation and tetanus after its discontinuation.

The Importance of Inhibition.—The importance of inhibition to the proper regulation of animal life is quite evident and needs no extended discussion. Many of the stimuli which keep up the activity of the body come from sources over which the animal body has no direct control, and the presence of inhibition is apparently indispensable for the regulation of the effects of these stimuli. If, for instance, the vascular system were controlled by the constrictors alone, they might often be affected by intense and lasting stimuli, which would cause complete and lasting constriction of the small arteries, thus producing anæmia and necrosis of the tissues. Furthermore, without muscular inhibition, the body might be permanently in an unendurably rigid state, or as Loeb puts it, if it were not for the inhibiting effect of the Ca- and K-ions, the Na-ions would turn all the muscles into pulsating hearts. However, besides its presence in each living tissue, inhibition is a wide-spread factor in the complicated activity of composite functions. Of this rôle of inhibition we have hitherto only spoken incidentally; it, however, deserves a special discussion. Many motor functions of the body depend for the proper discharge of their activity upon alternating contractions of antagonistic muscular parts—for instance, flexors and extensors, adductors and abductors, etc. Twenty years ago I suggested that the contractions of one group of muscles are probably accompanied by a simultaneous inhibition of the antagonistic group. I also pointed out that such a mechanism is actually present in the respiratory function. Each inspiration is accomplished by an inhibition of the expiratory and a contraction of the inspiratory muscles, while each expiration consists of an inhibition of the inspiratory and a contraction of some of the expiratory muscles. Furthermore, the nerve fibers for the inhibition of the inspiratory muscles and the contraction of the expiratory muscles are often carried in the same nerve trunk—for instance, the superior laryngeal, etc. Biederman further found the above-mentioned remarkable fact that in the stimulation of the nerves of the claw of the crayfish the strength of the stimuli which causes the contraction of the adductor causes also inhibition of its antagonist, and the strength which causes the inhibition of the adductor, causes the contraction of its antagonist. In other words, the same strength of a stimulus causes contraction of one muscle and inhibition of its antagonist. The recent experiments of Sherrington have brought many proofs for the correctness of the above-mentioned suggestion. He established, for instance, that the contractions of the internal rectus muscle of the eye are accompanied by an inhibition of the tonus of the external rectus muscle and *vice versa;* and that the contractions of the orbicularis palpebrarum are accompanied by an inhibition of the tonus of the antagonistic levator and *vice versa.* Furthermore, Sherrington and Hering have found that in the cortex the stimulation of the center for the contraction of one group of muscles—for instance, the flexors—causes simultaneously an inhibition of the antagonists, the extensors, etc. From the experiments of Biederman and of Sherrington can be learned, further, that the stimulation of the foot of a reflex animal while, for instance, in a state of flexion, will cause inhibition of the flexors and contraction of the extensors of the same leg, with, perhaps, an opposite effect in the other leg. Compression or contraction of one muscle—the flexor for instance—will cause inhibition of its antagonist. The arrangements for the proper execution of this "crossed innervation," as we may call it, are apparently located in the central organ in the cortex, as well as in subcortical centers or in the medulla. The inhibition of one part, for the purpose of assisting the proper activity of another part, is an essential mechanism in many functions of the body. We have seen it in the functions of locomotion, respiration, and the movements of the eyes and lids. We can recognize it also in the vascular system, inasmuch as the constriction of one vascular region is usually accompanied by a dilatation of the blood vessels of another region. The diastole of the ventricles during systole of the auricles is, perhaps, another instance of this mechanism. In the œsophagus we see inhibition running ahead of the peristaltic contraction; in the intestines each contraction is accompanied by an inhibition in the section below. I shall not burden you with many more instances.

"Crossed innervation" is certainly an important and widespread mechanism in a great many functions of the animal organism.

In considering the importance of inhibition, we have then to distinguish between its activity in the tissues and its activity in the organs. Regarding both, we may, however, formulate the following statement: the activity of an organ is a resultant of the excitation in one part and inhibition in the antagonistic part; the activity of a tissue is the resultant of excitation and inhibition in the same part.

THE RÔLE OF INHIBITION IN PATHOLOGICAL STATES OF LIFE.

Let us now turn to the rôle of inhibition in pathology. We have just seen that the entire life of the animal organism is a delicately adjusted equilibrium between excitation and inhibition. Can there be any doubt that this equilibrium is liable to be disturbed in many ways? There might be, in the first place, a congenital or acquired stationary or temporary deviation from the normal resultant in favor of one force or the other through the entire animal organism. All functions might show a greater or less tendency toward inhibition or toward excitation. The deviation might be due either to an increase or to a decrease of the value of one of the forces or even to a simultaneous increase of one and decrease of the other force; or the value of each force separately might be unaffected, but their mutual relations might be shifted in favor of one or the other force. Further, there might be a deviation only within a part of the functions of the body; or one part might deviate in one direction, while the other is deviated in the opposite direction. The same applies to deviations within a single organ or function. The equilibrium might be disturbed within one part of the organ or the disturbance might have reference to the "crossed innervation," the equilibrium between its antagonistic parts. Finally, the disturbance might be confined to one of the minor differences between the two forces—for instance, the latent period—the after-effect, the resistance to fatigue, the minimum stimulus, etc. The possibilities are very numerous, and I shall not attempt to enumerate them all and still less to illustrate them. In discussing the relations of inhibition to abnormal states I shall confine myself to a brief discussion of a few pathological pictures, which can be, I believe, profitably commented on from the new point of view which I have presented.

Cardiospasm.—I shall begin with a brief comment upon the condition now known under the term of cardiospasm, a subject in which I have some personal interest. Some fourteen years ago I described a case of dysphagia which I diagnosticated as cardiospasm. The diagnosis was then, as far as I know, quite new. We have now quite a considerable number of cases of that kind on record. The pathology of this disease, as I understand it, is as follows: The cardia is normally in a state of moderate tonic contraction. The tonus we now know is a resultant of simultaneous activity of motor and inhibitory nerves. The force of the normal tonus is adjusted by two opposing considerations. It has to be able to resist the force resulting from the contractions of the stomach in order to prevent the escape of the chyme from the stomach into the œsophagus; and it has to give way to the opposing force coming from the contraction of the lower end of the œsophagus in order to permit the entrance of the food into the stomach. A shifting of the resultant within the tonus in favor of the motor force will cause an obstruction which could not be overcome by the contraction of the œsophagus. That is what happens in cases of cardiospasm. The deviation from the normal need not be great—any deviation would be sufficient to neutralize the effect of the œsophageal contraction. In some cases, however, the shifting of the resultant in favor of the motor component is apparently considerable, as can be seen from the fact that such patients are unable to vomit, which means that even the strong inhibition of the tonus of the cardia which usually precedes each vomiting is unable to overcome this spasm. There are no primary anatomical changes in this form of dysphagia; in long standing cases a consecutive dilatation of the œsophagus is found at autopsy, which, however, does not involve the cardia. Here we have an instance in which a comparatively insignificant functional disturbance, due to a moderate deviation of the resultant in an insignificant mechanism, leads to very serious consequences to life.

Disturbances in the Biliary Passages.—In taking up now some of the disturbances in the flow of bile I shall have to discuss first the innervation of this mechanism. The secretion of bile within the liver goes on continually, but its discharge into the duodenum occurs only during the act of digestion, beginning about one hour after a meal. When the digestion is finished the bile flows from the hepatic through the cystic duct into the gall-bladder. What is it that turns the bile current away from the intestines towards the gall-bladder during rest? This question has hardly as yet been seriously discussed, not to say satisfactorily answered. Recent investigations by Doyon, however, have thrown a flood of light on the mechanism controlling the biliary paths. Stimulation of the peripheral end of the splanchnic nerve causes contraction of the gall-bladder and the relaxation of the circular muscle fibers within Vater's papilla, or Oddi's muscle; that means that the splanchnic nerve contains motor fibers for the gall-bladder and inhibitory fibers for the sphincter of the bile duct. The vagus, on the other hand, contains motor fibers for the sphincter and inhibitory fibers for the gall-bladder. At rest, the pair of fibers in the vagus is at work—that is, the sphincter of the bile duct is closed and the gall-bladder is inhibited, relaxed—the stream of bile therefore flows into the bladder. During digestion, however, this pair is set at rest and the pair of nerve fibers within the splanchnic nerve becomes active; that is the gall-bladder contracts and the sphincter of the bile duct is inhibited, relaxed; the current of the bile therefore is turned toward the intestines. We see here the same "crossed innervation" between the antagonistic parts of the same function as we have seen it exist between such antagonists as flexion and extension, expiration and inspiration, etc. We have here, still further, the complication that both nerves contain also crossed innervation in the centripetal direction. But this part of the mechanism we shall not discuss here, in order not to obscure our subject by too great complexity. The explanation of the mechanism is then this: one hour after a meal something takes place which causes a contraction of the gall-bladder, and inhibition of the sphincter of the bile duct, and the bile is then driven into the intestines. We shall add here that, according to Bruno, this something is the entrance of the digested food from the stomach into the duodenum which causes reflexly the activity of this part of the mechanism. It seems that only fats, peptons and albumoses are effective; but not acids, alkalis, etc. The proper activity of the mechanism depends upon the exact adjustment of the resultant of inhibition and excitation in each part as well as between the antagonistic parts.

In pathology of the biliary passages we speak almost exclusively of only one cause for the disturbance in the proper discharge of bile into the intestines, and that is the mechanical obstruction of the bile passages. This can be accomplished, it is stated, in two ways—by catarrhal swelling of the mucous membranes or by the presence of a foreign body within the duct, generally a biliary calculus. May we not expect also the occurrence of disturbances in the complicated and delicately adjusted nervous mechanism? Could it not happen here, as it often happens elsewhere in the functions of the body, that some part of the reflex mechanism becomes impaired? I believe that such disturbances do occur, indeed, but the occurrences are largely misinterpreted, owing partly to the lack of knowledge of the nervous mechanism and partly to our preferences for mechanical interpretations of phenomena. I shall now attempt to discuss some of these disturbances.

There are four different possibilities. It might happen: (1) That the sphincter remains contracted and the gall-bladder relaxed, even during digestion; (2) That the sphincter remains relaxed and the gall-bladder contracted even during rest; (3) That there might be a deviation of the resultant between excitation and inhibition in favor of excitation, and (4) That the deviation might be in favor of inhibition. Let us now consider, first, the first-mentioned disturbance, namely, that the sphincter remains contracted and the gall-bladder relaxed during digestion. This disturbance can be brought about by three different causes: (*a*) The activity of the center might for some reason be diminished and no impulses of sufficient strength would be sent through the nerve fibers of the splanchnic to the periphery during digestion; (*b*) The peripheral area of the duodenum, etc., from where normally the reflex takes place, might be less irritable and would not respond to the normal stimuli; (*c*) The stimuli might be abnormally weak and would be insufficient to bring out the reflex. In any case the gall-bladder and sphincter of the bile duct will remain during digestion in the same condition as they are during rest—that is, the sphincter will remain closed and the gall-bladder relaxed. The result will be that the continually secreted bile will accumulate more and more in the gall-bladder, will distend it far above normal until the natural resistance of its tissue will stem the further flow and cause a stasis of bile within the bile capillaries of the liver tissue. In short, a disturbance of the reflex mechanism which is normally instrumental in turning the flow of the bile into the intestines will be followed by all the consequences which we now know to follow a mechanical obstruction of the biliary passages, especially in catarrhal icterus. Do such nervous obstructions really occur? Many might be willing to admit that, for instance, the "emotional icterus," which is chiefly described by French writers, is of nervous origin, and might be caused by such a disturbance of the reflex mechanism as I have described here. However, I venture to go farther and claim that many of the cases which are diagnosticated as "catarrhal icterus" are in reality caused by a nervous obstruction. The proof for the assumption that an icterus and its allied symptoms are brought about by an obstructing catarrh of the biliary passages is usually seen in the fact that a gastric catarrh preceded for a few days the onset of the icterus. Let us suppose that this is, indeed, a reliable proof. But how about the cases in which a preceding gastric catarrh is missing? I have seen not a few cases in which an enlarged gall-bladder and enlarged liver, dull pains in the right hypochondrium and even in the epigastrium, finally icterus and acholic stools, etc., were present for some time before any reliable sign of a gastric catarrh made its appearance. Judging from my own experience, it would seem to me that the cases of icterus with a preceding distinct gastric catarrh do not form the majority of the so-called cases of catarrhal icterus.

However, I believe that even the presence of a preceding gastric catarrh is by no means a proof that the icterus was caused by a catarrh present in the bile duct. We have seen above that the reflex which causes the flow of the bile into the intestines during digestion is caused by entrance of normally digested food into the duodenum. Now, in some cases of gastric catarrh the chyme might reach the duodenum in an incomplete state of digestion, or the chyme might be enveloped by a layer of mucus, and thus not be in a position to stimulate the reflex mechanism efficiently. The failure of the bile to reach the duodenum might therefore also in these cases be due rather to a failure in the activity of the reflex mechanism than to a catarrh of the biliary passages.

These points deserve a serious consideration, the more so as the number of cases of pure catarrhal icterus which come to autopsy is comparatively small and the diagnosis of the presence of an unmistakable catarrh in the bile duct does not seem to be an easy matter and above doubt, even at the post-mortem, and the stagnation of bile within the duct from any cause whatsoever might produce an irritation and a reaction of the mucous membrane of the bile duct. I do not wish to be understood to mean by this that I deny the occurrence of an icterus of a purely catarrhal origin. I only suggest that disturbances in the nervous mechanism might produce conditions which might simulate exactly the so-called catarrhal icterus, and that therefore many of the latter cases, be they with or without gastric catarrh, might in reality be caused by the above-described disturbance of the nervous mechanism.

The theory I offer seems to me to be quite simple. During rest there is a mechanism in activity which causes a normal stagnation of the bile. During digestion a reflex is delicately stimulated, which sets another mechanism into activity for the discharge of the bile into the intestine. I suggest that sometimes the stimulus might be inadequate or the reflex less responsive. The result is that the mechanism acting during rest continues to work also during digestion, hence the pathological stagnation.

I shall now discuss briefly the above-mentioned third possibility of the functional disturbances of the nervous mechanism. It is the deviation of the resultant between excitation and inhibition in favor of the former. Through the influence of some pathological cause it may happen that the sphincter of the bile duct and the gall-bladder contract simultaneously. I believe that the foremost symptom which this disturbance could cause is colicky pain in the right hypochondrium. To explain my position I shall have to discuss briefly the mechanism of colic in general. The term colic is used chiefly, as we all know to designate the characteristic pains in the bowels. Nothnagel and some other writers believe that a strong single constriction of some part of the gut is the cause of this pain. It seems to me that a simple strong contraction of an empty part of the gut could never cause such severe pain as seen in colic. Even in normal peristalsis the intestines sometimes contract *ad maximum* without causing pain. I believe that colic occurs—chiefly, at any rate—when two places of the gut not far apart are strongly contracted simultaneously, especially when the lower contraction is more stationary, while the upper one progresses downward. The part of the gut which lies between the constrictions becomes distended by its gaseous contents to an extreme degree, hence the terrific pain. In the normal procedure of peristalsis, as has been shown by Bayliss and Starling, simultaneously with each contraction a relaxation of the adjacent lower part of the gut takes place so that the contents can pass downward easily. Relaxation and contraction are parts of one function and belong together, as, for instance, the inhibition of an extensor muscle belongs to the efficient contraction of the flexor. When the equilibrium is disturbed in such a manner as to favor excitation, two neighboring parts might contract simultaneously and the result would be colic. The same process takes place when the stomach is strongly bent on the expulsion of its contents into the duodenum and the pylorus remains firmly contracted; severe cardialgic pains are the result. And I believe that exactly similar conditions occur in the biliary passages: the gall-bladder contracts strongly while the constrictor of the bile duct is firmly contracted; the result is biliary colic. This is probably the mechanism in cases of nervous liver colic and neuralgia of the liver which has already been mentioned by old writers on diseases of the liver—Frerichs, for instance. The same can be said of the cases described as menstrual colic of the liver. By some reflex influence during menstruation the normal resultant in the mechanism of the biliary passages is deviated in favor of excitation, so that both antagonists are contracted and neither is inhibited. However, even some of the plain cases of gallstone colic in which no calculi could be detected might actually belong to this type of nervous colic. I remember a case of a woman with a history of gallstone colic who, after losing her only daughter, again started in with severe typical attacks of gallstone colic. The gall-bladder was palpable, the liver enlarged and painful, icterus was present and the stools were dry and acholic. Nevertheless her condition improved, not under a "Carlsbad-cure," but under valerian, bromides, etc.

Of the two other possible disturbances which I have mentioned above, one will probably prove to be of practical value and interest, namely, that the mechanism controlling the activity of the biliary passages during digestion continues to act also during rest, and that the flow of bile into the duodenum is a continuous one. I shall, however, not enter for the present into a discussion of these possibilities.

We have stated above that the deviation from the normal might be confined to a tissue and that the change might either affect inhibition or excitation, or it might be confined to minor points in the relations between the two forces. In the following I shall attempt briefly to apply these principles to a few obscure diseases in which chiefly the activity of the skeletal muscles are concerned.

Family Periodic Paralysis.—I shall discuss first that syndrome which is now termed family periodic paralysis. Thirty to forty cases are now on record in which persons otherwise healthy are periodically attacked with a temporary paralysis of nearly all the voluntary muscles of the body. The paralysis lasts from a few hours to a few days, onset and disappearance being comparatively abrupt. The most striking feature of this paralysis when complete is the total absence of indirect or direct irritability of the paralyzed muscles to mechanical or electrical stimulation, in the latter not even then when the needles are introduced directly in the muscle. There are many theories and some experiments as to the cause of this condition, but there has been hardly any discussion as to the nature of it. The comparison with the effects of curare is incorrect, as curare does not affect the direct irritability of the muscle. Dr. James J. Putnam, after a private conversation with myself, advanced the theory that the condition is a state of inhibition. I believe that this theory is correct. The muscles behave like the heart muscle when under the influence of a strong vagus stimulation. We have stated above that any condition of the normal muscle is a resultant of inhibition and excitation, and that normally the skeletal muscle responds to stimulation in the same manner as seen in the vascular mechanism of the submaxillary gland, namely, that excitation prevails during stimulation. We meet now in this disease a condition in which excitation and inhibition assume relations such as exist between the antagonistic nerves of the heart, that is, inhibition prevails during stimulation. The disease is a temporary extreme deviation of the normal resultant in favor of inhibition, just as a continued rigidity or spasm is a deviation in favor of excitation. This explanation of the nature of the disease does by no means make the search for its cause superfluous. On the contrary, the discovery of the cause of this disease might throw some light upon the fundamental question of the conditions which influence the phenomenon of inhibition. However, it seems to me that we need not search for toxins and the like as the cause of this pathological condition. Loeb's experiments on artificial parthenogenesis have taught us what profound effects can be produced by comparatively slight changes in the composition of the inorganic salts in a fluid. In our disease I am thinking of a temporary overproduction of the phosphates in the affected muscles. According to Biederman, potassium monophosphate abolishes the excitability of a muscle which can be re-established by washing it out with normal salt solution. There are in the tables given by J. K. Mitchell (Transactions of the Association of American Physicians, 1901) of the analysis of the urine of such patients some figures which might prove to be quite important. The urine voided soon after the paralysis passed off contained nearly three times as much phosphates as was found in the urine of this patient during the period of health. The phosphates found in the urine during the attack was about normal, and therefore the increase of the phosphates in the urine immediately after cessation of the disease can be accounted for only by an overproduction of the phosphates in the muscles. Future researches will have to clear up this important point.

Myasthenia Gravis.—A similar explanation might be offered for the Erb-Goldflam disease or myasthenia gravis pseudoparalytica. The disease consists in a paretic condition of the extrinsic muscles of the eye, of the muscles of the face, tongue, neck and often also of some muscles of the trunk and extremities. Some of the involuntary muscles are also involved. The disease fluctuates, but is usually fatal.

No anatomical lesion has been discovered in the cases. The excitability is only moderately diminished and that not in all cases. The main characteristic of the disease is the rapid exhaustion of the affected muscles in normal stimulation, as well as in stimulation by the faradic current. My interpretation of this functional disturbance is as follows: We have seen above that excitation and inhibition do not develop the maximum of their effect at the same time. In the vascular system, for instance, inhibition reaches its maximum effect much later. We might assume then that in the motor mechanism of the affected muscles in myasthenia gravis there is a moderate deviation from the normal in favor of inhibition, but that the latter after each new stimulation reaches its maximum effect quite slowly, but is then strong enough to overwhelm the excitation. On account of a greater participation of the component of inhibition in the general resultant, the muscular tone, even at rest, is distinctly diminished. After an extra stimulation, normal or artificial, excitation at first gets along fairly well. As soon, however, as the simultaneously stimulated inhibitory force reaches its maximum effect, excitation becomes subdued and the muscle appears to be fatigued.

Myotonia.—I shall now touch upon that functional disease termed myotonia or Thomsen's disease. The chief characteristics of this disease are as follows: Single voluntary contractions or single contractions caused by direct mechanical or electrical stimulation of the muscles continue for some time, twenty to thirty seconds or longer. In a continued series of contractions this impediment disappears very soon. The beginning of each single contraction seems to be slow and awkward. There seems to be some increase of the excitability of the muscles. No anatomical lesions were found in this disease. The changes reported to be found in the structure of the excised muscle fibers are, as Geo. W. Jacoby has shown, histological artefacts. The main characteristic of this malady I shall illustrate by the following striking feature: If such a patient be told to shut his eyes he will be unable to open them for some time. Now Sherrington has experimentally demonstrated that during the motor innervation of the levator, inhibitory impulses are sent to the orbicularis palpebrarum, either to relax it or to prevent its contraction. Therefore, it seems to me that if this patient be unable to open his eyes, though the levator be intact, this can only mean that the inhibitory impulses are not efficient enough to overcome the undisturbed long after-effect of the contraction of the orbicularis. The inhibition, however, is apparently not abolished, as there is no such impediment when opening and closing is continued for some time. My interpretation of this pathological phenomenon is as follows: There is in this disease only one deviation from the normal, and that is that the latent period for inhibition is considerably prolonged. In a normal muscle the inhibitory force might have the same latent period as the exciting force, and although it is in the main overwhelmed by the latter, the inhibitory force makes its presence felt in as much as it does not permit sub-minimum stimuli to cause a contraction. The latent period can be as long as twenty to thirty seconds, and even longer, as we know to be the case in the accelerator nerve and in the chorda. Such a long latent period will explain, in the first place, the prolongation of each contraction. We have stated above that the rapid relaxation of a muscle is due to the after-effect of inhibition. But in our case the excitation comes to an end long before the inhibition reaches its active state, hence the prolonged contraction. However, in a series of rapid alternating contractions the prolonged after-effect of inhibition from the first contraction is still present, while the second excitation passes off, therefore the rapid relaxation and the disappearance of the impediment when the work is continued. The length of the latent period has its drawback only in a single movement. Furthermore, the entire absence of inhibition at the beginning of a stimulation favors the effect of sub-minimum stimuli, therefore the increased excitability.

Finally, on account of the entire absence of inhibition during the beginning of the contraction, the antagonists are not inhibited, and therefore participate to a degree in the contraction of the chief muscle, which makes the latter somewhat slow and awkward.

Inhibition in Myxœdema and Graves' Disease.—I shall now discuss the relations of myxœdema and Graves' disease to the disturbances of the normal equilibrium between excitation and inhibition. It was stated above that one of the more striking disturbances of the equilibrium would be the deviation of the normal resultant in favor of inhibition or excitation, in all or most of the functions of the body. I am of the opinion that the diseases just mentioned present such deviations: myxœdema, with its outer relaxation, presents a deviation in favor of inhibition; and Graves' disease, with its restless activity, presents a deviation in favor of excitation. I do not mean to say that the deviations in one or the other are in each and every function of a considerable degree; it might be minute in one and extensive in another; some functions might not participate in the deviation at all, or might even have a deviation in the opposite direction. The general result, however, is a more or less pronounced deviation in one direction, either in favor of inhibition or excitation. I might add that greater predominence of one force is not necessarily brought about by an increase of the influences favoring that force; it might be due also to a decrease of the influences favoring the antagonistic force. We shall now attempt to discuss briefly some features of each disease in their relations to these forces:

In myxœdema the heart beats are less in number than normally, which is due to cardiac inhibition. The movements of the bowels are usually retarded—due probably to the inhibitory effect of the splanchnic nerves. The secretions of the sweat and lachrymal glands are inhibited. Reflex irritability, muscular excitability, power of perception, etc., are diminished. Muscular contractions are slow, perhaps, through inhibitory influences. The temperature of the body is lower than normal—perhaps through the action of the supposed inhibitory heat centers. All the muscles of the body seem to lack tonicity. The absence of any expression of the face is due to the entire lack of tonicity of the facial muscles; the presense of myxœdematous tissue could not abolish all expression, as there is no lack of it in very fat faces. The drooping of the upper lids is due to an inhibition of the normal tonus of the levators in addition to the presence of the myxœdematous tissue. The abundant formation of the myxœdematous tissue means pathological anabolism, which in itself means diminished activity or increased inhibition. While one or the other symptom of myxœdema might be interpreted in some other way, there can be no doubt, it seems to me, that there is in this disease a more or less distinct deviation in favor of inhibition in most of the functions of the body.

The reverse we observe in Graves' disease. The heart beats are considerably increased in number, due to the absence of the inhibitory tonus and, probably, also to a special excitation of the accelerator nerves. Diarrhœa is of frequent occurrence in this disease, some say owing to a greater secretion of the intestinal glands, but this might be assisted by a more active peristalsis of the gut, due to the diminished inhibitory influences. There is a greater activity of the sweat and lachrymal glands. Reflexes, muscular excitability, power of perception, mental activity are all increased. The intentional tremor I interpret in the following way: We know

now that with each voluntary contraction of a certain muscle, inhibitory impulses are sent to the antagonists, or to the undesirable synergists, to avoid their hindering by simultaneous contraction. When these inhibitory impulses are diminished and inefficient, irradiating impulses manage to reach these meddling muscles, hence the tremor. Intentional tremor means, therefore, also diminished inhibition. Stellwag's symptom, *i. e.* the greater width of the palpebral fissure and the diminished blinking, is due to an increase of the normal tonus of the levator. From Sherrington's studies upon the palpebral muscles and the extrinsic muscles of the eyes, we are justified in assuming that the descent of the upper eyelid during the turning of the eye downward, is due to an inhibition of the tonus of the levator, cortically connected with the contractions of the superior oblique and inferior rectus. Accordingly Von Graefe's symptom can mean only that the accompanying inhibition of the levator is diminished and therefore does not follow the downward movement of the eye to its normal extent. Even Moebius' symptom, that is the difficulty which is met with in accommodating for a near object, can be properly interpreted by the assumption that the inhibition of the tonus of both external recti is diminished; the internal recti have therefore a greater obstacle to overcome. Even for the exophthalmos itself, Stromeyer's opinion seems to me to merit consideration, namely, that it is produced by a simultaneous increase of the tonus of the superior and inferior obliques, which in themselves could pull the eye forward. Finally, the loss of flesh and increased catabolism observed in Graves' disease is certainly due to an increased excitation. I believe that a further study of this disease will bring out many more points tending to support the view that it presents in general a deviation in favor of excitation by diminished inhibitory influences at some points, and increased excitability at other points of the body. There is, however, in Graves' disease the activity of one function which makes the impression rather of an increased inhibition; it is the behavior of the vascular system. I shall not speak of the exophthalmos, which is taken by many to be a result of vasodilatation, as this is not proved and the symptom can be interpreted in another way. The same argument applies to the strong pulsations of some of the large arteries. But there are two symptoms which indicate clearly that the small arteries of the skin dilate with greater readiness than normal; these are the so-called tâche cérébrale and the ever present readiness to blush. And that means that in Graves' disease the vaso-inhibitors of the skin are more favored than in the normal body. There are two possible explanations of this phenomenon. One is that it is simply a fact that in the vascular system inhibition is favored, perhaps through the rapid beating of the heart, and the increased activity of the thyroid, which, according to Von Cyon, has a special relation to the depressor nerves. The second explanation is that the vasodilatation is confined to the skin, is only local and represents a collateral compensation of a constriction taking place in a much more extensive vascular area. We know that the largest portion of the blood is and certainly can be contained in the vessels of the abdominal viscera. When a constriction of the entire splanchnic region takes place the vascular system possesses an arrangement by means of which other vessels become dilated to accommodate the blood which was driven out, and to relieve the vascular system from too high a pressure. It is possible that in Graves' disease the great vascular region controlled by the splanchnic nerves possesses, indeed a tendency to constriction greater than normal, which would be in harmony with all other manifestations, and, hence, the greater tendency of smaller collateral areas toward dilatation. The latter explanation seems to me to be the probable one. The strong pulsation of the abdominal aorta which we meet with in Graves' disease will occur rather, as I believe, when there is a resistance offered to the outflow of a moderate quantity of blood which the rapidly beating heart is capable of throwing into the aorta, than when the blood finds an easy outflow into a wide open bed. Besides, with a rapidly beating heart and the accumulation of the largest portion of the blood in the dilated splanchnic area the patient could hardly exist very long, and will certainly show neither too much blood nor too much pressure in the peripheral regions. I believe, therefore, that the tonus of the vasomotor center which controls chiefly the splanchnic region, is in Graves' disease in conformity with all other functions increased, and the vasodilatation which is observed in the skin is only of the nature of a collateral compensation.

As to the activity of the thyroid it is obvious that it has specific relations to both diseases, and ought therefore to have specific relations to inhibition and excitation. I shall, however, not enter into a discussion of the intricate problems in this paper.

Before I finish I shall touch upon one practical point. The purposeful studies of the relations between excitation and inhibition will lead to the recognition of conditions and substances which are capable of influencing these forces and their mutual relations. This knowledge will ultimately help us in our struggle to meet the deviations. In the course of this paper the inhibitory influence of phosphates upon the excitability of the muscle was referred to several times. Everyone who had occasion to treat Graves' disease systematically with sodium phosphate has probably seen, like myself, its undoubtedly favorable effect upon the disease. The tremor improves first. I seriously believe that there is some sort of specific relation between sodium phosphate and inhibition, at least in the muscle tissue.

THE MERITS OF THE VARIOUS INCISIONS FOR APPENDICITIS.

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The merits of any incision for appendicitis must be determined by the condition which it is proposed to relieve. I employ but two: the "gridiron" or McBurney incision, and the "clean-cut" through all the tissues from the skin into the peritoneal cavity.

The former should be selected when the conditions justify. As I practise it: A cut through the skin, at least three and oftentimes four inches in length, is made, and this, while parallel with the linea semilunaris, is made nearer the iliac spine, so that immediately beneath the cut through the skin the transverse fibers of the internal oblique and the transversalis muscles may be encountered. If the incision is made over the linea semilunaris, the separation of the muscular bundles will not give sufficient room, necessitating the division of this fascia, which, in my opinion, should be avoided when possible. When the external oblique aponeurosis is reached it is split in the direction of its fibers, and the edges held apart with retractors. With two dissecting forceps the muscular bundles of the internal oblique and transversalis are next separated down to the peritoneum, and these are strongly retracted with dull instruments. The peritoneum is now in sight and may be incised in any direction, preferably in the direction of the incision through the skin.

This peritoneal incision should be about one inch in length. An opening of this size permits the introduction of one or two fingers, enables the operator to feel and detach, by breaking up any adhesions, and to bring the appendix and a very small portion of the cæcum through the opening into the wound, where it can be easily held until the mesoappendix is tied off and the organ itself tied with a silk ligature about one-quarter of an inch from the cæcum, and then removed.

I prefer the silk ligature to any other method of treating the stump. I have used it in all of my operations except one, and have no reason to regret using it in any instance. The funnel-shaped stump left beyond the ligature is thoroughly swabbed with pure carbolic acid.

I use a running catgut suture for the peritoneal wound, and loose kangaroo tendon sutures for reapproximating the separated muscular bundles of the transversalis and internal oblique; interrupted kangaroo tendon for the external oblique fascia, and silkworm-gut sutures for the skin, which completes the technique.

This incision should be used in all "clean" cases, in those operated upon in the period of quiescence, and in others when the inflammatory and septic processes are limited either within the lumen of the appendix or immediately about its walls, and when there is no more than a limited local peritonitis. When there is a well-marked abscess, and the septic process has gone far enough to wall off from the peritoneal cavity the diseased organ, and the pus which is around it, I do not approve of attempting an enucleation of the diseased organ and the abscess wall formed by adhesions through such a narrow incision. It is safer to enlarge the opening and have a free field for operation rather than run the very considerable risk of spreading the sepsis and causing general peritonitis.

An incision shorter than three inches, except in cases of well-marked abscess, is not advisable. In this condition it is best to simply incise and puncture and drain the abscess, and an incision one inch, or one inch and a half long, may suffice in these simpler cases, for the operation simply resolves itself into opening an abscess in which, after the skin is incised, there remains nothing but the separation of the muscular fibers, after the McBurney method, and puncture of the peritoneum adherent to the abscess wall.

When such a condition of sepsis prevails as to require a careful operation to prevent widespread infection and peritonitis, I prefer the "clean" incision through everything from the skin, and including the peritoneum. When this is to be made it should be situated over and parallel with the linea semilunaris, in order to avoid cutting the transversalis and internal oblique muscles through their fibers, which retract and leave a weak line of union. It is safer to cut through the muscular aponeurosis which forms the linea semilunaris.

In this operation the peritoneum is sutured with catgut, the aponeurosis of the semilunaris with kangaroo tendon, and the skin incision with silkworm gut, or with a single row of sutures of this last-named material, which include the skin with the aponeurosis.

I wish to call attention to an error in technique which I have observed in reapproximating the separated muscular fibers of the internal oblique and transversalis in which the kangaroo tendon sutures were tied so tightly that the vitality of the muscle was destroyed.

When the "gridiron" incision is used it may not be necessary to keep a patient in bed as long as when the "through-and-through" incision is employed, but, since it takes five or six weeks for the new connective tissue bundles to become fibrillated and fairly well hardened, it has always seemed a wise conservatism to keep these patients in bed in the recumbent posture, in order to give the abdominal muscles as complete rest as is possible, and thus secure a union which is more apt to prevent ventral hernia than if they are allowed to sit up in bed or stand up or move about the room within three or four weeks after operation.

I require my patients to remain in bed six weeks after the "through-and-through" incision, and not even to sit up. Since I have carried this practice into effect I have not had a single case of ventral hernia following even, in some instances, extensive incisions. All the accidents of this nature that I have ever witnessed have resulted from permitting patients to get out of bed or sit up and move about at an earlier period.

REPORT OF A CASE OF CÆSARIAN SECTION FOLLOWED BY HYSTERECTOMY FOR IMPACTED CERVICAL FIBROID AND PROLAPSE OF GANGRENOUS UMBILICAL CORD IN A SEPTIC WOMAN; RECOVERY.*

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I BELIEVE that the case which I have to report presents a number of interesting and somewhat unusual features.

P. G., a married Italian woman, forty years old, had given birth to three children without difficulty and was now in labor with her fourth child. During three days a midwife had been in attendance, but, as there was no progress, Dr. E. G. Tuffs was sent for on April 12, 1902. He found a prolapsed umbilical cord and sent for Dr. H. B. Jones to assist him. Under chloroform anæsthesia, an attempt was made to reduce the cord and dilate the cervix. A hard mass seemed to block the pelvis, almost completely rendering all efforts at dilatation futile. I was then invited by Dr. Tuffs to visit the patient.

On placing the patient on the table the funis was found to be in a gangrenous condition and protruded a distance of six or eight inches from the vulva. On introducing the examining fingers the pelvis was found to be filled up with a rounded hard mass attached to the posteria cervical lip and practically filling the lumen of the bony pelvis. High up, anteriorly, the os cervicis was discovered as a slit wedged against the symphysis pubis. It was open a distance of several inches transversely, but, anteroposteriorly, barely permitted the passage of the two examining fingers. High up the fetal head could just be reached. The patient's temperature was 103° F and pulse 130. Delivery through the natural passages, even with the aid of craniotomy, was out of the question, and, although the child was known to be dead and the mother's chances of recovery after any form of intervention were very slim, I suggested immediate transferral to the hospital, with the object of performing a rapid Cæsarian section with removal of the dead fœtus and drainage of the uterus per vaginam. Under the desperate circumstances we intended to leave the tumor for subsequent consideration. The cord was replaced in the vagina and kept there with a gauze packing.

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* Specimen and report presented at a meeting of the Bellevue Alumni Association, May 7, 1902.

Within an hour the patient was in the operating room at Beth-Israel Hospital. With Dr. Goldstein as my chief assistant and in the presence of Drs. Tuffs, Jones, Ghertler, Friedman and the house-staff. I made the usual longitudinal incision through the abdominal wall. A rubber tube was passed low down surrounding the uterus below the level of the tumor. As the uterus was drawn out of the abdominal cavity a large portion of the inflated intestine escaped and caused considerable annoyance before it could be replaced and kept back with sterilized towels. The uterine wall was incised in the median line longitudinally and the membranes ruptured. A most offensive odor greeted our nostrils. The decomposing fœtus and gangrenous cord were extracted and the latter divided between clamps. The placenta, with its adherent membranes, was next removed. The patient's pulse not being any worse under the anæsthetic, it was decided, after thoroughly washing out the uterine interior with pitcherfuls of sterilized hot water, to remove the septic uterus at the same sitting. This was done in the usual manner, catgut being used to secure the vessels, and, after draining with gauze per vaginam and leaving a small strip at the lower angle of the abdominal incision, the wound was closed with wormgut sutures embracing all the layers of the thin abdominal wall. This was done contrary to my usual practice of suturing the abdominal wall in three layers, because the operation had occupied somewhat more than an hour and I wished to spare the patient any additional shock.

Under the untiring efforts of Dr. Rabinowitch, the house surgeon, and of Dr. Goldstein, the house physician, the patient next day was in better condition than at the time of operation. Her temperature dropped to 101° F. During the next few days her bowels reacted after various cathartics and rectal enemata had been tried. She began to retain nourishment and temperature dropped to the normal. Everything pointed toward an uneventful recovery.

Excepting a certain irritability when given her food and medicines, we thought, from the little communication which we had with her in her native language, that she was in a normal mental condition. The nurse reported, however, that at times she seemed to be picking at the dressings.

On the ninth day pulse and temperature were normal. The dressings and sutures were removed and the wound was found to have healed by primary union. The patient, however, seemed to be unduly irritable and kept on muttering things which we could not understand. During the night she picked a good deal at the dressing and, in the absence of the nurse, jumped out of bed, evidently in a moment of mental aberration. This was only reported to Dr. Rabinowitch on the following morning. Examining the dressings he found them soiled and, on their removal, the wound was found to be gaping with eventration of some of the bowel. He very properly put the woman at once under anæsthesia, replaced the bowel, and sewed the wound with the first suture material at hand, which happened to be chromicized gut. For several days the patient was in a septic state with elevated temperature and dry, brownish-coated tongue. She gradually emerged from this state and, about the fourteenth day from the time of the first operation, she was practically out of all danger. She is still in the hospital (at the end of three weeks), because the skin incision gave way again and will require, very probably, some secondary sutures or healing by granulation. (Two weeks later the patient was almost in condition to be discharged.)

To me the features of interest in the case were the following:

1. The fact that the woman had spontaneously given birth to three living children, although the tumor must have been of some years' growth.

2. The recovery of the mother after cord and uterine contents had undergone decomposition with resulting maternal sepsis.

3. The mental derangement which showed itself about the ninth day and was evidently the direct result of the operation.

4. The escape of the intestines for several hours after the spontaneous reopening of the wound, without fatally influencing the progress of the case.

5. The desirability in sepsis preceding delivery (in cases requiring Cæsarian section) of immediately combining abdominal hysterectomy with Cæsarian section. The risk of additional shock is fully met by the advantage of removing from the woman's system the infected uterus. I have, in similar cases, known women to die of subsequent septicæmia after the uterus had been emptied through the natural passages. Hence, sepsis preceding delivery offers to me a strong indication for the removal of the uterus either at the time of delivery or shortly afterwards if the septicæmia does not rapidly abate.

112 East Sixty-first Street.

EXTERNAL SPEECH-PHYSIOLOGY, OR SO-CALLED LIP-READING.

By CORA D. GORTON,
NEW YORK.

As external speech-physiology may now be placed in the category of descriptive sciences, and as the art of lip-reading has been so systematized as to be acquired in a relatively short space of time, aurists and general practitioners are seeking enlightenment upon the subject, in order that they may understandingly advise with such of their patients who, being afflicted with defective hearing, may be benefited by a knowledge of the art of reading the lips.

This being so, it is my purpose to here set forth, briefly, some of the principles underlying the science, and to indicate how these principles may be applied.

While the present agitation of the subject may lead many to believe that this science is of somewhat recent origin, in reality it originated hundreds of years ago in foreign countries, but only within the last few years has it been reduced to an art by systematizing and arranging it upon scientific and phonetic principles.

The positions and actions of the organs of speech produced by the muscular activities of the mouth of a speaking person are most pronounced, and the eye is trained to read this rapidly-changing display of features automatically and correctly.

Every motion of the lips stands for something to the person who knows what to watch for and how to interpret it. One grows to note, unconsciously, every mark of facial expression. Through experience it becomes no tax upon the memory.

Faces differ in strength of expression, some speakers presenting an almost entirely blank one, yet there *are* aids to be found, even with that most serious of impediments—the heavily-moustached mouth. Even under a short course of discipline the sight becomes unusually acute, and results, at times, are marvelous, the proficient reader often passing among strangers as an intelligent hearing person.

The vowel letters, a, e, i, o, u, according to the phonetic method, are presented to the pupil first, as they are *fixed* shapes with open apertures of the mouth, and have in speech longer duration than the consonants, thus showing stronger movements. These letters are used in the formation of all words, consequently, they form the life of speech.

The vowel sounds of words are unchangeable, while those of the consonants have transitional shapes, with closing and opening movements of the organs. The consonants are the initial and final elements used with vowels.

The number of syllables in a word uniformly corresponds to the vowels it contains. (The diphthongs, ei, eu, etc., are read as single sounds.)

In the word Ohio, for instance, containing three vowel letters, there are manifested three distinct syllables. In valetudinarian, where seven vowels are employed, a corresponding number of syllables may be noted.

Monosyllables are more difficult to read than many-syllabled words, as are single words than sentences. Context soon becomes an invaluable aid.

The characteristics of the vowel letters externally manifested are: (1) Changes in the form of the mouth; (2) The position of the lower jaw; (3) The movements of the cheek surface.

Each vowel letter has two or more changes; "A" has the greatest variety of sounds, and, according to my experience as an instructor of the art, the most important ones to be read from the lips are the long, short, Italian, and broad sounds.

Experiment before a mirror, if the reader chooses, with the following words, representing in order the four sounds mentioned, and you may form an idea of the distinctions as produced by the mouth in speaking them: fāmous, long a; fămished, short a; färmer, Italian a; fa̤lter, broad a. At all times the sounds are to be considered rather than the letters represented. To the skilled reader whole sentences appear as one long word, for he is taught to take it from the lips as a whole rather than to analyze it into its constituent parts. Not all words need necessarily be recognized in a sentence, nor are they to be read in detached form as before intimated.

During the elementary drill upon the vowel letters or sounds, the consonants are mastered also, as it is impossible to present the one in practice without the other. Conversation is made use of from the beginning, simple sentences slowly given at first, but leading gradually to the more difficult and complex, with rapidly pronounced words and profile views. In the formal drilling upon important sounds repetition is the surest aid to remembrance. Every sound that becomes familiar to the eye of the speech-reader becomes a key to every other word in which the same occurs. In this connection much attention is given to the systematic drill upon prefixes, suffixes, and all terminals which occur frequently in language.

One of the satisfactory methods for testing the reading, understanding, and general improvement of pupils is to address imaginary people in remote parts of the room, speaking naturally and at length, presenting, the profile and three-quarter views. Pupils thus learn to read the movements of the lips without the aid of the full-face expression.

Another beneficial and interesting diversion is to read to the pupil some short poem, or a paragraph from a newspaper, and have the same reproduced by questions from the teacher, or given in substance by the pupil. This process insures interest, for it is an important feature of the work to make, so far as is possible, all lessons interesting, and to demonstrate a gradual progress.

Exaggeration of the movements of the organs of speech in teaching lip-language to people who are merely deaf is to be deplored, as the pupil is thus hindered rather than helped to read the lips of strangers.

Pupils of ordinary ability will show marked improvement in the course of a few lessons, and frequently, after a few months of regular work, will become good readers. Great skill comes with practice, which must be constant and practical, such as one gets in daily intercourse with one's family and associates.

Experience proves that age, as a rule, makes but little difference in the acquirement of a knowledge of lip-reading. With a fair degree of intelligence, the art may be mastered at almost any age in life.

When one considers how deaf people are handicapped in all the walks of life, how hindered in business and social advancement, how the defect destroys ambition, and often leads to melancholia, the importance of a system which will reduce the evil influences of the affliction cannot be overestimated.

68 West Forty-ninth Street.

A NEW METHOD OF OPERATING FOR OBSTINATE CASES OF RECTOVAGINAL FISTULÆ.

By HIRAM N. VINEBERG, M.D.

ADJUNCT GYNECOLOGIST TO MT. SINAI HOSPITAL; ATTENDING GYNECOLOGIST TO ST. MARK'S HOSPITAL, ETC.

The method to which I wish to draw attention is one which I carried out in a case operated upon at St. Mark's Hospital on May 18, 1900:

The patient had had a small fistulæ, as a result of a rectovaginal abscess. The vaginal opening, which was quite small, was just within the posterior commissure; the rectal opening, which was much larger, was about an inch from the anal border. She was a very stout woman and did not present a good subject for plastic surgery. She had been operated upon by one of our best known gynecologists without success. My first operation upon her, which consisted of the usual method of splitting the sphincter, denuding the edges of the fistula and suturing this separately, was a total failure; in fact, the fistula was left larger than before. It then occurred to me to excise the rectal mucosa to a point beyond the fistula, draw down the mucosa and suture it to the skin as in a Whitehead operation for hemorrhoids. This I, accordingly, did, and excised about an inch and a half of the rectal mucosa. I then dissected the rectal mucous membrane for fully an inch beyond the cut border, so as be able to bring it down to the cutaneous border of the anus without undue traction. The mucosa was then sutured to the skin by a number of catgut sutures and with a couple of deep silkworm-gut sutures. The patient made a good recovery, having primary union throughout, and has been perfectly free from any rectal symptoms since.

I believe an important feature in the success of the method lies in the free dissection of the rectal mucous membrane beyond the excised portion, so as to be able to attach it to the cutaneous margin of the anus without any tension. The ill results at times following the Whitehead operation, in my opinion, are frequently due to the failure on the part of the operator to carry out this technic. The mucous membrane of the lower part of the rectum is, as we all know, very soft and friable, and if there be the slightest tension the sutures cut out. The result is that the mucous membrane retracts, leaving a large raw surface between it and the cutaneous border. Even when this surface does not suppurate it is very slow in healing and is likely to be followed by a marked stenosis.

I have not had an opportunity to put this method into practice since then, as, in my opinion, it ought not to be resorted to excepting for rebellious cases that have failed to be cured by the typical methods. When I carried out the procedure, as far as I knew, it was original with me. Before publishing it, however, as an original method it was my intention to look up the literature to ascertain if some one else had not already resorted to a similar procedure.

I put off doing so from time to time, with the proverbial result of procrastination. But at a recent meeting of the New York Obstetrical Society (January 14, 1902), Dr. A. P. Dudley described what he designated as "Dudley's operation for rectovaginal fistula." The method, as he described it, was based on exactly the same principles as that which I had carried out in my case. He operated upon his case in July, 1901, in the Mary Hitchcock Hospital, Burlington, Vt., fourteen months after I performed my operation.

The only difference between his case and mine is that the fistula in his case was situated higher up, and he resected, as he stated, about three inches of the rectal mucous wall. His case was complicated by hemorrhoids, which he first excised according to the Whitehead method. He then excised the rectal mucosa higher up, that embracing the fistulous opening, and sutured the upper end of the mucous wall to the anal cutaneous border.

I was now determined to carry out, without further delay, my intention of searching the literature upon the subject. I found that Dr. Paul Ségond had already performed the operation in 1895, and described it in "Annales de Gynecologie et d'Obstetrique," Vol. XLIV, 1895. In Ségond's case the fistula was larger and situated higher up in the rectum than in Dudley's case. The operation was done without incising the perineum, and proved to be a complete success. To Dr. Paul Ségond, therefore, belongs the credit of priority, although Dr. A. P. Dudley and myself devised the operation independently of him and of each other. It appears to me an appropriate name for the operation would be "The Cure of Rectovaginal Fistula by Excision."

751 MADISON AVENUE.

Pain in the Diagnosis of Digestive Diseases.—S. P. Scherer (*The Medical and Surgical Monitor*, March, 1902) says: In hyperchlorhydria there is pain from two to four hours after meals, burning and gnawing in character; passes away when stomach is empty, is relieved by alkaline medication or albumen food, aggravated by acid fruits, smoking, anxiety, etc.

In ulcer pain comes on when food is taken into the stomach; tender point over seat of ulcer and to the left of the twelfth dorsal vertebra. Not so severe when stomach is empty, relieved by orthoform, 10 per cent. sol. Pure gelatin should be given every hour for protection to mucosa.

Pain in hypersecretion is paroxysmal, greatest at height of digestion, aggravated by slowly digesting foods. Pylorus is the seat of greatest pain and tenderness, frequently confounded with gallstone colic; relieved immediately by lavage, tablespoonful of hot linseed oil is beneficial an hour before meals, to protect irritable pyloric orifice.

Pain in myasthenia gastrica is not severe unless associated with hypersecretion. More of a full, heavy feeling, increased by eating or drinking, splashing sound well marked soon after eating or drinking. Stomach feels well when empty. Give mechanical support to abdominal walls, food finely macerated, not over 45 oz. liquid in twenty-four hours, intragastric faradic currents.

Pain in cancer is constant or paroxysmal, influenced by the pathological condition; more severe when stomach is full of stagnating food. Sharp lancinating in character, may follow around the course of intercostal nerves; patient constantly aware of some serious disturbance, rapid emaciation; relieved temporarily by opiates.

In hyperasthenic gastritis-pain and tenderness are over entire stomach, aggravated by foods and stimulants, relieved when stomach is empty, aggravated by overexertion and excitement. Indications: lavage with one-half of one per cent. sol. argentum nitrate. Hot applications over stomach after meals; rest.

These diagnostic points are only of importance when taken in connection with careful clinical history, physical and chemical examination of patient, as the symptomatic treatment alone of digestive diseases is usually unsatisfactory both to patient and physician.

A Harmless Local Substitute for Ergot.—This substance to which W. Fischer gives the name of "metroglycerin," is a preparation containing 10 per cent. of glycerin in a combination which has the specific action of the concentrated agent, but is free from its toxic properties and can be rendered sterile. A series of experiments is reported showing its freedom from undesirable local or systemic by-effects, while clinical experience justifies the assertion that it is the ecbolic *par excellence*. In abortion 50 c.c. and in labor 100 c.c. are introduced into the uterus by means of a sterile syringe and catheter, and, used in this way during the past five years, the author has found it universally safe and reliable. It is indicated in all conditions of uterine inertia in abortion and labor, as well as for the induction of abortion and premature labor when necessary.—*Monatsschrift für Geburtshu und Gynækologie.*

Report of Experiments with Yellow Fever Fomites at Las Animas Hospital, Havana.—John W. Ross conducted his experiments in the city of Havana itself, in buildings similar in construction and material (*mamposteria*) to those occupied by people of the poorer classes of the city—damp, poorly lighted, badly ventilated, with floors on the level of the ground. They were conducted at the season of the year when the dreaded scourge is at its worst and does its most deadly work. The facts obtained from the procedures is in accord with the convincing experiments conducted by the Yellow Fever Commission of 1900, and the conclusion reached is the same, namely, "Yellow fever is not conveyed by fomites, and hence disinfection of articles of clothing, bedding or merchandise, supposedly contaminated by contact with those sick with this disease, is unnecessary."—*New Orleans Medical and Surgical.*

Immigration Record Broken.—While the exact returns of the immigrants which came through the Immigration Building on Ellis Island in the month of May have not been computed, it is known that all records have been broken. About 85,000 was the figure for May. This is 12,000 higher than any figures which are remembered by the old immigration officials. On one day during the month more than 7,500 immigrants were received on the island or arrived at New York city. The number actually landed and examined was only 6,088, a little more than 200 below the record. The total of immigrants who were examined and who arrived last week, including those on the steamers *Celtic* and *L'Aquitaine*, was over 24,000.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., Editor.

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INVESTIGATIONS INTO THE CAUSE OF CANCER.

The April number of the *Journal of Medical Research*—devoted to a consideration of the investigations undertaken at the Surgical Department at Harvard Medical School into the cause of cancer—has been published at a very opportune time. Never in the history of cancer has the disease excited the widespread attention, both among scientific men and the general public, that it is arousing now. The increase of cancer in every land, its loathsome nature, the personal interest taken in the subject by eminent people, and the baffling mystery of its origin, have all combined to invest the malady with a peculiar importance. This sentiment has been strongly expressed of late, by the donation. on the part of rich men, of large sums for the especial object of providing every facility to investigate the origin of cancer.

Scientists have been busy for many years in attempting to reach this end, and with some degree of success. The parasitic theory of the origin of cancer for some time received full credence in many quarters; indeed, some were, and are still, fully convinced that ample proof had been afforded that cancer was caused by parasites. Latterly, however, a considerable amount of doubt has been evinced as to the validity of this theory, and many now hold with Stiels and others that the origin of cancer is due to degeneration of the nuclei of the epithelial cells. While Hansemann attributes the cell inclusions in cancer to (1) Degeneration of cells and anomalous secretion; (2) Phagocytosis; (3) Invagination; (4) Abortive and pathological mitosis; (5) Special organs of the cell, archoplasm or paranucleus; (6) Extra-cellular hyaline drops (Russell's); (7) Cancer cells themselves.

The *Journal of Medical Research* for April consists of articles on "Coccidium Infection of the Rabbit's Liver," by E. E. Tyzzer; "Molluscum Contagiosum," by Charles J. White and W. H. Robey, Jr.; "Culture Experiments with Malignant Tumors," by Oscar Richardson; "Four Pathogenic Torulæ," by Joseph D. Weis; "The Relation of Blastomycetes to Cancer," by Edward H. Nichols; "Cell Inclusions in Cancer and in Non-Cancerous Tissue," by R. B. Greenough.

These articles, the result of careful research, practically cover the whole ground, and the conclusions arrived at by all the writers are of a negative nature, but are decidedly in opposition to the parasitic theory.

Dr. Edward H. Nichols summarized as follows: It has been claimed by the adherents of the theory of the parasitic origin of cancer that (1) A proliferation of epithelial cells analogous to the lesions seen in cancerous tumors can be produced by certain well-known protozoa—nodules caused by the coccidium oviforme; (2) Certain skin lesions characterized by epithelial cell proliferation are due to the action of a so-called protozoon—molluscum contagiosum; (3) Blastomycetes are constantly present in human cancers, and are the cause of the lesion; (4) By experimental inoculations of animals with "blastomycetes," true epithelial or cancerous nodules can be produced; (5) Finally, the well-known endocellular bodies seen in the protoplasm of cancer cells have a definite morphology, are "parasites," and the cause of cancer.

As a result of the work pursued by the investigator in research during the past year, and published in the *Journal of Medical Research*, it is concluded that: (1) The lesion produced by the coccidium oviforme is essentially a process of chronic inflammation, and is not analogous to the lesion seen in cancer; (2) The lesion in molluscum contagiosum is characterized by certain changes in the epidermis, is not due to the action of a protozoon, and is not analagous to cancer; (3) The so-called "blastomycetes" ("saccharomycetes") of Sanfelice and Plimmer are torulæ; (4) The lesions produced by these "blastomycetes" (torulæ) are essentially nodules of peculiar granulation tissue, are not cancerous, nor in any sense true "tumors; (5) Blastomycetes are not constantly present in human cancers; (6) The peculiar bodies seen in the protoplasm of cancer cells are not parasites, nor the cause of the lesions, but probably are, in part at least, atypical stages of the process of secretion by glandular epithelium.

It will be observed that the whole trend of the investigations made at the Harvard Medical School is absolutely opposed to the parasitic theory of the cause of cancer.

The articles are destructive of the belief that microorganisms have anything to do with the production of cancer in man. One of the most important conclusions reached is that the "blastomycetes" are not feasty substances at all, but torulæ, the difference being that the latter do not produce spores, and do not develop any mould-like vegetation.

It is not in the least to be expected that these pronouncements will be regarded as final, but will doubtless be warmly combated by the upholders of the parasitic theory of the origin of cancer. Nevertheless, the investigators at Harvard have done excellent service, in their efforts to get at the truth concerning the cause of cancer, and the several papers are valuable contributions to the literature on the subject.

THE IMPROVEMENT OF MARKET MILK.

Inhabitants of cities are beginning to appreciate the importance of being able to procure pure milk. They have reached this stage of reasoning by practical experience, and by education. At one time an unaccountable indifference prevailed with regard to the quality of the milk, or rather it might be said that ignorance of the bad effects consequent upon the consumption of contaminated milk existed. However, the community at large, taught by physicians and sanitarians as well as by observation, has come to the conclusion, that it is not only desirable, but even necessary to the preservation of health, that the milk supply should be as pure as possible. Nevertheless, convinced as the majority of the population may be of this need, ideas as to the best means of effecting its fulfillment are extremely vague.

Therefore the suggestion of a feasible plan for the improvement of market milk should be welcome. Such a plan has been proposed by Mr. R. A. Pearson, M. S. Assistant Chief of Dairy Division, U. S. Department of Agriculture, and which he has published in pamphlet form.

The suggestion made is that a milk commission should be formed, consisting of a responsible body of citizens who are interested in an improved milk supply.

The Commission should select and secure the advice and assistance of four experts—a veterinarian, a physician, a bacteriologist, and a chemist—all more or less familiar with the conditions and possibilities on dairy farms.

The Commission should send to each dairyman who supplies milk to the city a circular naming all the particular conditions which should be found on every farm where milk is produced for city use, and announcing that when any dairyman notifies the Commission that he is fully conforming to the conditions specified, or endeavoring to do so, his dairy will be inspected; and, if it is found to comply in letter and spirit to all the requirements. his name will be placed upon an "approved" list, and he will receive an official endorsement in the form of a certificate.

The requirements are far too lengthy to transcribe here, but they would seem to cover every possible detail with respect to ensuring a supply of uncontaminated milk.

Mr. Pearson is strongly in favor of awarding certificates to dairies conducted in an approved manner, holding that it may be very useful to one who sells milk by assisting in securing fair prices and new trade, for many of the best class of milk users would value the assurance thus given.

Regarding dairy laws and regulations, Mr. Pearson says: Thirty-one States have laws of more or less detail referring to milk for city use, and practically all large cities have special regulations or ordinances relating to milk. These laws and regulations have, undoubtedly, done a great deal of good, and their benefits should not be underestimated. But experience has shown that in some respects they are deficient. For example, of what special benefit are milk laws to the person who wants milk of high quality and as pure as it can be produced, or not at all. There are many such persons. Laws do not require the production of that kind of milk, and if they did require it the probability is that they could not be enforced. This is fully appreciated by those who have charge of their enforcement. The laws usually state that milk shall contain at least 3 per cent. of fat; sometimes they prescribe more and sometimes less. Frequently preservatives are prohibited. Legal force is directed principally toward carrying out these requirements. They usually prohibit the sale of impure or adulterated milk or milk from diseased cows, but they do not define these requirements, and naturally opinions differ upon them. Sometimes they provide for the inspection of producing dairies, but it is seldom that any great part of these are visited and such visits are often only yearly; a little extra attention is usually given to the dairies within city limits. The result is that in many places no attempt whatever is made to enforce sanitary conditions, unless the attention of the authorities is called to an especially flagrant case, which may be dealt with under the general sanitary laws. More satisfactory results of laws may be expected, but they will doubtless come very slowly. The laws may be depended upon to assist materially in raising the average quality of milk, which is extremely desirable, but there will always be a great variation in the units that go to make the average, and consumers who are not reliably posted run the same chance of purchasing from a dairy that is below the average as from one that is above. The laws themselves and the manner in which they are enforced are in great need of improvement. Under present conditions they not infrequently have more effect in teaching consumers to avoid milk than in inducing suppliers not to violate their provisions. The public read so many startling reports of diseases among dairy cows and of prosecutions of dishonest milkmen, that they do not know what dairyman or dealer to trust; therefore they protect themselves by going without milk. There are thousands of such persons in every large city and hundreds in every large town. The statement of a milk inspector that the worst dairies have been improved or abolished is not satisfactory to them; for they do not care to run the risk of getting milk even from those next to the worst. As long as they have no way of knowing where they can procure pure milk they will use as little as they can.

Both pasteurization and sterilization of milk have their drawbacks, for it is by no means certain that by either method all the harmful bacteria are destroyed. In fact, most of the prominent authorities declare that pasteurization and sterilization are, to a great extent, ineffective processes. This being so, it is eminently desirable that absolutely natural milk, the product of healthy cows, should be easily procurable.

Mr. Pearson claims that such milk can be reliably obtained by adopting the plan described above. There would seem to be no reason to doubt his statement, and cities and towns would do well to appoint milk commissions based upon the foregoing suggestions.

THE NATIONAL GUARD HOSPITAL CORPS.

A striking example of the use of an efficient ambulance corps was given at the accident which occurred during the parade in honor of our French visitors on Tuesday, May 27. A bridge, built over an excavation made for building purposes, was crowded with a mass of people of both sexes, and gave way under the weight, precipitating the greater part of its occupants more than thirty feet, among a quantity of débris.

The hospital corps attached to the National Guard fortunately chanced to be near at the time of the accident, and its members were mainly instrumental in extricating the fallen and injured.

The majority of those hurt had been brought up to the street, and were being conveyed to the nearest hospital on litters and in Troop C's Red Cross ambulance when the first city ambulance appeared on the scene.

The manner in which the hospital corps went about their work was a proof of their thorough training, and afforded an excellent object lesson on the utility of such organizations in emergencies.

Sir Henry Thompson on Automobiles.

To the ordinary pedestrian who cannot afford to indulge in the luxury of automobiling, the motor car is a nuisance, often an abomination. This is especially the case in crowded cities, and the automobile, driven, as it too frequently is, at a reckless speed, is a source of danger to life and limb, and the cause of shaken nerves to many a harmless citizen. There should be strict laws regulating the speed of these machines within reasonable limits in thickly populated localities.

As to the motor car, considered from the health standpoint, there has until recently been little said. Sir Henry Thompson, however, has just published a book on motors, in which he appears as an enthusiastic advocate of this form of exercise. He declares that the easy jolting which occurs when a motor car is driven at a fair speed over the highway conduces to a healthy agitation; it "acts on the liver" in much the same way as horseback exercise acts. He says the exhilaration which accompanies driving in a motor is particularly helpful to people who are somewhat enervated. Furthermore, the action of the air on the face, and the continual inspiration of fresh air, tend to promote sleep, and is an excellent aid in the prevention of insomnia.

To dwellers in cities the automobile is of great benefit, as it enables them in a short time to reach the fresher air of the country. It is difficult to exaggerate the necessity for those who live in the densely populated parts of cities and large towns to take every possible opportunity of breathing the purer air of the country. The air in towns is impregnated with carbon. It is also, in dry weather, loaded with dust, a great part of which is composed of dry and pulverized horse manure. In wet weather, fluid manure, from the same source, is absorbed by and then exhaled from the road or wood pavement, with similarly injurious effects.

These impurities are practically absent from the air of the country, and so access thereto is one of the great benefits which may be derived from the use of the automobile.

All this is doubtless true, and the automobile has proved a great boon to the overworked city man. Nevertheless, the fact cannot be denied that the automobile has been and is still abused.

Used in moderation, and as a form of healthful recreation, the exercise is worthy of all the praise that has been heaped upon it. But, on the other hand, when the motor car is made the means of senseless speed tests, and when traveling at seventy miles an hour seems to be the object of all up-to-date automobilists, the practice is hurtful to the health of the travelers, and a menace to the community at large.

Automobile exercise in moderation is good, but when practised to excess is bad for all concerned.

The Superabundance of Medical Men.

There are few countries of the civilized world in which the supply of medical men is not more than equal to the demand. Probably Russia is almost the only exception. In Great Britain competition among doctors is painfully acute, and a similar statement applies with equal force to France and Austria. It is notorious that the evil is more accentuated in the United States than in any other part of the globe, and that, unless steps are taken to restrict the output, the situation from being serious will become absolutely alarming.

In Germany the aspect of affairs, viewed from the physician's standpoint, can hardly be termed encouraging, for the practisers of the healing art increase and multiply out of all proportion.

Mr. Oliver J. D. Hughes, United States Consul-General to Germany, has recently sent to the Assistant Secretary of State at Washington some quotations from an article which appeared in *The Aerztliche Central-Anzeiger*, with regard to the position of medical men in Germany. It appears from the article in question that in 1880, on an average, one physician was counted for every 3,400 inhabitants; in 1900, there was one for every 2,000, and, in all likelihood, in 1906, the proportion will be one to 1,850 people.

Not only is the present position of medical men in Germany unsatisfactory, but their prospects for the future are even more gloomy.

The total number of physicians in Germany now amounts to 28,500, only 6 per cent. of whom are in the employment of the State The remaining 94 per cent. get no pension, are not freed from municipal taxes, and most of them are compelled to pay a considerable house rent.

It is computed that, up to 1906, about 500 physicians will die every year, while 1,350 young physicians will come from the medical schools, so that their number will be increased by 860 yearly.

The German physician's lot does not compare favorably with that of the American. He has to study for at least six years and a half, generally for a longer term than this, and must spend more than 12,000 marks ($2,856) on his studies. After all this work and expenditure of money it is stated that more than one-half of the German physicians make less than 3,000 marks ($714) a year.

From 1887 to 1896 the increase of the population of Germany amounted to 115 per cent., while the number of physicians during the same period augmented by 63.8 per cent.

The Prevention of Enteric Fever among Troops on the March.

War would be robbed of one of its worst terrors if any effective means could be devised whereby the water used for the soldiers' consumption might be rendered reasonably uncontaminated. In hot countries, during or after a long march, drinking is a necessity, and if the soldier is unable to procure sterilized water when he requires it, he will infallibly quench his thirst with whatever kind of water is within his reach, despite all efforts of his officers to the contrary.

The need is to have a plentiful supply of water, together with a satisfactory apparatus for ridding it of its noxious properties.

The *British Medical Journal* of May 3 has an interesting editorial bearing on the subject, in which is described a plan about to be adopted in the British Army:

Special water carts, of the Lefebvre pattern, are to be attached to columns, in the proportion of two to each 1,000 men. These water-carts of French design are of special construction. The type of cart adopted by the British Army has a large square tank of wrought iron, holding 150 gallons, surrounded by an insulating jacket. A special feature of the cart is that it has at the back a small compartment holding an iron cylinder, in which are placed asbestos bags, packed with a mixture of charcoal and potassium permanganate; this is the "clarifier;" it is provided with a suction pipe, worked by hand, by which water sucked up from pool or river can be forced through the charcoal into the reservoir. All the parts can be taken to pieces for cleaning, and the cart, which is mounted on two wheels, and weighs, when full, one ton is drawn by mules. These carts are to be used for collecting the water. The water thus collected will then be passed through an apparatus for sterilizing it, either by heat or by filtration, and delivered into ordinary water-carts, which will be used only for receiving this "safe water."

For sterilizing by heat it is intended to use an apparatus of the type of the Waterhouse-Forbes water sterilizer, the great advantages of which are accurately described in "Munson's Military Hygiene." The particular form of water sterilizer, however—the writer in the *British Medical Journal* goes on to say—is really a detail in the scheme, and its application must, to some extent, depend upon local circumstances, the essential point is that water-carts from which men are supplied with water for drinking should never receive any other water than that which has been so treated as to satisfy the medical officers that it is safe.

The construction of the special water-cart described above would seem to be ingenious, and, if it acts as well in practice as it promises in theory, will prove a great success. Any method that will ensure a supply of water which is not calculated to originate enteric fever among troops on the march will be gladly adopted by every army in the world.

THE HEREDITY OF POETIC TALENT.

Some months ago, in the pages of a prominent review, a writer of note discoursed at length on the subject of genius, its heredity, its occurrence among the different professions and callings, and its various manifestations. The conclusion was come to, that the medical profession was curiously sterile in the production of men of genius, more so indeed than any other profession. As to the soundness of these conclusions, there was, at any rate among medical men, a belief that they were not well founded, and many conspicuous examples were cited to demonstrate the fallacy of the reasoning. Whatever doubt there may be as to the possession of genius among doctors, dead or alive, every one is agreed that many poets have been accorded this divine gift.

According to the *Lancet*, May 10, in a discussion opened at the Medico-Psychological Society of Paris, and reported in the *Archives de Neurologie* for April, Dr. P. Chaslin referred to the subject of the heredity of poetic talent, basing his remarks chiefly on a recent publication by Dr. Möbius, which dealt exhaustively with the same topic, Dr. Chaslin and Dr. Möbius arrived at the following conclusions: first, that great poetic talents were solitary and exceptional, even amongst persons exhibiting a taste or aptitude for poetry; secondly, that the mother of a poet was always an intellectually gifted woman, whereas the son of a stupid woman was always stupid; and, thirdly, that poetic talent was hereditary and was transmitted through the mother alone. Dr. Chaslin cites numerous instances in support of these conclusions.

Francis Galton, however, in "Hereditary Genius," takes an altogether opposite view to this, and has stated positively, "in the case of poets and artists, the influence of the female line is enormously less than the male," and he supports his assertion with a "summary of relationships of twenty-four poets grouped into twenty families."

Poetic talent or genius is like inventive or literary talent, capricious, and does not pass from generation to generation as a rule. There are a few scattered instances where the child of a poet has been touched himself with the divine afflatus, but these are the exceptions. Speaking generally, the children of poets do not shine any more than the sons of inventors, statesmen, orators, social reformers make names in the same pursuits followed by their fathers. With regard to the question as to whether conspicuous talent comes from the father or mother, despite Galton's dictum, the matter cannot be called finally settled. The long-held belief that a son's talent is inherited chiefly from his mother, as Möbius asserts, will be long in dying.

VOLCANIC ERUPTIONS AND THE ISTHMIAN CANAL.

Attention has already been called in some of the medical journals to the extreme unhealthiness of the country bordering on the Nicaragua and Panama routes of the projected Isthmian Canal.

Of these two routes, probably Panama bears a more sinister reputation for insalubrity than Nicaragua for the reason, perhaps, that the former has been exploited while the latter has not been touched.

The *Scientific American*, May 24, points to another menacing feature which distinguishes one of these routes. The article referred to declares that the Martinique disaster conveys a special warning to the people of the United States, on account of the seismic and volcanic eruptions which may affect the route in question.

So far as Panama is concerned, it is stated that no trace of volcanic agency can be found there, and that there is within 180 miles of the canal no volcano even of the extinct variety. Nicaragua, on the other hand, has always been a center of seismic disturbances; its route is lined with, or closely approximate to, volcanoes, some of which have shown evidence of tremendous latent energy. There have been occasions within the past century when the volcano Cosequina in the northwest of Nicaragua has been in active eruption, and earthquakes have been plentiful in the same region.

The recent apalling occurrences in the West Indies have naturally occasioned a great fear of volcanoes, and the existence of volcanoes in the immediate vicinity of the Nicaraguan route is calculated at the present time to create a certain amount of distrust of the section of the country in which it is proposed to build the canal.

There can be but little doubt that when the canal has been built along whichever route is chosen, efforts will be put forth to free the district from the diseases which now prevail, and further, that when the present dread of volcanoes has subsided, the fact that Nicaragua appears to be volcano-ridden will exert small influence on the choice of route.

American Medical Editors' Association.—The annual Meeting of this Association will be held at Saratoga Springs on June 9. The preliminary program includes the following: "President's Address," Alexander J. Stone, St. Paul; "An Evolution in Journalism," T. D. Crothers, Hartford, Conn.; "The Reciprocal Relations between Physicians and Medical Journals," Burnside Foster, St. Paul; "A Step Forward in Affairs for the Profession," C. H. Hughes, St. Louis; "The Evolution and Influence of Medical Journalism," Dudley S. Reynolds, Louisville; "International and State Medical Comity," Clark Bell, New York; "The Editorial, Its Place in Medical Literature," Frank P. Norbury, Jacksonville, Ill. The annual dinner of the association will be given in the Hotel Kensington. The secretary of the association is Dr. Otho F. Ball, Linmar Building, St. Louis.

News of the Week.

The American Urological Association will hold its annual meeting at Saratoga on June 13 and 14. This association has been formed to promote the study of the male and female urinary tract in health and disease, its membership being open to all regular physicians legally qualified to practise medicine and surgery in any part of North or South America or the West Indies. The annual meeting is held each year at the same place as that of the American Medical Association on the last day of and the day following that meeting The meetings of the New York branch, at present the only one, are held on the first Wednesday of each month except June, July, August, and September. It is permissible to read a paper before the association in any modern language, but the annual report will be published in English and Spanish. The preliminary program contains the titles of twenty-four papers. Anyone intending to present a paper, the title of which has not yet been published, should communicate at once with the secretary. The following are the officers of the association: *President*, Ramón Guitéras; *Vice-President*, Wm. K Otis; *Treasurer*, John Van der Poel; *Secretary*, Ferd. C. Valentine; *Assistant Secretary*, A. D. Mabie, all of New York city.

The Beth-Israel Hospital was opened with appropriate exercises on Sunday, May 25. The hospital is located at Jefferson and Cherry streets, in the heart of one of the most densely populated sections of the east side. The hospital has four large wards for patients, one of them a children's ward, and an isolation ward for contagious cases. Then there are ten rooms for urgent cases or private patients, an operating room, a laundry, meat and milk kitchen and sterilizing and disinfecting plants. The whole of the ground floor is given over to the dispensary department and has been arranged with a view to meet an exceptionally large demand. The waiting room is capable of seating 300 persons and the necessary consultation rooms and pharmacy are arranged with a view to providing for a service of more than 30,000 a year. The cost of the hospital, including the furnishing, will be about $225,000. Mr Harris Cohen is President of the Hospital Association, and Dr. Abram Brothers Chairman of the Building Committee. The Rev. Samuel Schulmann delivered the opening address, and addresses were also made by Borough President Jacob A. Cantor, Messrs. Jacob A Schiff, Louis Marshall, and Abraham Nelson, and Dr. Louis J. Ladinski.

Red Cross Conference.— The Seventh International Red Cross Conference, under the Presidency of General Richter, was officially opened in St. Petersburg by the Russian Minister of Justice, M. Muravieff, on May 29, in the presence of the Dowager Tsarina, and many other notabilities. A hundred delegates, from various countries, were present. A banquet was given to the delegates the same evening in the Tahrida Palace. A flattering reception was accorded to Miss Clara Barton, President of the American Red Cross.

Pasteurized Milk Depots.—Mr. Nathan Straus's summer depots, where pasteurized and modified milk may be obtained for children, were opened on June 2 for the tenth year of their existence. Following are the locations of the depots:

151 Avenue C (laboratory and depot); 241 East Fifty-ninth street; 235 West Sixtieth street; 305 East One Hundred and Fourteenth street; 65 Market street; Hebrew Institute Roof Garden, East Broadway and Jefferson street; Central Park (near the Arsenal); Tompkins Square Park; City Hall Park; Battery Park; Recreation pier foot of West Fiftieth street; Recreation pier foot of East Twenty-fourth street; Recreation pier foot of East Third street; Recreation pier foot of Barrow street, North river.

The Reception Hospital at Coney Island was reopened last week for the summer, under the charge of Dr. John Burns of the Kings County Hospital. During the summer months of last year it treated 1,300 cases.

Trouble among Hospital Directors.—Application for a writ of visitation was recently made in the Supreme Court by the attorneys for certain directors of the Austro-Hungarian Hospital, who wish to have the books of the institution and management by the resident physician-in-charge, Dr. John Guttmann, looked into. The application follows a disagreement in the board of directors. In the complaint it is charged that Dr. Guttmann and his friends have arbitrarily taken possession of the building, sent the patients elsewhere, and closed the hospital. In reply, Dr. Guttmann says that the hospital has been closed for six months owing to a lack of funds.

A Monument to Dr. Thomas Dunn English.—The Society of American Authors, of which the late Dr. Thomas Dunn English, the author of "Ben Bolt," was a member, has undertaken to erect a monument to his memory, and has issued an appeal for subscriptions for that purpose. Should any funds be left after the monument is provided for, they will be turned over to Dr. English's family. Contributions should be addressed to Morris P. Ferris, 32 Broadway.

Boric Acid as a Meat Preservative.—The German Sanitary Department, after an examination extended over a long period, and an exhaustive series of experiments, has decided that the use of boric acid or borax preparations to the extent necessary for the preservation of meat should not be permitted. On the other hand, Professor Edmund v. Lippmann stated, recently, that he had made analyses of oranges, lemons, and other tropical fruits, showing that they all contain large quantities of boric acid. The *Chemiker Zeitung*, commenting on this, asks how it is possible that the universal consumption of these fruits, containing such quantities of boric acid, could be regarded by everybody as highly beneficial to health, if, in reality, boric acid is necessarily injurious, as the Imperial Health Office asserts.

National Confederation of State Medical Examining and Licensing Boards.—The twelfth annual meeting of this association will be held in Saratoga on Monday, June 9, under the presidency of Dr. N. R. Coleman of Columbus, Ohio. Members and ex-members of State medical examining boards, physicians and educators who are interested in the cause of higher medical education are cordially invited to attend. Every State or territorial board whose duty it is to examine or license physicians intending to practise in the jurisdiction of the board, by whatsoever name it may be called, is urged to affiliate with the National Confederation, if it has not already done so. The Secretary is Dr. A. Walter Suiter, Herkimer, N. Y.

The American Medico-Psychological Association.—The fifty-eighth annual meeting of this association (formerly known as the Association of Medical Superintendents of American Institutions for the Insane) will be held at Montreal on June 17–20, under the presidency of Dr. R. J. Preston of Marion, Va. The annual address will be delivered on the evening of June 18 by Dr. T. Wesley Mills of McGill University. The secretary is Dr. C. B. Burr of Flint, Mich.

A League for the Suppression of Inoculable Diseases.—At a meeting of physicians, held at the office of Dr. J. C. Shrader of Iowa City, on April 12, an association was established with the object of educating the laity regarding their sexual relations so far as may enable them to avoid the widespread evils of venery which are so disastrous, not alone to the health and comfort of men and women, but of children who are innocent victims of venereal disease. The name selected for the league was "The Iowa Society for the Suppression of Inoculable Diseases." The following are its officers: *President*, Dr. J. C. Shrader; *Vice-President*, Dr. E. C. Clapp; *Secrctary and Treasurer*, Dr. J. G. Mueller, all of Iowa City.

The Confederation of Members of Reciprocating State Medical Examining and Licensing Boards.—A meeting of this association was held in Chicago on May 20. Representatives from the Illinois, Wisconsin, Indiana, and Michigan boards were present, and the details for the reciprocal exchange of certificates between Indiana, Wisconsin, and Michigan were perfected upon the basis of the two qualifications passed at the January meeting of the Confederation, viz., (1) That a license or certificate of qualification of at least one year's date and based upon presentation of a satisfactory diploma, and an examination before a board in specified branches of medicine and surgery, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a State may be issued; (2) That a license or certificate of qualification of at least one year's date, issued by a State board of registration or medical examiners, based upon presentation of a satisfactory diploma and upon the recommendation of a State board of registration or medical examiners as to the reputability of the applicant, may be accepted at the discretion of a board in lieu of an examination, and as a basis upon which the license of a State may be issued. The boards of the above mentioned States meet in June and will take such action then as will result in the immediate exchange of certificates.

The following officers were elected: *President*, J. R. Currens, Two Rivers, Wis.; *First Vice-President*, J. M. Dinnen, Fort Wayne, Ind.; *Second Vice-President*, W. F. Curryer, Indianapolis, Ind.; *Secretary*, B D. Harison, Sault Ste. Marie, Mich.; *Treasurer*, W. A. Spurgeon, Muncie, Ind.

Philadelphia County Medical Society.—At a stated meeting, held May 28, Dr. John B. Roberts reported a case of deformed nose treated by subcutaneous injection of paraffin. The patient was a man whose nasal bones had been fractured, and considerable deformity had resulted. White paraffin was sterilized by heat, and its solidifying point reduced to 105° F. by addition of petrolatum. The paraffin was then injected by means of a metallic hypodermic syringe, also sterilized by heat. After a little manipulation, the mass soon became hard, and a shapely nose was the result. There was little pain, and scarcely any reaction. Dr. B. Alexander reported a case in which a similar operation had been successfully performed. Dr. Moses Behrend read a paper entitled "The Dangers of Inflating the Stomach with CO_2 Gas; Its Diagnostic Value; Report of Three Cases with Autopsies." In all of these cases a sense of oppression succeeded by depression followed the consecutive ingestion of a teaspoonful of tartaric acid in four ounces of water followed by a like amount of sodium bicarbonate. In one death resulted from hemorrhage due to the rupture of a vessel in a preexisting gastric ulcer; and in the two others from distention of the œsophagus, due, in the one case, to the presence of carcinoma at the cardiac orifice, and in the other to undetermined causes. Dr. L. J. Hammond read the "Report of a Case of Gunshot Wound of the Thorax Involving the Heart." The symptoms were slight, and a lesion of the heart was not suspected. Improvement apparently took place, and the patient was permitted some liberty in moving about and in sitting up. Death resulted suddenly, and post-mortem examination disclosed a perforating wound of the apex of the left ventricle with an enormous amount of fluid and blood in the pericardial and pleural sacs.

Medical Appointments in the Philippines.—The Civil Service Commission will hold an examination on June 17 and 18 to fill positions of medical inspector and physician under the civil government of the Philippine islands. The salaries to be paid vary from $1,800 to $2,000, and the positions, in some instances, include quarters in addition to the salaries named. Some of the appointments from the medical examination may be made to the position of president of provincial boards of health at salaries of less than $2,000 per annum; but in these positions living expenses are usually much less than in Manila and the opportunity for outside practice greater. The examination is open to all citizens of the United States who comply with the requirements.

An Impostor.—Physicians are warned against a young man, heavily built, tall, good talker, who professes to be an agent for *Collier's Weekly*, and solicits subscriptions to this periodical, offering a three-volume history as a premium. The manager of this weekly has declared this man an impostor.

Camden (N. J.) District Medical Society.—At the annual meeting, held May 13, the following officers were elected for the ensuing year: *President*, Dr. John G. Doron; *Vice-President*, Dr. John W. Marcy; *Secretary*, Dr. Paul Mecray; *Treasurer*, Dr. Joel W. Fithian; *Historian*, Dr. H. H. Sherk; *Reporter*, Dr. Joseph H. Wills; *Trustee*, Dr. H. Genet Taylor; *Censor*, Dr. W. H. Ireland.

Obituary Notes.—Dr. T. RITCHIE STONE of Washington died suddenly, on May 31, of heart disease. Dr. Stone was an old resident of Washington, having been born there, in the same house in which his death occurred, in 1857. He received his early education in the local schools, and took his medical degree from the University of Virginia in 1884.

Dr. SAMUEL R. COCHRANE died of apoplexy at his home in Albion, N. Y., on May 25. He was a graduate of the Medical Department of the University of Buffalo in the class of 1867.

Col. EDWARD P. VOLLUM, Surgeon U. S. A., retired, died in Munich, Bavaria, on May 31. Col. Vollum was seventy-five years of age, and had been on the retired list for eleven years. He was born in New York, appointed an assistant surgeon in the army from that State forty-nine years ago, and served through the Civil War with distinction. A year before he was retired he was made Chief Medical Purveyor of the army. In March, 1865, President Lincoln breveted him lieutenant-colonel for faithful and meritorious services during the Civil War.

Dr. CLARENCE M. VAN SYCKLE died of typhoid fever at his late residence in Brooklyn on May 13. Dr. Van Syckle was born at Boonton, N. J., on June 14, 1878. He was a graduate of the public schools and of the Brooklyn High School. His professional education was obtained at the College of Physicians and Surgeons, and at the Baltimore Medical College, from which he was graduated in 1901. Since receiving his degree he had practised in Brooklyn.

Professor ADOLPH KUSSMAUL, formerly professor of medicine at the University of Strassburg, died on May 27, at the age of eighty years.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

NURSES—PAROTID TUMORS—BACTERIA—LYMPHANGIOMA—SARCOMA OF SYNOVIAL MEMBRANES—HORIZONTAL DILATATION OF AURICLE—VICTORIA CROSSES.

LONDON, May 16, 1902.

NURSES, like the poor, are always with us—some good, some, alas, bad; all more or less imperfect human beings. Doctors, who see most of them and are best able to judge of them, are, as a rule, content to employ the good and dispense with the services of those who may prove unequal to the immediate duty required of them. Not so the patient and friends, who, naturally, see more of the individual, and have to bear the results of failure. Current literature has so often depicted the nurse as an angel that some allowance may be made for the disappointed employer, who declares her to be a nuisance. That she has proved herself such in many households is undeniable, and that is at the bottom of her "unpopularity," which Miss F. M. Johnston admitted and tried to account for in the April number of the *Nineteenth Century and After*. I do not say that she has succeeded in explaining the fact, and think she lays too much stress on the notion that the employment tends to render the nurse indifferent or callous. There seems no more reason for a nurse to become hardened than a doctor. But Miss Johnston's admission opened the floodgate, and newspapers are having their say.

The May number of the *Nineteenth Century* contains two replies to Miss Johnston, one by Mr. Sidney Holland, the other by Miss I. Stewart. The latter—*place aux dames*—describes nurses as, "for the most part, hard-working, womanly women, with the faults that belong to other women," and, as to the special charge of indifference, she asserts that the better part of their nature and character is "developed and strengthened by contact with much suffering, the exercise of much self-denial, and a cheerful submission to duty."

Mr. Holland, as an official of the London Hospital, who is largely responsible for the management of its nursing staff, takes up the question from an institutional point of view, repudiates the charge that hospital nurses are overworked, and holds that the public expect too much of private nurses. Of course, he defends the present system, for it is a source of profit to his hospital, which sends out its nurses to private cases. Other hospitals do likewise, but the plan is open to abuse, and, on the whole, unsatisfactory. An excellent hospital nurse may often find herself out of her element in the sick-room of a private house. This would be more likely to be felt in a case in which her special abilities were not called for.

The war has opened the eyes of many to the necessity—not to dwell on the propriety—of employing more men as nurses. Nevertheless, many women who claim to be womanly are loud in their assertion that women are the fittest nurses for all cases; they claim an exclusive right to the nursing profession, and deride the suggestion that mere modesty should have a say in the matter. It is only when a powerful man becomes delirious or insane that they are willing for men to undertake the case, and then they will often prefer an untrained man to a trained male nurse. Our hospital authorities are greatly to blame in this matter. We have a certain number of men thoroughly well trained as nurses, but our hospitals will not employ them, nor will they afford facilities for training others.

Messrs. Raymond Johnson and T. W. P. Lawrence started a discussion at the Pathological Society on Parotid tumor and other endotheliomata. They showed a number of specimens, and illustrated their paper by lantern slides, and asked whether the so-called parotid tumor and others of identical structure were of epithelial or connective tissue origin. In the specimens in museums they did not find any adenomatous structure, and had come to the conclusion that they were, in fact, endotheliomata, but they had no data as to whether they arose in the endothelium of blood vessels or lymphatics. In reference to the well-defined and limited distribution of salivary-gland tumors, it was suggested that similar formations might arise in other parts of the area of distribution of the carotid vessels. Other contributions to the subject followed.

Mr. Seligmann read an account of three cases of tumors which he considered endotheliomata. Two in the soft palate and the other in the abdomen.

Drs. Rolleston and Grünbaum showed sections from four tumors (three from the cheek, one from the lip), which they classed as endotheliomata. One was typical, one was a perithelioma, and somewhat resembled a villous carcinoma. The other two, from the lip and cheek, respectively, closely resembled parotid tumors; like them, contained cartilage, and arose from endothelium living lymphatics.

Messrs. Emanuel and Nuthall read an account of six cases of growths in the alimentary tract, and showed specimens. They could trace no connection with the epithelium. In all the mucous and serous coats were unaffected. Endothelioid cells were found in the growths.

Dr. Targett was inclined to regard these specimens as cancerous, arising from the deep layer of the mucosa.

Drs. Corner and Scott showed sections from a tumor of the lip and another of the submaxillary gland, both of long standing and with fibrous capsules, and containing no vessels.

Mr. Shattock discussed the nature of a mixed tumor of endotheliomatous type, which had long been in University College Museum. It belonged to the same group as parotid tumors.

Mr. Gask showed sections of a complex papillomatous growth, probably arising from the endothelial lining of the synovial sheath of the ankle-joint, after an injury.

Dr. Payne, looking at the various cases and specimens before the society, was inclined to think parotid tumors originated in embryonal "rests." Mr. Targett leaned to the old view that they were altered gland tissue.

At a subsequent meeting of this society (May 6) bacteria were to the fore. Dr. Klein announces that he had found in dead rats sent to him from Bristol a bacillus which closely resembled that of plague, morphologically and pathologically, but differed in cultural qualities.

Drs. Foulerton and Kellas read a paper on the action of currents or discharges of high potential and rapid frequency on bacteria. They experimented by spraying the current over the surface of an emulsion in water of the organisms. They tested thus the bacillus typhosus b. coli communis, b. dysenteriæ (Flexner), b. anthracis and some streptococci and staphylococci. A proportion of the b. anthracis were destroyed in twenty minutes, and the emulsion was sterilized in forty-five minutes. The emulsion of b. dysenteriæ was sterilized in thirty minutes. In these two cases the exact lower limit had not been determined. Emulsions of the other bacteria were sterilized by exposure to the current for from ten to twenty minutes.

Dr. Bokenham reported similar experiments he had been making, and said the results varied a good deal with the conditions. Thus with a brush discharge the emulsions were all sterilized in from ten to twenty minutes, but with a condenser discharge the effect was negative; indeed, in some cases the vegetative growth seemed to be rather reinforced.

Mr. Leslie Milburn described a bacillus he had isolated from bodies of laboratory guinea-pigs dying from pseudo-tuberculosis. The organism resembled that obtained by Muir and Klein from the disease in birds.

Mr. Seligmann reported that he had found the fluid withdrawn from two knee-joints of cases of Charcot's joint disease complicated with locomotor ataxy, had a remarkable effect on the growth of bacteria. The fluid completely inhibited the growth of b. coli, typhosus, streptococcus pyogenes, staphylococcus albus, aureus and citreus. The effect ceased when the fluid was dilated with 50 per cent. of broth.

At the Clinical Society last Friday Mr. Spencer related a case of congenital diffuse lymphangioma terminating in lymphosarcoma after lymphangitis. The patient was a girl born with the right leg longer than the left, but it gave no trouble until, at four years old, it became inflamed. Hectic soon set in, and in three months she died. It was suggested that lymphatic-gland sarcoma would more accurately describe the disease.

Mr. Turner related a case of that rare affection sarcoma of synovial membrane. It was in the ankle-joint of a man of thirty-two who had knocked his foot against a screw two months before it began to swell.

Mr. Lockwood read an account of a case of sarcoma of the synovial membrane of the knee in a woman who had suffered in the joint for three years. The interest in the case was considerable, from the difficulty of diagnosis. It was believed, in fact, to be tuberculous, and resection was performed, but the absence of carious material or pus excited suspicion, and on examination by two pathologists independently, it was pronounced sarcoma. When first seen two points might have excited suspicion that the disease was not tuberculous: (1) Absence of muscular wasting; (2) Free and painless mobility of the joint after having been the seat of supposed tuberculous disease for three years.

Mr. Marsh, president, referred to the case reported in the "Transactions," vol. 32, which resembled these. The patient is now alive, and was in hospital lately with a consolidated lung, which, however, cleared up. He said the temperature, which led Mr. Lockwood to suppose his case tuberculous is not a trustworthy guide, as malignant growths in joints often cause high temperature.

Drs. W. Ewart and I. Owen read a paper on "Horizontal Dilatation of the Left Auricle," referring to the first case recorded (by Drs. Owen and Fenton), and one shown at the society in January. Of course, a complete account of the affection is at present impossible, but rather lengthy details of the cases were given. Dr. Owen had inquired at the chief schools and museums, but could only hear of two other cases.

On Monday the King bestowed the Victoria Cross on Captain E. T. Inkson, R.A.M.C., for his distinguished service on the battle-field.

In Wednesday night's *Gazette* it was announced that the King had signified his intention to confer the Victoria Cross on Surgeon-Captain A. Martin Leake of the South-African constabulary, for conspicuous gallantry in attending to wounded in action at Vlakfontein on February 8. He was shot three times, but continued to attend to the other wounded until he rolled over, thoroughly exhausted. Even then he refused water until all his wounded had been served. Such are the sort of men that Lord Wolseley declared are "not soldiers," and the Duke spoke of as "brave civilians," just to please the "combatant officers."

The Irish College of Surgeons bestowed its honorary fellowship on Surgeon Captain Crean, who received the Victoria Cross for gallantry in the field last December.

Progress of Medical Science.

The Boston Medical and Surgical Journal, May 29, 1902.

Papilloma of the Bladder.—G. H. Washburn reports the case of a woman of forty-nine years who complained of straining pains in the region of the bladder and urethra. These had been present more or less for three years and had not been relieved by operations previously performed for the removal of tumor of the bladder. An operation was performed and there was found within the bladder a papillomatous growth as large as a good sized hen's egg. Other smaller growths were scattered all over the bladder wall. An oval piece of the bladder wall, to which the larger tumor was attached, was cut away, while the small growths were removed by cautery. Recovery was satisfactory.

F. B. Harington reports three cases of papilloma of the bladder in men, The first patient died a month after operation, the other two made a good recovery. In the first case a microscopic examination of the growth was made and the tumor was regarded as malignant because fairly satisfactory evidence was found of the presence of atypical epithelial cells, arranged loosely and in columns in the submucosa; and also because of the great variability in size and shape and abnormalities in appearance of the cells.

Maurice H. Richardson removed by suprapubic cystotomy a small papilloma of the bladder characterized by an excessive hemorrhage. He advises suprapubic explorations in all cases of hæmaturia in which from the urinary examination there is reason to expect bladder tumors. Preliminary examinations with the cystoscope and the lithotrite should be made when the patient's strength is good. Exploration by suprapubic cystotomy is indicated early in the history of hemorrhage, for then the patient's powers of resistance are best, and the tumor is more easily and thoroughly extirpated. Prolonged delay is responsible for most of the failures, immediate and remote, that follow suprapubic cystotomy for bladder tumors.

Journal of the American Medical Association, May 31, 1902.

Action of Silver Nitrate and Chromic Acid in Chronic Glossitis under the Influence of the Electric Current.—M. L. Ravitch treats his cases as follows: After painting the patient's tongue with a 15 per cent. solution of nitrate of silver or 5 per cent. solution of chromic acid, the patient is told to hold the wet positive sponge electrode in one hand while the negative metal electrode is rubbed over the painted diseased areas for from ten to fifteen minutes; an excess of saliva is produced, and it is caught by the patient or operator holding a large piece of absorbent cotton to the mouth. Pain of which most patients are apt to complain is greatly relieved by galvano-chemical applications, the hyperæmic condition of the tongue gradually subsides, the tissues become more natural, the patches gradually fade away and the tongue assumes its healty color. From twenty to thirty applications is all that is needed even in the severest cases. Irritant condiments must be forbidden and the digestion cared for.

Rotary Lateral Curvature and Pott's Disease of the Spine.—D. W. Marston discusses the differential diagnosis and rational treatment of these two conditions. In the former he advises the following: (1) Mechanical support and proper gymnastic exercises are to be combined; (2) The exercises are to be taken while the patient wears the support; (3) The apparatus is removed while the patient sleeps; (4) Where the deviation is more than half the diameter of the vertebræ an unyielding support is imperative; (5) After absorption of bone has taken place the primary curve cannot be eradicated; the "cure" lying in the establishment of compensating curves, which maintain the equilibrium of the spinal column. In tuberculosis of the spine, on the other hand, we must remember the importance of the following: (1) Fixation and extension are to be employed; (2) The existence of sinuses and abscesses do not contraindicate the immediate application of proper immobilizing apparatus; (3) Forcible correction of deformity is advised only in selected cases; (4) Finally, the success or failure in the treatment of either of these diseases is dependent largely upon the intelligence and willingness on the part of the patient; the care and help of the parents or friends, and prolonged watchfulness at regular intervals on the part of the surgeon.

Surgical Conservatism of the Ovaries and Fallopian Tubes.—Edwin Rickets makes a plea for greater conservatism in the surgery of the pelvic organs. He states that in cases of congenital stenosis of the Fallopian tubes, causing sterility, that are diagnosed only after the abdomen has been opened for other reasons, dilatation of the tubes often results in a cure. In healthy Fallopian tubes, associated with a thick tunica albuginea, a free longitudinal and transverse incision, followed by dissection of the same, promises a cure for those anteoperative distressing symptoms of pain and general lassitude along with an exhausted nervous system. With a thickened tunic, through which can be plainly seen protruding a few or a number of small flattened or round cysts, the ovary containing them may be retrodisplaced and held firmly by bands of adhesions. To free the same by carefully dissecting them away and puncturing them often means success. He who always resorts to hysterectomy for fibroids, whether large or small, should not be regarded as a conservatist in pelvic surgery. Myomectomy in many instances, under such circumstances, may be chosen as the operation of election. Large myomas are successfully removed to save the uterus and the opposite Fallopian tube and ovary.

Medical News, May 31, 1902.

The Smallpox Problem.—Ernest Wende says that it should be made indispensable that health officers qualify by a course of study in sanitation before being eligible to office. Success in combating this disease depends on an enlightened system of isolation, quarantine and disinfection, based upon a thorough understanding of the origin and transmission of the disease, the duration of isolation and quarantine to be regulated by the period of incubation and the period of infection. The enforcement of these regulations should be accomplished by members of the police department rather than by doctors or sanitary inspectors. The orders should emanate from a central authority and their execution should be prompt. The patient should be at once removed to a suitable hospital, no distinction being made.

A Contribution to the Subject of Infant Feeding.—S. Henry Dessau holds that by far the simplest, cheapest, and best food for daily use is a fair average quality of cows' milk, diluted with water; the amount varying with the age and digestive capacity of the child. The "top milk," the upper part of milk that has stood in a vessel at a temperature not above 60° F., for from four to six hours, is sometimes preferable. The proportion of fat to proteids in this milk is much greater. Because cows' milk contains no sodium salts, while human milk does; a pinch of common salt or phosphate of sodium is added; also a heaping teaspoonful of raw cane sugar to the quart. This mixture is placed in a double boiler, with cold water in the outer vessel, and left on the fire ten minutes after the water has begun to boil. The greater the dilution of cows' milk, the easier of digestion the curd becomes. For babies under three months of age it is generally well to use equal parts of water and milk. For older babies one part of water to three of milk is usually a good proportion. If barley or oatmeal gruel is used, it must be cooked for at least one hour and dextrinized by the addition of diastase.

The Bacterial Pathology, Symptomatology, Diagnosis, Treatment, and Quarantine of Tonsillar Inflammations. William G. Bissell discusses first, follicular tonsillitis simplex. This affection is without known microorganismal origin. Positive diagnosis can be made only by cultural methods, which in this instance will reveal the staphylococcus pyogenes aureus and albus to the exclusion of other organisms. Treatment is simple and prognosis excellent. Calomel internally, glycerin, with chloride of iron on the tonsils, is indicated. The next class of diseases shows the Klebs-Löffler bacillus. Quarantine should be established. Antitoxin should be administered. If the membrane be dense, a local application of Löffler's solution, 10 per cent. nitrate of silver, 10 per cent. protargol is of value. Dotell's solution, or Seiler's tablets in solution, assist. The prognosis of tonsillar and pharyngeal diphtheria is excellent if the disease be recognized early and if the proper treatment be followed.

Another class of diseases is inflammation of the tonsil, in which the streptococcus pyogenes is present to the exclusion of other organisms. The treatment from the local standpoint is the same as that of diphtheria. Constitutionally, diphtheritic antitoxin does little or no good. Antistreptococcus serum seems to be of value. There should be some quarantine measures. The next class considered are those inflammations of the tonsil due to the micrococcus of sputum septicæmia. The treatment is about the same as for the infection by the streptococcus pyogenes, except that no antitoxic substance has as yet been discovered. Tonsillar infections due to the oidium albicans are combated by local stimulative alkaline washes and a general tonic treatment. The writer then speaks of disinfection.

Philadelphia Medical Journal, May 31, 1902.

Two Cases of Folie du Donte.—John H. W. Rhein reports these cases. The first patient was a woman, twenty-four years of age. Her symptoms had begun when she was sixteen years old. She was afflicted with the desire to repeat whatever she did or said. She had the fear that she had committed a sin, the character of which she could not define. There is no history of insanity in the family. The second patient was a woman of forty years, who suffers from the fear of being contaminated. She feels this fear especially after handling her handkerchief. These cases illustrate a disease which has been described under the title of folie du donte. The writer thinks that it may be concluded that folie du donte, *i. e.* a train of symptoms in which doubt and fear of contact with external things predominate, may be a manifestation of neurasthenia, with the same prognosis as this disease, or that it may be a distinct form of mental disorder of degenerative type, having some relation to neurasthenia, but incurable, with remittent symptoms, occurring mainly in women, and beginning about the menophania. The symptoms of this affection may be observed also in certain forms of insanities, such as hypochondriasis, melancholia and in syphilitic inanities.

On Cystoscopy, Its Value and Dangers.—Frederic Bierhoff states that, in addition to using a reliable cystoscope, much importance attaches to the source of the electrical current. This may be either a dip-battery, storage-battery, or the street current as used for incandescent lighting. A proper rheostat must be connected with the source of the current to regulate the supply which reaches the cystoscope. Examination is more difficult in the male than in the female. It is wise in determining the question whether the urethra is of sufficient caliber to admit of the insertion of the cystoscope, to employ for the purpose of emptying the bladder, a catheter which is slightly larger than the instrument to be used. The bladder should be capable of a sufficient degree of distention for satisfactory illumination. In the male usually 150 c.c. of fluid suffice, while in the female 200 to 250 are better. There is a certain routine of examination which gives the minimum of discomfort and the maximum of information. It is: After turning on the current and being satisfied that the light is of sufficient intensity to permit of clear vision, the lower margin of the sphincter is first examined, then the trigone, and the ureters; these are located and their character and activity, as well as the character of the urine noted, and then the lower posterior wall of the bladder is examined. Then one of the lateral quadrants in its entirety is completely and carefully examined. Then the upper and anterior wall and, finally, the other lateral wall. Cystoscopy is not always easy, as there may be strictures or spasmodic contraction of the compressor urethræ. The dangers of cystoscopy have been much exaggerated; disasters are due to faulty technique, or carelessness on the part of the examiner. Where a proper degree of asepsis is observed, it should be no more dangerous than catheterization or the passage of a sound. The more intricate and delicate manipulations should be left to the expert, but the simple cystoscopic examination should be within the grasp of every general practitioner.

American Medicine, May 31, 1902.

The District of Columbia Cancer Record for Twenty Years.—Clarence A. Smith draws the following conclusion from these statistics: (1) On the basis of comparing cancer deaths with those of thirty years and over, no increase of the disease is found in the last decade over the preceding; (2) Classification of cases into accessible and inaccessible reveals practically no increase in the former, but entirely in the latter, probably the result of improved diagnosis and certification of deaths; (3) Aside from cases of the female generative organs, the sexes are equally liable to the disease; (4) The white and colored races are alike subject to cancer, the latter showing a greater increase in cases of the uterus and liver; (5) While cancer deaths during the last decade have increased over those of the previous decade by a larger percentage than those from any other disease, we are not justified in attributing this to an increase in the disease itself.

Pneumococcus Arthritis.—Rufus I. Cole considers this a rare condition. He reports several cases, and from a study of them concludes that there is a tendency to involvement of the larger joints, though small joints may also be affected. There is a tendency to the involvement of more than one joint (thirteen out of forty-one cases). There is a tendency to involvement of joints already the seat of a chronic affection. (In thirteen cases a history either of chronic rheumatism, old injury, previous arthritis or gout.) The effusion is usually purulent, but may be serous. The mortality is high (twenty-eight deaths, thirteen recoveries). The clinical features of the condition and the prognosis depend more on the septicopyemia, of which it is usually but a manifestation, than on the joint lesion itself. When recovery occurs the course is usually a long, slow one, and usually ankylosis of the joint results. The local treatment should consist in free opening and draining of the joint. The fact that in a few cases of mild infection of the smaller joints spontaneous recovery has occurred might justify one in adopting conservative methods in such cases. Considerable experimental work has been done on the artificial production of pneumococcus arthritis in animals.

Bubonic Plague.—Joseph J. Curry states that most writers divide this disease into three classes or types: (1) Pestis bubonica, or bubonic plague; (2) Pestis siderans or septicæmic plague; (3) Pulmonic plague. Bubonic plague is by far the most frequent type. There is a type called pestis minor (mild, or walking plague), with very low mortality, cases of which invariably precede epidemics. The invasion of plague is generally sudden, and is often accompanied by a chill, followed by high fever. The onset is quite similar to that of the malarial fevers. Soon after the initial fever, there appears a glandular swelling in the groin, axilla, or neck, generally in groin, The swollen gland is extremely tender. There is great mental depression. Death occurs usually in from two to five days. Absolute diagnosis of the bubonic type is made, readily and safely by aspiration of the swollen glands. It would be difficult to make a diagnosis of septicæmic plague, in the absence of other cases of bubonic or pulmonic plague, save at post-mortem. In the pulmonic type the bacilli occur in enormous numbers in the watery, bloody expectorations. Rats are very susceptible to this disease, and often die in great numbers in the course of an epidemic; flies, ants and other insects act as carriers of the plague bacilli. The first and greatest prophylactic measure is cleanliness, Rats and mice should be destroyed. Food and drink should be protected from possible contamination. During epidemics all food should be cooked.

The Lancet, May 17, 1902.

Remarks on the Subsequent History of Children Born While the Mother Was Insane.—A. F. Tredgold studies this question, using several statistical tables for the purpose. He believes that the only logical conclusions, from the facts at his command, are the following: (1) The mental and physical condition of the child is in no wise influenced by the mere fact of the mother being insane during pregnancy; (2) Neither is the condition of the child influenced by the variety of insanity, the duration of the attack, or the age of the mother, nor even directly by the number of attacks from which the mother may have suffered; but that (3) This condition is directly dependent upon the presence or absence of morbid hereditary influences.

Liquid Air as a Freezing Medium in the Laboratory.—W. H. B. Stoddart says that liquid air evaporates quite slowly when stored in the vacuum flasks used by the manufacturers. An untouched gallon evaporates from the storage flask in about six weeks. In ordinary constant use in the laboratory a gallon lasts a little longer than a fortnight. Liquid air is therefore very much cheaper than ether for laboratory purposes. Further, it acts much more rapidly than ether—about from twenty to thirty compressions of the indiarubber bulb are always sufficient to freeze the gum and the tissue remains frozen much longer. On the other hand, tissues are not destroyed by liquid air-freezing more than by ether freezing. Lastly, the unpleasant smell of ether is done away with and instead thereof a supply of pure air issues from the microtome. When working with liquid air the best plan is to shut all the windows and ventilators and to be satisfied with the pure air issuing from the microtome. It is, says the author, equal to a good tramp in the country.

A Case of Rodent Ulcer of the Nose and Eyelids Treated with the X-Rays.—The case is reported by Stopford Taylor, whose patient was a sailor aged eighty-two years. The condition has existed for some twenty years. Treatment was begun on May 15, 1901. A current of three ampères was used for twenty minutes twice weekly. From June 12 the sittings were increased to four times a week. Up to about August 19 healing had been very slow, but on this date treatment had to be suspended because of the sharp reaction, indicated by a sudden appearance of a dusky red erythema surrounding the ulcer, attended by the destruction of the newly-formed epithelium upon its surface and of the surrounding epidermis, brought about, I think, by change of the *x*-ray tubes from one of high vacuum to one of medium vacuum. It took five weeks for the effects of this reaction to disappear, when spontaneous healing began and was very rapid, for on October 15 the ulcer had cicatrized with the exception of a small area, which proved obstinate and where an application of potassa fusa had been made six years previously. On this date treatment by the *x*-rays was resumed, but they were applied to this unhealed spot only for ten minutes three times weekly, the newly-formed scar-tissue being specially protected from their action with double lead-foil shields.

Treatment was completed by December 20. At that time there was not the slightest evidence of the disease, neither has there been any recurrence. It is interesting to note also that the conjunctiva of the everted lower lid and that of the inner canthus was covered with a smooth layer of opaque horny epithelium and no trace of the puncta remained.

A Case of Malformed Fœtus.—The peculiarites of the case are thus described by N. Erlington. The body was well developed and the lower part of the face was that of an ordinary full-time child. The frontal bones were widely separated and were flattened back so as to be almost at right angles to the face. The eyes were very far apart and the eyeballs protruded. The parietal bones were small and what should have been there upper margins were pointing almost directly backward. The occipital bone was only represented by two small strips of bone lying close to the posterior edges of the parietal bones. All the cervical and the upper five or six dorsal vertebræ were apparently wanting. The chin rested on the second piece of the sternum; the ears, which were abnormally large, lay in front of the shoulders. The back of the head and the neck was occupied by a mass of freshly formed blood-clot, which in one place had burst through the skin; there was no hair and the skin of the head was very thin. The labor occurred at full term and the mother was certain that the child was alive two hours before her pains began, which they did only three hours before the child was born. The author had to be content with an external examination, and consequently cannot say what was the condition of the brain and the spinal cord. There was nothing during the pregnancy out of the ordinary except the amount of liquor amnii, which was very excessive. He thinks that there is no doubt that the child died from the effect of pressure during parturition. The presentation, as may be imagined, was somewhat bewildering, but the progress of the labor was very rapid, and the child was born with the chin presenting under the symphysis pubis without any difficulty.

The Lancet, May 24, 1902.

Improvements in the Operation for the Radical Cure of Inguinal Hernia by the Use of Some New Instruments and Gold-Wire Sutures.—I. Tansini has devised a hook for the spermatic cord, special retractors, and a spatula for depressing the floor of the wound, all of which are figured in his paper. He recommends the use of gold for sutures, as it can be drawn into wire finer than silk, and is also stronger and more flexible. The suture is fixed by twisting the ends of the wires three times. With it and with the instruments above referred to, the author is able to complete the radical operation in ten minutes. Operating in the same place and with the same assistants, out of 150 consecutive operations for the radical cure of hernia, of which not a few were of a serious nature either from their size or from adhesions, or from the age of the patient, he has uniformly obtained healing in eight days without any suppuration, early or late, and without a single relapse.

Linen Sewing-Machine Thread for Ligatures and Sutures.—Arthur E. J. Barker says that this material can be obtained everywhere, and that it is relatively very cheap. It can be easily sterilized by boiling in plain water, and then stored in methylated spirit. It is enormously strong, and ties a most uncompromising knot. It is easy to work with, and runs through the eye of any suitable needle easily, having been spun with special care in order to travel evenly through the sewing-machine needle. He has used several sizes, and now limit these to three, viz., No. 40, which is as thick as need be desired for the abdominal wall or ligature of the larger arteries; No. 60, which is thinner, but still very strong; and No. 90, which is as fine as can be desired, say, for a suture of the intestine. He finds it convenient to procure No. 40 as a white thread, No. 60 in red, and No. 90 in black. He has prepared it by simply boiling it for an hour in ordinary water, and then keeping it in spirit. A little of the dye comes out of the finer sizes in boiling, but does not appear otherwise to alter the thread which can be boiled over and over again without rotting it. It is well borne by the tissues, and altogether seems to be an ideal article for the purposes named.

A Contribution to the Study of Tropical Abscess of the Liver.—Ten cases are reported by B. J. Godlee. Special attention is called to the complicating abscesses in the pleural cavities and lungs. If extensive pleural adhesions have formed, the patient is saved from very great danger. Two important diagnostic points with reference to the existence or non-existence of adhesions are the following: (1) The upper level of the dulness caused by a liver which is enlarged upward is, speaking generally, considerably lowered when the patient is placed on his left side. If, however, the lower part of the pleural sac is obliterated by adhesions, this does not occur, because the lung cannot be sucked down into the pleural sinus by the falling away of the liver—that falling away which so frequently causes pain when the patient attempts to lie on the left side; (2) In very thin people, even when the parts are normal, it is often possible, on careful inspection to see the lower margin of the lung on the right side move upward and downward during respiration. It may sometimes be observed on the left side, especially if the spleen be enlarged, or if there be a great enlargement of the left lobe of the liver, or, indeed, any tumor in this situation; and on the right side it is more obvious when the liver is enlarged than when it is of normal size. This sign requires somewhat careful inspection for its discovery, and it is only of use in emaciated or very thin subjects. If it be present, it is a certain proof that there are no adhesions in this situation, and that there is little or no pleural effusion. Persistent discharge of chocolate-colored pus from a pleural or pulmonary abscess is no positive proof that the liver abscess has not healed. A pulmonary abscess consequent on a hepatic abscess should be opened without delay, and the site of election for the incision is in the lower axillary region.

British Medical Journal, May 17, 1902.

A Note on the Operation for Removal of Malignant Disease of the Breast.—Douglas Drew has, during the last two years, removed in almost all cases the sternal part of the pectoralis major, and in the more recent cases both pectoral muscles. But it is too early yet to draw definite conclusions concerning immunity from recurrence. It makes an extensive operation more extensive, but shortens very much the time occupied in clearing the axilla. The after-condition of these patients shows remarkably little inconvenience. In many cases it does not seem greater than when the muscles have been left intact.

An Analysis of Forty-six Cases of Cancer of the Breast Which Have Been Operated upon and Survived the Operation from Five to Thirty-two Years.—Thomas Bryant believes that the interval which may take place between the primary amputation of a breast for cancer and its recurrence in the scar or second breast, when such occurs, is very uncertain. While in half the cases tabulated in this paper recurrence took place in five years or less, in the second half the interval varied from six to thirty-two years. As to the seat of the recurrence it appeared in or about the scar of the original operation in fourteen cases; in the scar and axilla in only one case; in the sternum in three cases; in the second breast in ten cases, and in five of these the scar of the first operation was also involved. The writer notes that it is not his custom to clean out the axilla in all cases of recurrent cancer, and yet his results do not suggest an inadequate operation. They show that operations for cancer of the breast when undertaken at an early period of the disease are not so unsatisfactory in their ultimate results as we have been led to believe. Even should the disease recur after the primary operation, the prospects of prolonged life without second or third operations are neither unreasonable nor unsatisfactory. When recurrence has been treated by second or third operations much benefit may be conferred. The result of operation would be much better than they now are if they could always be undertaken during the early development of the disease. Every breast tumor, neither clearly inflammatory nor encapsuled, which seems to involve gland tissue, and may therefore be cancerous, should be at once explored and removed, if found to be cancerous, with the whole gland; and recurrent growths when localized should be similarly treated. In advanced and neglected cases, where the lymphatic glands and covering integument are involved, the so-called complete operation may be called for, but its results are not by any means so likely to be as favorable as these reported by the writer, whose operation is rather between the modern operation known as Halsted's and the older one by which rarely anything more than the diseased breast itself with the skin covering, when involved, was removed. In cases of recurrence not favorable for operation, unless the removal of the ovaries can be shown in the future to be successful, the *x*-rays should be employed. The influence of the rays, to make them effective, must be maintained for several months after it has seemed to be beneficial; a three-months' course, with about three applications a week, appears to be the shortest from which any permanent good is to be expected, and this treatment is full of hope.

A Case of Premature Senility of the Uterus.—Augustus W. Addinsell reports the case of a woman, aged twenty-six years, who consulted him for sterility. She had at that time been married a year, but during all that time had never menstruated. Examination, both internal and external, revealed nothing abnormal. It is now nearly seven years since she was married, and during this period there has been no appearance of mentruation, with the exception of a slight show for one day only. She appears to be in good health, and is strong and active. She complains of heats and flushes at irregular intervals. Both ovaries seem healthy, but no cervix can be felt, merely a dimple in the vaginal roof. Bi-manually, no uterus could be made out, but the sound passed just under one inch. Inquiry into the history brought out the fact that the honeymoon had been spent in Switzerland, and within a fortnight of marriage the patient had sustained a great shock from what she feared might be a fatal accident to her husband. This occurred about the time that menstruation was expected. The nervous shock probably brought about the condition of premature senility of the uterus.

British Medical Journal, May 24, 1902.

Malignant Smallpox Fatal within Six Hours.—E. R. Coffey describes this case. The patient was a boy of ten weeks. When first seen the whole face was covered with a subcutaneous hemorrhagic rash. Besides this there was a rash slightly elevated on the surface which resembled that of measles. Beneath the jaw and around the neck and on the buttocks there were red patches, as if the surface had been touched with blood. The temperature was 101°. The child was partly unconscious and groaned as if in pain. The child had been perfectly well on the previous day, but on the noon of the day when seen it was dead. The diagnosis of malignant smallpox was made. The rapid fatality and difficulty of diagnosis made the case a most unusual one.

Case of Sporadic Cretinism, in Which a Relapse Occurred Owing to Omission of Thyroid Extract.—Arthur Hall reports this case to show that cretins should be kept under careful observation if the results of treatment are not to be spoiled. The child was first seen at fifteen months. It was just weaned and was put at once on thyroid extract. In a month the improvement was general, and in four months it was very great. In a little less than a year from the first treatment the thyroid was stopped by the parents, who thought that the child was becoming weaker. From that time the child steadily went backward. The child is now seven years old and is less a cretin and more of the child with myxœdema. The writer believes that in spite of the valuable time that has been lost by the cessation of treatment, that with judicious treatment and careful watching, the child will yet develop into a fairly useful member of society.

Myxœdema in Mother and Child.—Although the occurrence of this disease in mother and daughter may be a coincidence, still S. W. MacIlwaine thinks that it may show an inherited susceptibility of the thyroid to toxic influences. The mother had previously been in excellent health, but was suddenly seized with a persistent attack of diarrhœa and vomiting, which was followed by phlebitis. Graves' disease was diagnosed. The skin became affected, and also the hair, and small doses of thyroid were given, and in three months all of these symptoms disappeared, leaving no doubt that the case was one of myxœdema. Four years later the child was born, and when one year old was seized with dysenteric diarrhœa. She became a typical cretin, but on the thyroid treatment she recovered. The myxœdematous state was clearly secondary to some pre-existing toxic condition. It was an incidental symptom-group, not a primary disease.

A Case of Complete and Temporary Paralysis of the Limbs in a Child, Probably a Case of Recovery from the Initial Stage of Acute Anterior Poliomyelitis.—This case is reported by Judson S. Bury. The patient was a girl aged nine years. It was first noticed that the child had a chill. This was followed by fever and then her legs seemed to fail her. She became unable to move any part of her body except the head. She had no pain and no alteration in cutaneous sensibility. The knee-jerks were absent. The action of the bladder seemed to be normal. There was no history of sore throat. In less than a month she left the hospital quite recovered from the paralysis. As to the site of the lesion, the flaccid paralysis and the loss of the deep reflexes point to an affection of the lower neurons for the limbs and trunk. The absence of all sensory and of all other symptoms than paralysis indicates that the motor path was alone at fault. Just as difficult to settle as the site of the lesion, is its nature. The action of some poison seems to be the simplest explanation. Yet such a speedy recovery is remarkable. No facts were obtained which threw any light either on the nature or on the mode of entry of a supposed infectious agent. If it is assumed that a toxin did attack the lower neurons of the parts paralyzed, the rapid disappearance of the paralysis would suggest that the toxin had been quickly destroyed.

Deutsche medicinische Wochenschrif , May 8, 1902.

Acute (Trophoneurotic) Bone Atrophy Following Inflammatory and Traumatic Lesions of the Extremities.—P. Sudeck says that inflammatory lesions and traumatism of the extremities may be followed by an acute bone-atrophy, which is usually very persistent. In addition to the bone atrophy there may also be present an atrophy of the soft parts following traumatism. As a rule, all of the bones on the peripheral side of the lesion are involved in the atrophy. This atrophy is to be regarded as trophoneurotic, arising reflectively from the peripheral irritation. At first the radiographic picture, as shown by the Röntgen ray, is characteristic. The spongiosa shows the presence of a large number of small spaces, arranged in groups so that the whole has a dappled appearance. Later the cortical portions of the bone show numerous similar spaces. The most prominent symptoms are stiffness, pain and loss of motion in the affected parts. The diagnosis rests primarily upon the etiology and the radiographic picture as described above. As a rule, the prognosis is unfavorable, more or less loss of motion and stiffness prominently remaining. Under appropriate treatment, however, a few cases proceed to complete recovery. During the acute stage the affected parts should be immobilized. Just as soon as the pains subside, however, massage and exercise should be begun. Localized hot baths are also very useful in relieving the stiffness at this stage. If the massage and exercise give rise to pain, they should be discontinued, as under these conditions, additional irritation is caused thereby. It is important that a careful differentiation should be made between this condition and tubercular or syphilitic bone affections, since the treatment of the latter when applied to this form of bone-atrophy works irreparable injury.

The Abortive Treatment of Furuncle by the Means of Subcutaneous Disinfection.—A. Bidder says that beginning furuncles and carbuncles may be aborted by the subcutaneous injection of a 2 per cent. aqueous solution of carbolic acid, and also that advanced lesions may be rapidly cured in the same manner. Weaker solutions may give equally good results, but they have never been employed by the author. On the other hand, stronger solutions (3 and 4 per cent.) have frequently been advantageously used. In beginning furuncles or carbuncles the needle of an ordinary hypodermic syringe, filled with the carbolic acid solution, is introduced close to the border of the zone of inflammation and inserted in a diagonal direction until the center of the lesion is reached. A few drops of the solution are then injected and the needle withdrawn. The canal thus made serves for the exit of the main portion of the solution, which is then to be injected in the following manner: Beginning at a point on the border of the zone of inflammation, directly opposite to the place where the needle was first introduced, the needle is inserted to the center of the lesion in a manner entirely similar to that above described. The entire contents of the syringe (about thirty drops) is then injected. The major part of the solution thus injected soon flows out through the canal first made. In large lesions it is often advantageous to use larger needles than those which usually accompany the ordinary hypodermic syringe as the outflow of the carbolic acid solution is much accelerated thereby. In advanced lesions which are discharging pus the primary insertion of the needle is unnecessary, as the carbolic acid solution exudes freely from the fistulæ which already exist. The after-treatment consists of the usual antiseptic dressing. Immediately after the injection the pain in the lesion is increased and there is usually some fever. These symptoms, however, subside in twenty-four hours and rapid recovery takes place. In the case of beginning lesions scarcely any scar remains. Nine cases are reported in illustration of this method of treatment.

Berliner klinische Wochenschrift, May 12, 1902.

Diabetes Insipidus and Paralysis of the Bladder.—C. Posner reports a case of diabetes insipidus, during the course of which a paralysis of the bladder supervened. Careful examination failed to show any cause for the paralysis either in the central nervous system or in any other location. While it is possible that the same may have been due to an overfilling of the bladder, this supposition is not probable. The patient was forty-two years of age and a primary degeneration of the bladder may hence be excluded. It is well known that various nervous manifestations are often present in diabetes insipidus. The etiological status of these manifestations is not certain, but it seems sure that it is identical with that of the diabetes. The occurrence of paralysis of the bladder in diabetes insipidus has not been previously reported, and it is highly probable that in this case it is to be regarded as of similar origin to the frequent nervous manifestations above-mentioned. Since the report of the above a similar case has been observed in a patient fifty-four years of age.

Münchener medicinische Wochenscrift, May 13, 1902.

Paranephritis and Pyonephrosis Following Furunculosis.—A. Cohn reports five case of paranephritis, and one case of pyonephrosis, which were preceded by a furunculosis. No other cause could be discovered and the author thinks that the infecting microorganisms gained entrance through the furuncles. In the case of pyonephrosis it is certain that the infection did not proceed upward from the bladder. There are many cases of paranephritis in which the etiology is entirely obscure, and it is impossible to ascertain in what manner the infection has gained entrance. In view of the above cases, it is possible that such may have taken place through a small furuncle which has been overlooked in the examination of the patient. Increased observation along this line is greatly to be desired.

Reflex Spasms Caused by Ascaris Lumbricoides.—J. P. Naab draws attention to the pronounced nervous symptoms which may be produced by ascaris lumbricoides. The author has recently observed several cases in which the clinical picture closely resembled that of meningitis. The child was suddenly seized with convulsions and rapidly became comatose and thus remained for several hours. The diagnosis was at first doubtful, but later an examination of the stools revealed the presence of numerous worms. In all the cases the administration of santonin and calomel was followed by prompt recovery. There is evidently no relation between the number of worms and the intensity of the cerebral symptoms since the latter were very pronounced in several cases where only one or two worms were found. From a diagnostic standpoint the presence of an excessive secretion of saliva is of much importance. In all of the cases which showed marked cerebral symptoms the secretion of saliva was so abundant during the night that it flowed in considerable quantity from the mouth. In cases where the stools cannot be immediately examined the presence of this symptom should be given great weight.

Influence of the Movements of the Diaphragm upon the Liver.—K. Walz designates as "respiratory" those changes in the shape of the liver which are produced by the movements of the diaphragm during respiration. The so-called "rest-stage" of the liver occurs at the end of expiration. During ordinary respiration this "rest-stage" is moderately prolonged and while it lasts the blood enters and leaves the liver unimpeded, the circulation in the liver vessels being very slow. The gall-bladder is lax and its contents remain *in situ*. The "inspiration-stage of the first grade" occurs at the end of ordinary inspiration. It is not present, however, in pure toracic breathing. During this stage the blood and the bile are driven out of the liver vessels, but the gall-bladder still remains lax. In forced breathing there is present in addition to the "stages" already described (1) A "stage of forced expiration," in which the blood is driven out of the liver vessels and the bile out of the gall-bladder by the compression of the bladder between the lobus quadratus and the right lobe of the liver; (2) The "inspiration-stage of the second grade," which occurs at the end of forced inspiration. The effects here produced are similar to those described in the "inspiration-stage of the first grade," but are much more pronounced. It is especially to be noted that during this stage the bile is not expelled from the gall-bladder, as has been supposed by Hasse. The practical point is that in respiratory liver-massage the production of deep expirations are much more important than the production of deep inspirations. The circulation of the liver is influenced by both, but the expulsions of gall from the gall-bladder is produced only by the former.

French and Italian Journals.

Acute Dacryadenitis.—Enrico Grimaldi concludes from his researches that this is an extremely rare disease. It is more apt to affect both lachrymal glands than one only, and may implicate the whole or only part of a gland. As a rule, it disappears in a few days, but it may go on to suppuration. The bilateral dacryadenitis is more apt to resolve, while the unilateral is more likely to suppurate. As a rule, it originates in some infection already existing in the organism, but it may arise from various causes.—*Giornale Internazionale delle Scienze Mediche*, April 30, 1902.

A Contribution to the Treatment of Aneurysms by Gelatin.—Claudio Mancini reports two cases which, while they cannot be regarded as conclusive, demonstrate that gelatin is absorbed, that it coagulates the blood, that it is not dangerous, and that it is certainly a valuable auxiliary in the treatment of aneurysms. It does not, of course, have the slightest effect upon the cause of the arterial dilatation, but it is to be used in combination with measures directed to that cause. In the case of patients who are apparently unable to tolerate subcutaneous injections it is probable that the substance can be advantageously administered in the form of enemata.—*La Riforma Medica*, May 2, 1902.

Paranephritic Hæmatic Cyst.—This case is reported by Walther. The patient was a young woman of twenty-two years, who was referred to him with the diagnosis of perforating appendicitis. The patient presented the appearance of one suffering from internal hemorrhage. Chloroform was administered and in the renal region there was palpated a tumor the size of a fetal head. Lumbar incision revealed a large hæmatic cyst which contained a liter of blood and clots. The cyst was attached to the upper border of the right kidney. It was excised, the wound was drained and recovery took place. It was examined histologically and proved to be a paranephritic cyst.—*La Médecine Moderne*, May 7, 1902.

The First Symptoms of Deafness.—Castex enumerates certain symptoms, which he says are characteristic of beginning deafness. In the child there is often noticed an air of distraction, which is really due to bad hearing. Again the child will often listen with the head obliquely tilted. In the adult it is often noticed that a question addressed to him will have to be repeated. Many times the individual affected first discovers his infirmity at the theater because he notices that in order to hear he must occupy one of the front seats, or he hears the music better than the talking. Again others are not able to follow general conversation. Certain patients with tympanic sclerosis hear well over the telephone. The voice of the deaf patient is often a sigh. Some old people hear better from a distance than nearer, or they will hear a whispered voice better than a loud one, because the affected organ has lost the ability of accommodation and perception.—*Le Bulletin Médical*, May 17, 1902.

A Case of Exophthalmic Goiter Simulating Pulmonary Tuberculosis.—A. Pégurier reports the case of a man twenty five years old who became emaciated, had a severe cough, fever, suffered from profuse sweats, and from digestive disturbances. There was no hæmoptysis, the appetite was excellent, and both the stethoscopic signs and the results of bacteriological examination were negative. The beginning of the illness was sudden, following a violent emotion; there was tachycardia, intense carotid pulsations, but a weak radial pulse, and a slight hypertrophy of the right lobe of the thyroid gland. There were present the characteristic tremor of goiter, irritability, and the signs of Graefe and of Buzzard-Charcot. A milk and vegetable diet was ordered. Alcohol, tea, coffee, and tobacco were forbidden. Every other day a shower-bath with water at 45° F., with massage. Every morning, theobromin was given and at every meal bromohydrate of quinine. Complete rest of body and mind, and a sojourn in the country in a climate of high altitude was ordered. In four or five months the patient was decidedly better. The writer does not consider the results of surgical treatment always encouraging.—*Journal des Praticiens*, May 17, 1902.

Grippal Hemorrhagic Cystitis.—M. A. Breton reports three cases of this nature. The first patient was a woman about fifty years old. Four or five days after the first symptoms of the disease, the urinary troubles suddenly began. Pain was strictly localized to the vesical region, and was both spontaneous and elicited on pressure. Polyuria, vesical tenesmus, a burning sensation during micturition and finally hæmaturia appeared. There was neither sugar nor albumin in the urine. The hæmaturia persisted for three days, but finally yielded to rest and treatment. For twelve days the signs of cystitis lasted. The upright posture or walking aggravated the symptoms. At the end of about nineteen days, the cure was complete. The second patient was a woman of sixty-five years. The hæmaturia lasted for eight days and was very abundant. The fact that this patient could not stay in bed accounted for the violence of the attack. The third case was a woman of thirty-four. The hæmaturia lasted for about nine full days, because she was not able to stay in bed from the first. Treatment of these cases consists in rest in bed, milk diet, emollient drinks, ergotine, hot vaginal douches, suppositories of opium and belladonna for the pain and tenesmus. Benzoate of soda relieves the cystitis.—*Gazette des Hôpitaux Civils et Militaires*, May 13, 1902.

American Journal of the Medical Sciences, May, 1902.

The Unilateral Occurrence of Kernig's Sign as a Symptom of Focal Brain Disease.—Joseph Sailer believer that Kernig's sign may occur as a symptom of focal encephalitis, and in this condition may be present upon only the opposite side of the body. Sometimes it is associated with spastic paresis of the leg upon that side. In these cases there may be a persistent tonic spasm of the flexor muscles of the arm, which, however, does not resemble Kernig's sign in its mechanism. The most reasonable explanation of Kernig's sign that we possess at present is to ascribe it to an irritative lesion of the pyramidal tract that diminishes but does not destroy its functional activity. It is obvious that it is not a lesion of the meninges, but of the subjacent nervous substance that causes the occurrence of Kernig's sign. Practically, all cases of leptomeningitis are associated with a more or less severe degree of encephalitis. As far as the writer has observed, however, the occurrence of the sign in the course of a typical case of encephalitis has not been recorded.

Localization of the Mental Faculties in the Left Prefrontal Lobe.—Charles Phelps states that it is immaterial, so far as it concerns a control of the mental faculties in the prefrontal region. Whether the function of this lobe is one of coordination or one of inhibition, or whether it is a direct control of mental, moral and emotional phenomena comparable to the control of mobility in the motor areas, or whether it is a control of sensori motor processes. It is simply a question of topography, entirely independent of psychological considerations. The writer believes that: The more absolutely the lesion is limited to the left prefrontal lobe the more positive and distinctive are the symptoms of mental default. The integrity of the mental faculties remains unimpaired in the right frontal lesion, though it involves the destruction of the entire lobe, or even extends to the entire hemisphere. The exceptional instances in which seemingly opposite conditions exist are always reconcilable, on more careful examination, with the assertion of an exclusive control of the mental faculties residing in the prefrontal region of the left side. The writer adds that if the same nature and degree of proof which is deemed sufficient for the localization of other cerebral functions may be accepted in case of the mental faculties, their center of control has been established.

The Causes and Varieties of Chronic Interstitial Pancreatitis.—Eugene L. Opie says that chronic interstitial pancreatitis is slightly more frequent in males than in females. Two-thirds of the total number of cases occur between the ages of forty and sixty years. The most frequent cause of the disease is obstruction of the duct of Wirsung, due to pancreatic calculi, to biliary calculi in the terminal part of the common bile-duct, or to carcinoma invading the head or body of the gland. Duct obstruction may be followed by the invasion of bacteria, which take part in the production of the resulting lesion. Ascending infection of the unobstructed duct of Wirsung may follow an acute lesion of the duodenum or of the bile passages, and may cause chronic inflammation. In cases in which there has been a history of long. persistent vomiting, chronic diffuse pancreatitis may be found at autopsy, and is, probably, the result of an ascending infection of the gland. General or local tuberculosis is occasionally accompanied by chronic diffuse pancreatitis, affecting chiefly the interstitial tissue of the gland. Chronic interstitial pancreatitis is not infrequently dependent upon the same etiological factors, notably alcohol, which produce cirrhosis of the liver, and in about one-fourth of the cases the two lesions are associated. Following duct obstruction and ascending infection the lesion, affects, principally, the interlobular tissue, only secondarily invading the lobular tissue and sparing the islands of Langerhans. Diabetes results only when the lesion is far advanced. Accompanying the so-called atrophic or Laennec's cirrhosis of the liver, the pancreas is at times the seat of a diffuse chronic inflammation, characterized by diffuse proliferation of the interacinous tissue, which invades the islands of Langerhans. A similar lesion accompanies hyaline degeneration of the islands of Langerhans and the condition known as hæmochromatosis. Interacinar pancreatitis is usually accompanied by diabetes mellitus. When diabetes is absent the lesion is of such slight intensity that the islands of Langerhans are little implicated.

The Lateral Chain Theory of Ehrlich as Explanatory of Toxins, Antitoxins, Bacteriolysins, and Hæmolysins.—F. P. Gay states that Ehrlich has conceived each cell as possessing, in addition to its nucleus, multitudes of atomic "lateral chains" or "receptors," each with its affinity for a certain assimilable substance. The toxin unit must be considered as more than a simple body; it possesses at least two parts, a "haptophore" group, which unites it to the cell receptor and a "toxophore" complex, which is the poisonous element. Excess of toxin-elective "receptors" cumbers the cell, and they are eventually thrown off into the circulating blood, where they form the antitoxins. When "circulating receptors" or antitoxins are present in the blood the haptophore group become anchored and never reach the cell, which accounts for the neutralization of the action of toxin by antitoxin. Toxins are "unicep-tors," that is, they have only one uniting arm, the haptophore group. Bacteriolysis depends on two elements: A specific body acquired by immunization which is not destroyed at 55° C., and a substance present in all normal sera, destroyed by heat or by standing. A hæmolytic serum contains two substances, to which Ehrlich gas given the names of "immune body" and "complement." The immune body has two affinities, a stronger one for the red blood cell, and a weaker one for the complement. Red blood corpuscles contain a united immune body. The immune body having two uniting processes is an "amboceptor." The complement resembles in its constitution and action a toxin; it has a haptophore group, which unites with the immune body, and a "zygomatic complex," which acts on the red blood cells saturated with immune body in a manner partly toxic and partly fermentative. The complement can unite with red blood-corpuscles only in the presence of the immune or intermediary body. Just as the inoculation of toxins gives rise to antitoxins, so inoculation with "hæmolysins" gives rise to antihæmolysins, which are more complex, however, being composed of "anticomplements" and "anti-immune bodies." There is reason to suppose, although the heating of hæmolysins destroys the action of the complement, that in reality it is not wholly destroyed but forms a "complementoid," which can form anticomplements. This concept of Ehrlich's gives a rational basis for serum therapy as we have it, and suggests by analogy the problems of the serum therapy that may arise.

The Etiology of Infantile Paralysis.—Alfred M. Gossage states that, from present evidence, it is impossible to arrive at any definite conclusion as to the exact nature of the disease. Clinical records are strongly in favor of at least two, and probably three or four, definite diseases, being included under the term anterior poliomyelitis: (1) One in which the paralysis comes on suddenly without previous ill-health; (2) One in which the onset of the paralysis is preceded by general symptoms, such as fever, vomiting, pain in the back, etc.; (3) The disease occurring in the epidemic form; and (4) Adult poliomyelitis. The three last-mentioned may possibly be forms of the same disease which may sometimes occur sporadically, and at other times in the form of an epidemic. Occasionally cases occur sporadically which are like the epidemic cases, the disease having spread to the nerve centers in the brain and to the peripheral nerves, and in some of these even death has ensued. In spite of the fact that a purely vascular lesion (hemorrhage into the gray matter of the cord or thrombosis) would best explain these striking cases where the onset is absolutely sudden, without any other sign of ill-health, we are compelled to regard such a cause as improbable. Of the other two possible ways by which the cells in the ventral horns might be destroyed, a local inflammation or a primary degeneration of the nerve cells, it is impossible at present to quite ignore the latter. An acute degeneration of the nerve cells might be brought about by some poison circulating in the blood which might be formed by the growth of the microorganisms which are the causes of such diseases as scarlet fever, or by the growth of a microorganism which is specific to infantile paralysis. Such a primary degeneration is a possible cause for some cases of infantile paralysis, but the evidence in its favor is very inconclusive. The one definite fact obtained from the post-mortem examination is that in all the recent cases there are signs of a local inflammation in the ventral horns. There is no direct evidence of the existence of a specific organism for this disease, excepting the observations of Schultze and Chapin. But the clinical aspects and the post-mortem appearances are strongly in favor of this theory. It is probable that the organism, associated with anterior poliomyelitis, is specific to that disease and is not concerned in the causation of any other morbid condition. Since there seem to be two or more definite diseases included under the name of infantile palsy, there would probably be two or more specific organisms. It is impossible to go beyond this at present.

Bulletin of the Johns Hopkins Hospital, May, 1902.

Syphilitic Disease of the Cerebral Arteries.—F. C. Goldsborough reports the results of autopsy on a case of syphilis. There was shown to be pre-eminently an affection of the vessels, the meninges and central nervous substance being relatively little involved. The lesions consisted in thickening in the walls of the vessels, which were histologically gummata, with the characteristics of gummata in other situations. These gummatous lesions were most advanced in the adventitia, and were generally accompanied by proliferation of the intima in a corresponding locality. From this it would appear that the process probably begins in the adventitia. It is on account of its characteristic histological appearance, as specific in its nature as the tuberculous change in the vessels in tuberculous meningitis, and is not to be confused with the ordinary arteriosclerosis.

Paracolon Bacillus.—Richard P. Strong reports the single case of infection with paracolon bacillus which has been seen at Manila. The body was observed forty-two hours after death. There was considerable post-mortem change and gas in the subcutaneous tissues. The hospital record at Santa Cruz, where the patient had died, stated that there had been no departure from the ordinary type of typhoid fever. Gwyn has reported a case of infection with the paracolon bacillus in a patient with all the clinical symptoms of typhoid fever. Cushing has reported a case of paracolon infection, the organism being obtained from an abscess of the rib following an attack of prolonged fever resembling typhoid. The serum in both these cases agglutinated the organism. No serum reaction was tried in the present case. So it cannot be said whether or no the organism was a post-mortem invader. There were no macroscopic lesions of the intestine to serve as portal of entry. No other cause of death, however, could be found. Although this report is incomplete from the circumstances attending the examination, the writer thought it worth while to mention it.

The Effect of Certain Poisons on Inorganic Ferments.—Harry C. Jones states that the inorganic ferments in question are finely divided metals, such as platinum, gold, silver, cadmium, etc. The metals are obtained in the finely divided condition by dipping bars of the metal in question into pure water, and passing a heavy electric current from one bar to the other through the water. The metal under these conditions is torn off in a state of such fine division that it remains suspended in the water in the form of a solution. These solutions of the metals are not true solutions, and, in order to distinguish them, they have been called pseudo-solutions or colloidal solutions. Solutions of starch, albumin, and the like, are analogous. The solutions of the metals have some remarkable properties, which seem to resemble in many respects the properties of the organic ferments. A colloidal solution of platinum accelerates the oxidation of alcohol to acetic acid in the presence of the oxygen of the air, as well as the organic ferment *mycoderma aceti*. Finely divided iridium decomposes calcium formate into calcium carbonate, carbon dioxide, and hydrogen in the same manner as certain bacteria. The analogy between the action of the finely divided metals and ferments holds also for diastatic phenomena, such as the inversion of cane sugar. The finely divided metals do not enter into the reaction which they effect. Substances which act by means of their surface alone, without entering into the reaction, are known as catalyzers, and such reactions are termed catalytic. Experiments have shown that the colloidal solution of platinum can recover from the poisonous action of cyanogen iodide, provided the poison is not too concentrated. Bredig does not claim that there is any strange identity between the metals and the enzymes. But he believes, from the great number of analogies, that the colloidal solutions must be considered, in many relations at least, as inorganic models of the organic enzymes. The writer refers the action of the colloidal solutions of the metals, the enzymes, and catalysis generally, to the surface energy possessed by these substances. In this way we have advanced one step in the solution of the nature of catalysis, which underlies so many processes of both living and dead matter.

Book Reviews.

Psychology, Normal and Morbid. By Charles A. Mercier, M.B., F.R.C.P., F.R.C.S. London: Swan, Sonnenschein & Co.; New York: The Macmillan Co.

This comprehensive treatise on psychology has, from the first page to the last, the distinctive stamp of individuality, principally because the subjects therein discussed are considered from a point of view very different from that of other writers. The book has been written mainly, it would seem, for those interested in the subject of insanity, but it will be found instructive and suggestive to him who is not particularly concerned with the study or care of the insane, but who is in pursuit of general culture.

The contents of the volume are: a brief (and rather unsatisfactory) discussion of Sensation; Thought, under which are discussed abstraction, faults of thinking, axiomatic reasoning, belief, faults of belief and apperception; Volition; Memory, Pleasure and Pain; and Subject Consciousness.

The chapters devoted to Reasoning are particularly worthy of note. The author has striven to prove that the Syllogism is not the sole form of reasoning, and that it is, indeed, but a subordinate mode of axiomatic reasoning. The subject of belief and delusion is discussed in an attractive and scholarly manner. The writer states that in the section on Memory he has endeavored to clear up the ambiguities which have made the term one of nebulous meaning. We regret to say that success has not crowned his effort, for unless it be the section on Pleasure and Pain, there is no more unsatisfactory chapter in the book.

Although it is impossible here to enter into an analysis of Dr. Mercier's work, we wish to record our opinion of its value, and of its merit. The time is not far distant when a course in psychology must form a part of the medical student's studies. In the meantime the student who wishes to lay a solid foundation for the superstructure to be constituted by his future experience, can do no better than to study the volume under review.

Morphinism and Narcomanias from Other Drugs: Their Etiology, Treatment and Medico-legal Relations. By Dr. T. D. Crothers. Philadelphia: W. B. Saunders & Co., 1902.

This small volume is written in a somewhat gossipy or "popular" style. Selections from the table of contents are: The History of Morphinism, Opium Taking; Its Prevalence and Diagnosis; Treatment of Morphinism; Asylum Conditions; Drugs; Hygienic Measures; Cocainism; Tobacco Inebriety; Ether Inebriety, and Chloroformism, its Etiology and Treatment.

Some of the author's inculcations can be best conveyed by quotation. In speaking of treatment, he says: "Private and special asylums have superior advantages, which cannot be obtained elsewhere. In such places the stimulating firmness of a stranger, if coming with tact, does much to rouse up a weakened will. The surroundings, with the central purpose of removing the morphine, will encourage personal effort on the part of the patient. This idea should be made dominant at the beginning."

"The question of restraint is dependent largely on the condition of the individual." It is indeed. And the "condition" in this state must be one which shall justify two examiners in lunacy in certifying to the *insanity* of the individual, otherwise the *slightest* restraint is illegal. The author talks about putting morphicists in asylums, as if it were possible to do it.

The so-called slow method of withdrawing morphine is the one which the author seems to favor. Treatment after withdrawal of the drug is spoken of in some detail.

The author's views, as herein expressed in reference to some of the comforts of life, are not likely to be taken very seriously: "The continuous and excessive use of tea may be considered not only an active cause of serious neurosis, but also a prominent symptom of psychosis, which may merge into many and complex disorders." We should like to be informed of the name of the neurosis, and likewise what psychosis has "the continuous and excessive use of tea" as a prominent symptom. "There can be no doubt that the use of tobacco is poisonous." "It is an interesting study to know how far the tobacco habitué is impaired mentally, and how far he could be called responsible for his conduct and his thought." It is indeed. How far Tennyson, John La Farge, and the greatest financier of the age, or of any age, J. P. Morgan, all habitués of tobacco, are impaired mentally, would be an interesting study—for one who is mentally impaired. How far Mark Twain could be called responsible for his conduct at Albany, last winter, when he appeared in behalf of the osteopaths, has given the reviewer much concern. Now, it is apparent, and the answer is, Dr. Crother's former and distinguished townsman was not responsible—it was the weed! The author says that persons who use tobacco to excess "are of faulty memory, and both sight and hearing are equally depressed, and their statements can scarcely be depended upon in matters requiring great accuracy." When an author allows himself a free rein in this fashion, it seems, to an unprejudiced reader, that he might back it up with some other evidence than his "I said it."

The Drug Habits and Their Treatment. By T. D. Crothers. Chicago: G. P. Engelhard & Co.

A brochure of 80 pages, an abbreviation of the volume reviewed above, evidently intended for the layman.

Gynecological Pathology: a Manual of Microscopic Technique and Diagnosis in Gynecological Practice for Students and Physicians. By Dr. Carl Ohil, Privat-Docent, Berlin. Translated and Edited by Samuel Myllis Bandler, M.D., Adjunct Gynecologist to the Beth Israel Hospital, New York. Illustrated by one hundred engravings. Pp. XV–237. New York: William Wood & Company, 1901.

This little book must prove of great practical value to gynecologists, as it covers a subject which is treated somewhat superficially in the larger manuals of pathological anatomy. Introductory sections on technique are followed by exhaustive descriptions of the histology of simple erosion and commencing epithelioma of the cervix uteri. The sections on the nominal and pathological anatomy of the endometrium are especially good. The changes during menstruation, uterine and extra-uterine gestation, are clearly described and figured. Endometritis, glandular and hypertrophic, diffuse hyperplasia receive thorough treatment. Neoplasms are considered briefly, but clearly, especially carcinoma, sarcoma and deciduoma. Chapter V, on the tubes, is most interesting and instructive. Tubal gestation is exhaustively discussed, while the results of inflammation are treated at considerable length. The important chapter on the ovaries is introduced by a short description of the normal histology. The sections on oophoritis are too brief, but neoplasms are treated at length, with the exception of dermoids. A full description of the latter growths, however, appears in Part III, on embryology. It is impossible, in a brief notice, to do justice to the many commendable features of this work. Attention is called particularly to the number and beauty of the illustrations, which are not only artistic, but are such as are seldom seen in the ordinary textbooks on gynecology. These alone, aside from the valuable text, render the book a distinct help to the student and practitioner, to whom we cheerfully recommend its perusal. The translator has done his work in a scholarly manner, and deserves no little credit for his efforts as editor of the American edition.

The Practical Medicine Series of Year Books, comprising two volumes on the year's progress in medicine and surgery. Issued monthly under the general editorial charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School, Vol. IV. Gynecology, edited by Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, with the collaboration of William Healy, A.B., M.D., March, 1902. Pp. 212. Chicago: The Year Book Publishers.

The name of the distinguished editor of this useful little book is a sufficient guarantee of the care and discrimination exercised in the selection and arrangement of the ample material at his command. With a few unimportant exceptions, we find little to criticise. It may seem to the attentive reader that too much space has been allotted to abdominal surgery, in view of the editor's comment in the preface that "plastic work has shown a tendency to become a lost art." Surely the past year has witnesed some valuable additions to minor gynecological surgery. The chapter on pelvic infection is quite comprehensive. Chapter VIII, on uterine tumors, is the longest of all, and contains a lucid description of the editor's method of uniting the broad ligaments after removal of the fibroid uterus. The accompanying drawings are admirable, but the question naturally arises: "Is not the technique made a little too easy?" Celiotomists will at once infer that there must be many cases in which exact apposition of the stumps is impracticable without undue tension. We do not wish to be hypercritical, but it would seem as if fifteen pages were too many to devote to the author's own device. We miss any reference to the original work, which has, during the past year, been done by the Germans in the study of ovarian pathology—especially of dermoids. The editorial comments are brief and to the point, showing a most commendable conservative tendency. Only one who has had experience in translating and condensing into a few lines lengthy, and often obscure, articles from foreign journals can appreciate the labor entailed in preparing such a year book as the one before us. We doubt not that no small degree of credit is due to the collaborator for his work. The index, typography and binding are worthy of praise.

A Handbook of Appendicitis. By A. J. Ochsner, M.D., Professor of Clinical Surgery, College of Physicians and Surgeons, etc., Chicago: G. P. Engelhard & Co., 1902.

This small volume records the author's experiences with appendicitis, and it consequently exhibits a good deal of the personal element. An attempt has been made to systematize and epitomize the subject, and the result is fairly satisfactory. We cannot say that any long-felt want is filled by the appearance of this book, but it is satisfactory as far as it goes.

The Perverts. By William Lee Howard, M.D. New York: G. W. Dillingham Co.

"Love, however obfuscated in the gloomy umbrage of ethics or in the obmutescence of patristic senility, is the conscious but uncontrollable action of physical attributes governed and stimulated by unconscious psychic forces." These "weedy, sedgy, spumy statements are an effort at detruncation of a purely lycanthropic condition arising from false ascetic pietism"; but despite delapidated detruncation disastrously debilitating him, "Leigh rushed to the bar and in a smothered voice sessile with words called for whiskey." He was "the pitiable, pusillanimous, progeny of the decayed, delapidated dregs of a former vital and equilibrated cell-protoplasm, the inevitable, invariable incarnation of the *damnos a hereditas*."

These lines are not a transcript from the archives of a lunatic asylum—at least they are not so far as the reviewer knows. He has copied them from a book called "The Perverts," which, we regret to say, is written by a member of the medical profession. Viewed as a story, the book is incoherent. From the standpoint of literary execution, it is execrable; and as an example of bad taste in subject matter, it stands at the head of the list.

Ophthalmic Myology: a Systematic Treatise on the Ocular Muscles. By G. C. Savage, M.D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, author of "New Truths in Ophthalmology," ex-President of the Nashville Academy of Medicine, ex-President of the Tennessee State Medical Society. Sixty-one illustrative cuts and six plates. Published by the author, 139 North Spruce street, Nashville, Tenn. Printed by Gospel Advocate Publishing Company, Nashville, Tenn. 1902.

This volume of 589 pages is of convenient size, well printed and fairly well illustrated. Chapter I treats of the "fundamental principles of ocular motions," discussing the various phases of the subject in a systematic, logical manner. Orthophoria is discussed in Chapter II, the different methods employed and instruments used to determine the power of the extrinsic muscles of the eyes are fully and clearly described. Then follow chapters of the heterophorias, the chapter on cyclophoria occupying thirty-three pages. Strabismus is discussed under the generic term Herotropia. A chapter is devoted to the consideration of "paralysis and paresis of the ocular muscles" and one to the "muscles of the iris and ciliary body." In the consideration of chorea, epilepsy, catalepsy and neurasthenia the author may, perhaps, have exhibited a degree of enthusiasm, and have expressed belief in the causative effect of eye strain that would be considered extreme. The work bears evidence of much study and a careful analysis of the subject given. The discussion is full even to the point of repetition. There are few questions in ophthalmology that give the practitioner more concern than anomalies of the eye muscles, and oculists will heartily welcome any unbiased attempt to elucidate it. The book is well worth careful perusal.

Society Reports.

AMERICAN GYNECOLOGICAL SOCIETY.

Proceedings of the Twenty-seventh Annual Meeting, Held at Atlantic City, N. J., May 27, 28 and 29, 1902.

The society convened in the ballroom of Hotel Rudolph, under the Presidency of Dr. Seth C. Gordon of Portland, Me.

An address of welcome was delivered by Dr. Philander A. Harris of Paterson, N. J., which was responded to by President Gordon.

A Case of Wandering Spleen Packed in the Pelvis, Complicated by Typhoid Fever; Splenectomy, with Recovery.—Dr. Thomas A. Ashby of Baltimore, who reported this case, drew attention to the anatomy and function of the spleen. He said its size was influenced by bodily nutrition, the organ being large in the well-nourished, and small in the poorly-fed individuals. In 1887 McCann reported nineteen cases of splenectomy, with thirteen recoveries. These cases were reported by eighteen different surgeons. Sixteen were observed in women, and three in males. In properly selected cases there was no doubt that the spleen could be removed with as good results as those which followed the removal of the uterus, the ovaries, or kidney.

The chief interest in his case was from the standpoint of diagnosis. The patient, a young woman, had lived all her life in a malarial section of country, and had had repeated attacks of malarial fever. She had contracted a malarial spleen which, from its increased size and weight, had exercised such traction upon the splenic ligaments as to permit the spleen to wander down into the pelvis, where it became impacted behind the uterus and filled the pelvic basin. How long it had remained in this position there was no way of determining. In the meantime she became infected with the typhoid organism and developed typhoid fever. In the initial stage of the disease her temperature took a high range, and pelvic pains were soon felt. Her family physician, being called in at once, palpated the abdomen, and finding a large mass in the pelvis, well above the brim, with marked tenderness and high temperature, concluded that he had a large inflammatory tumor to deal with. At this time there were no typical symptoms and there were no typhoid cases in her family or neighborhood. He at once brought the patient to the hospital for treatment. At the time of the first examination the physical signs were markedly those of an inflammatory mass in the pelvis. There was pain on pressure, a doughy sensation to the touch, and the skin over the region of the tumor was so red and shiny that the surface indications were those of a suppurating mass ready to break through the skin. When anæsthetized the following morning the physical signs had markedly changed, and Dr. Ashby's diagnosis, before opening the abdomen, was that of an ovarian cyst or myomatous tumor. He determined to make an incision to find out the true character of the condition and to remove the same. As soon as the incision was made, the spleen was discovered, and its removal at once decided upon. The enlarged size of the organ, length and weakness of its ligaments, made an attempt at its restoration and attachment to its normal position a physical impossibility. The only safe course was to remove the organ, and this was done without the least difficulity, as its pedicle was not larger than one's little finger at the point of its attachment under the diaphragm. It was ligated in section, and the stump well covered with peritoneum. The subsequent behavior of the patient's temperature could not be accounted for until the typical typhoid reaction was obtained some six or seven days after the operation. From that time on the typhoid condition was regarded as the primary disease, and was treated accordingly. The abdominal section presented no features to occasion the least alarm. Patient ran the regular course of the fever, and her convalescence was uneventful. Her health since her recovery has been better than prior to the attack of typhoid fever.

Dr. I. S. Stone reported a case of splenectomy, with recovery. He thought there was no longer any danger from hemorrhage in properly selected cases of splenectomy.

Dr. Wm. T. Howard said that splenectomy had been done three times successfully in Baltimore by Dr. Kelly. In each case an incorrect diagnosis was at first made.

Dr. Lapthorn Smith detailed a fatal case of splenectomy.

Dr. A. Palmer Dudley had seen three cases of enlarged spleen, in two of which splenectomy was performed by himself, the third case having been operated upon by another practitioner. One of his patients died, while the other recovered.

Dr. J. Wesley Bovee reported two cases of splenectomy, with one death.

Dr. Joseph E. Janvrin had removed a malarial spleen which weighed seven and eight pounds. The operation was easily done, but the patient died from what he considered secondary or surgical shock.

The Medical Side of Gynecology.—Dr. Edward W. Jenks of Detroit said that there was a medical side to gynecology which could not be ignored, for a special training, together with a thorough knowledge of general medicine, were prerequisites for the making of an ideal gynecologist. Fully one-half of the women seeking advice and relief from disorders peculiar to their sex were suffering from some deranged condition of the eliminative organs, as shown by constipation or defective elimination of solids in the urine. Even where there were lesions in the pelvic organs, no relief from distressing symptoms could be secured until the underlying constitutional causes of pain and general poor health were first ascertained and removed. There were many derangements of the system which closely resembled diseases of the pelvic organs. Pain in the back, the commonest complaint of women, might be due to coccygodynia, myalgia, or chronic malarial toxæmia, or other constitutional causes; pain in the abdomen, sometimes attributed to the ovaries, might be due to habitual constipation, or to an atonic condition of the large intestine.

He was convinced that some of the medical schools were responsible for the neglect of medical gynecology. Surgical technique was taught in all its refinements, but symptomatology, differential diagnosis, and the treatment of diseases of women amenable to medicinal remedies could not receive adequate attention in the brief time devoted to them, if one judged by the results. The glamor of gynecological surgery had obscured the commonplace, but equally important, study of gynecological medicine. He made an eloquent plea for the medical side of gynecology, and urged that it be not relegated to obscurity in our zeal to advance gynecological surgery. He entered his protest against so many calling themselves gynecologists who ploughed only in one furrow of the field of gynecology, while the field itself was only a part of the great domain of medicine and surgery.

Lacerations of the Cervix Uteri and Pelvic Floor.—Dr. W. L. Burrage of Boston read a paper on this subject, in which he made a plea for their more careful study, their diagnosis and treatment. He said the glamor of successful abdominal surgery had left the less dangerous and less showy plastic surgery in the background. Lacerations of the cervix and pelvic floor merited a more careful study than they had received; that if they were repaired early, fewer major and mutilating operations would be called for later; that the normal conditions were the ones the gynecologist should endeavor to restore, and until he was successful in doing this no attempt should be made to improve nature. Emmet gave the principles underlying repair of lacerations of the pelvic floor to the profession in 1883. These had been generally accepted as correct, and as yet no one had proved them to be erroneous. He urged the members of the society to stand by these principles and to devote their energies to perfecting details of operative technique rather than to invent or advocate operations which involved principles diametrically opposed to those of Emmet.

He had operated for laceration of the cervix two hundred and one times, and for lacerated perineum and pelvic floor a hundred and sixty-two times.

Symposium on Retrodisplacements of the Uterus.—Dr. Matthew D. Mann of Buffalo, N. Y., discussed the etiology, pathology and symptoms. He believed that the round ligaments were important factors in holding the uterus in place, and that they acted in the manner pointed out by Kellogg. If the ligaments be stretched, the uterus falls behind the center of gravity, and the round ligaments are not able to pull it far enough forward, so that intraabdominal pressure falls on the posterior wall, with every effort to increase backward displacement. Weakening of the pelvic floor, relaxation of the pelvic outlet as the result of child-bearing, with or without rupture of the perineum, will allow the uterus to sag downward, and the fundus to fall backward. Relaxation of any of the supports of the uterus tends to backward and downward displacement of the uterus, and if the ligaments and pelvic floor are relaxed, then, eventually, there will be prolapse to a greater or less extent, dependent upon the amount of relaxation. He spoke of the uterovesical ligament as having considerable influence in the production of uterine displacement. He mentioned other factors which caused the uterus to become displaced backward, one of which was rupture of the perineum, which enables the vaginal walls to come down. If these came down, with cystocele or rectocele, then the vaginal wall, dragging upon the cervix, pulls the organ downward, and tips it over backward.

In displacement of the uterus the circulation and nutrition of the organ are interfered with, so that in a short time the woman would get a chronic congestion, with thickening and enlargement of the connective tissue of the uterus. This might be called, for want of a better term, chronic metritis.

Another cause of displacement of the uterus was laceration of the cervix, which allowed the organ to sink down into the pelvis, to turn slightly backward, the displacement going on from bad to worse. He had seen two cases of displacement of the uterus, one following whooping cough in an adult, the other from straining at stool. In the latter case the uterus was forced outside of the body from constant straining at stool, although the hymen was intact. He then mentioned the symptoms of the retrodisplacement of the uterus and among them he spoke of backache, bearing-down pains in the pelvis, etc. He did not believe that every case of posterior displacement of the uterus caused symptoms, but the majority of cases of backward displacement did cause symptoms. A woman with a backward displacement of the uterus would not continue to be well. She might be well for the time-being, but eventually she would suffer. He did not believe a backward displacement of the uterus could exist for any great length of time without the woman suffering more or less. Besides the symptoms familiar to the gynecologist he thought there were a great many reflex symptoms. A woman with a retrodisplaced uterus might suffer a great deal from reflex symptoms without the presence of pelvic symptoms. He cited cases in point.

Non-operative Treatment of Retrodisplacements of the Uterus.—Dr. F. H. Davenport of Boston, Mass., read a paper with this title. The paper takes up three points: First, the methods of non-operative treatment; second, the indications for their employment, and, third, the results.

The only important method of non-operative treatment is that by pessary. Twenty-five years ago it was practically the only method, and for that reason it was developed to a remarkable degree, not only as regards the variety of displacements, but also the numerous forms of pessaries devised for their relief. Massage, electricity and general tonic treatment cannot properly be called methods, but are merely adjuncts. The choice, then, lies between treatment by operation and that by pessary. With the development of surgical procedures, that by supports was thrown into the background, and neglected. There are cases, however, which are well adapted to the pessary treatment. Such are, first, cases of simple retroverted uterus without complication, which have presumably lasted only a short time; second, retroversion following childbirth; third, cases complicating neurasthenia as a result, where operation is inadvisable until the patient's health is built up.

The pessary treatment is not applicable to cases in young girls where local treatment of any kind is inadvisable, to cases complicated with lacerations, or to cases of long standing, where secondary changes in the circulation of the uterus have followed. Many of these which should be operated on refuse operation and choose the pessary. What, then, are the chances of cure? The author's own statistics have shown that of all cases treated by pessary about one-third are cured either anatomically or symptomatically by the use of a pessary for from one to two years. In selected cases the showing would be far better. Such success, however, presupposes close study of the case, care in the selection of the pessary, and constant supervision while it is worn.

The only displacements which need correction are prolapse and retrodisplacements, and the latter may be usually corrected by one of two varieties of pessaries, the Langford and the Albert Smith. The treatment by pessary, therefore, while it should be scientific, is simple.

The Alexander Operation.—Dr. Clement Cleveland of New York, in a paper on this subject, described the Alexander operation in detail. Although usually performed for retrodeviations of the uterus, he has found it useful in the cure of forward displacements. The selection of cases, however, is very important. In cases where adhesions exist, it is better to follow some of the other methods or resort to the vaginal route. In cases where the Alexander operation is not indicated, he prefers the operation devised by Dougal Bissell, and styled by him "internal shortening of the round and broad ligaments," with which the writer has had many good results.

To obtain the best results from the Alexander operation, a pessary should be worn before, and for two months after, the operation. It is also advisable that the patient should wear one for a few months after confinement. The patient should be kept in bed for three weeks after the operation, and the dressings should be changed daily. The main point in the performance of this operation is to reach the external ring with a clean cut from the surface. To a beginner the great stumbling block is the mistaking the superficial fascia for the aponeurosis of the external oblique. The doctor believes that by including in the first suture the pouch of the peritoneum or infundibuliform process, it not only strengthens the attachments of the ligaments, but adds to the support of the uterus. Sterilized iron-dyed silk is recommended to hold the ligaments.

Hernia, as a result of this operation, is rare, and when met with, is due either to faulty technique or suppuration. The chief causes of failure are (1) Suppuration in the wounds, and (2) The too tightly tying of the ligament sutures.

In comparison with other methods, the writer prefers the Alexander operation for an uncomplicated case of displacement. In his opinion, the vaginal method of operation should be confined to women who have borne children.

Suspension of the Uterus.—Dr. Hunter Robb of

Cleveland, Ohio, in speaking of the advantages, disadvantages and results of suspension of the uterus, insisted that suspension and fixation are not interchangeable terms, the latter procedure being always undesirable. Before we are able to speak with certainty as to the results we must have more accurate data, which can only be obtained by a more rigid classification and a subsequent analysis of sufficiently larger series of (1) Uncomplicated cases of malposition; (2) Those cases of malposition in which other pathological conditions are present, but in which the malposition is the indication for operation; (3) Those cases in which the suspension is only a supplementary operation.

Robb believes that in suspension we have a method of permanently relieving a large percentage of patients suffering from obstinate retroflexion. Difficulties in future pregnancies are mainly the result of fixation operations and not of suspension. Hernia of the abdominal wall, adhesions, and localized or general sepsis are due to faulty technique and should not occur.

Intraabdominal Shortening of the Round Ligaments Per Vaginam for the Cure of Retrodisplacements of the Uterus.—In a paper with this title, Dr. J. Riddle Goffe of New York said that gynecologists are uniformly agreed that the ligament which serves the most important functions in supporting the uterus is the sling of tissue reaching from the promontory of the sacrum, known as the uterosacral ligaments, to the posterior wall of the cervix, plus the uterovesical ligament reaching from the anterior wall of the uterus to the symphysis pubis. This is reinforced by the cellular tissue and ligamentous structure in the base of the broad ligament. So long as the uterosacral ligaments retain their proper tone and length, swinging the cervix high in the hollow of the sacrum, retroversion of the uterus is impossible. It is for some malign influence affecting the uterosacral ligaments, therefore, that we must look for the cause of retrodisplacements of the uterus, and it is consequently to the repair or the recovery of function in the uterosacral ligaments that we must look for restoration to normal condition. Unless the indirect result of any operation for maintaining the uterus in its normal position is to enable the uterosacral ligaments to involute and recover their tone and sustaining power, that operation becomes a failure. That this can be secured by direct operative procedure upon the uterosacral ligaments themselves, he is convinced from experience.

The next most favorable tissue to utilize for this purpose is the round ligament. This is attested by the results secured by many operators upon the round ligament in various ways. Alexander and others have demonstrated that the round ligaments, when shortened at the external abdominal ring, are efficient in maintaining the uterus in its normal position when applied to cases of retrodisplacement uncomplicated by inflammatory process. Olshausen has shown that the round ligaments when caught up near to the uterus and attached to the edges of the abdominal incision are efficient and satisfactory in restoring the uterus to its normal position. Wylie, Mann, and many of their followers have had complete satisfaction in simply doubling the round ligaments upon themselves and stitching them in that position through an abdominal incision. Duhrssen, Wertheim and Vineberg have presented most conclusive statistics bearing upon the entire efficiency of shortening the round ligaments through the vaginal incision by catching them up near the horns of the uterus and stitching them to the anterior vaginal wall. The same German operators, Duhrssen, Wertheim, etc., and in this country, Byford and the essayist attest to the equal efficiency of operating through the anterior vaginal fornix, and doubling the ligaments on themselves in accordance with the Wylie-Mann suggestion. He had not found a method which had given him such universal satisfaction as this. He reported 130 cases that he had subjected to this procedure during the past sixteen years, and he knew of only three failures, and these were due to some departure from the regular procedure in which a modification was attempted. Among these cases ten are known to have become pregnant and eight have gone to full term, the pregnancies resulting most comfortably and satisfactorily, the uterus retaining its proper position thereafter. Of the miscarriages one was in a syphilitic negress, and in the other the cause could not be learned.

The superiority of this method over others depends, therefore, upon the general question of the value of the vaginal route of attack over the abdominal route, and the incomparably wider field of application as compared with the Alexander operation.

Among his cases he finds six of congenital retroversion in young, unmarried women, whose ages ranged from nineteen to twenty-seven years. In these cases, although the vagina was small and the hymen intact in all of them, he was able to perform this operation and effect a complete cure in all.

Operations on the Uterosacral Ligaments in the Treatment of Retroversion of the Uterus.—Dr. J. Wesley Bovee of Washington, D. C., recounted briefly the surgical treatment of the uterosacral ligaments in retroversion of the uterus. The first operation for shortening the uterosacral ligaments through the vagina was done by him on June 28, 1897, and since that time he has had seven other cases, all successful. By the abdominal route he began shortening these ligaments, February 21, 1900, and since then on three other occasions the operation has been done.

The method of shortening these ligaments through the vagina, as he has planned and practiced it, is to place the patient in the extreme lithotomy or Simon's position, and with a self-retaining perineal retractor in place, the posterior lip of the cervix is grasped with a vulsellum forceps and drawn forward. An anteroposterior incision is made through all the structures of the posterior vaginal fornix, except the peritoneum, and extending approximately from the cervix to the rectum. By careful dissection the ligaments are brought plainly into view. Then, grasping one of them with a forceps midway between the extreme points to be united and lessening the traction on the cervix at the same time, the fold of the ligament is brought down into the vagina; then a curved needle, armed with kangaroo tendon, is passed through the ligament at the extreme points noted and another through the loop thus formed and through the posterior portion of the cervix below the insertion of the ligaments. When the other ligament has been treated in a similar manner, the two deep sutures are tied, and then the others. The wound is now spread well open and the two ends of it approximated by a continuous kangaroo tendon suture. When the wound is closed it appears to have been originally a transverse one. Sometimes he has modified it by separation of the anterior vaginal wall from the uterus and converting the wound into a longitudinal one or by transplanting the wall higher on to the uterus. When adhesions have been thought to exist in the retrouterine space, the culdesac has been entered and the adhesions separated. In all instances he has shortened the round ligaments through the anterior fornix.

By the abdominal route the plan he has followed is to use the Trendelenburg position, remove the intestine and omentum from the pelvis, and by the use of a special long retractor hold the uterus and appendages well forward and upward. Then, tracing the uterosacral ligaments with the fingers, to properly locate them, a longitudinal incision is made through the peritoneum near the inner margin of one of them. The ligament is then partially dissected loose and is treated much as the vaginal route. The peritoneum is closed by a purse-string suture, or by the plan of closing the vaginal wound.

The other side is treated similarly and the abdomen closed. He has, in a few instances, shortened the round ligaments at the same sitting.

The results of the various operations for shortening the uterosacral ligaments were given. The author's own work in shortening the uterosacral ligaments consists of eight vaginal and four abdominal operations.

As to the advantages of the operation, the extraperitoneal shortening of these ligaments, with the adjoining portion of the vaginal wall, is practically devoid of danger, and is frequently indicated. The abdominal route is less frequently required. Yet, with the abdomen opened, perhaps for some other purpose, shortening of these ligaments would be very little extra risk to the patient, or an extra tax upon the part of the surgeon. It does not have the same conditions incident to ventrosuspension and ventrofixation which are considered by some as real dangerous, and it is supporting nature's supports to this important reproductive organ.

A Further Contribution to the Study and Practical Significance of Lactation Atrophy of the Uterus.—Dr. Hiram N. Vineberg of New York read this paper. Although the writer six years ago drew the attention of the profession to lactation atrophy, the subject has not yet received the consideration that it deserves, as is evidenced by the literature and the recent textbooks on obstetrics. It is a physiological process accompanying lactation, with or without amenorrhea, the atrophy or superinvolution being temporary only, the return to the normal size being in some cases dependent upon the cessation of lactation. In others, again, the regeneration of the uterine tissue occurs while lactation is still going on. It is not to be confounded with what is commonly known in this country as hyperinvolution, which is usually permanent in its character, although in some rare cases it terminates in this form. While the author has seen during his ten years' service at the dispensary over five hundred cases of lactation atrophy, he has not met with more than twenty cases of permanent hyperinvolution.

When the atrophy is slight and is manifest only by a thinning of the uterine walls, it is known as "eccentric atrophy," when it is more marked, as is evidenced by a marked diminution in the size of the uterus, the term "concentric atrophy" is employed.

The cervix usually participates in the atrophic process, but the ovaries, as a rule, do not. The hyperinvolution or atrophy is fully established between the eighth and twelfth week, and persists for a variable period in different nursing women, its persistence usually being dependent upon the continuance of lactation. Anæmia does not play an important rôle in the causation of the condition, as has been stated by some writers, notably Engström. The author had the blood examined in a series of cases, and he found that the degree of atrophy bore no relation to the diminished number of red blood cells and to the lowered percentage of hæmoglobin. Cases with the smallest uteri had the highest number of red blood cells and the highest percentage of hæmoglobin.

Hyperinvolution may occur independently of lactation, as shown by Hansen and P. Müller. Most writers hitherto have concerned themselves chiefly in showing that lactation atrophy is not an injurious condition, and that it seldom leads to permanent atrophy. But the writer drew attention to its decidedly beneficial effects upon the uterus in bringing about a normal hyperinvolution. Therefore, women who nurse their babies are rarely the victims of subinvolution, with its usual sequel, chronic metritis, one of the most unsatisfactory and rebellious conditions to treat. When, as is usually the case among the better classes, the mother is unable or disinclined to nurse her baby, it is the duty of the attending obstetrician to keep the parturient under observation, and treatment, until nearly the same degree of hyperinvolution is established as obtains in lactation. This period will seldom be less than eight weeks and will frequently extend to three months. Unfortunately, the importance of this desideratum is not very generally recognized. The accoucheur rarely considers it necessary to examine the parturient after the second or third week.

In concluding, the writer drew attention to a peculiar circumstance, that in the class of women from whom he draws his material in dispensary practice uterine cancer is exceedingly rare. From the fifteen hundred to sixteen hundred new patients he sees yearly, not more than one or two are the victims of cancer of the uterus. One would expect almost the opposite, if improper attendance during the puerperium and lacerations of the cervix play any rôle in the causation of that dread disease. He asked the question whether the circumstance that these women are shielded, in a great measure, against the occurrence of chronic metritis, renders them less susceptible to the development of uterine cancer.

President's Address.—The Relation of the Gynecologist, Obstetrician and General Surgeon.—Dr. Seth C. Gordon of Portland, Me., selected this for his Presidential address.

He said it was the custom of late years to say that gynecology had passed its usefulness, and had become merged into general surgery, and that there no longer existed the necessity for attempting to prolong the life of this hopelessly doomed department of medicine. With this proposition he took issue, and maintained that, until modern obstetrics approached more nearly to the ideal standard, there would be a large field for the gynecologist proper. Scientific gynecology had its birth in America, and was founded by Marion Sims. No gynecological surgery prior to his day had made any impression on surgical practice that had endured until the present time. That which the keen, brilliant genius of a Sims made possible, the intelligent, patient, practical commonsense of an Emmet made probable to every afflicted one of womankind. The field was wide and from all parts of the country came the sufferers from childbed injuries, many of which were due to the faulty obstetric work of that day. Among the causes were long-delayed use of the forceps; careless and needless use of forceps; a disregard of the accidents occurring; and a total lack of aseptic precautions during the progress of labor. From the first came vesicovaginal fistula; while from the second came lacerations of the uterus and perineum, many of which could have been remedied had the accoucheur regarded them at all, and treated them according to the best known surgical principles. The great fault lay in entirely ignoring such accidents.

There are many faults yet to be overcome in the practice of obstetrics before the millenium shall dawn for the gynecologist. While public institutions are doing good work in eliminating germ diseases, and bringing the mortality almost to the vanishing point, much missionary work needs to be done among professional men in private practice.

The criticisms he offered were: (1) The too early use of the forceps. When the pendulum began to swing from rarely using the forceps, it went to the opposite extreme, using them far too often. A very large majority of cases will, if left alone, terminate naturally; (2) Cases of accidents occurring in labor are not properly repaired at the time.

The fashion of late seems to be to prohibit antiseptic douches after labor. While it may be necessary in normal labors, with no accidents, lacerations should be kept surgically clean, and it can be done only by frequent irrigation and germicides. Surgical cleanliness on the part of the accoucheur and patient from the beginning of labor until convalescence, insure safety to one and duty well performed on the part of the other.

As an additional safeguard against laceration of the perineum, he believes the timely use of anæsthetics invaluable. It prevents the use on the part of the patient of the voluntary muscles, which do much to cause this accident. His preference as an anæsthetic is the A. C. E. mixture, given only during pains. It acts promptly and does not excite the patient.

Post-partum hemorrhage is not due to the use of an anæsthetic, but to the carelessness of the attendant. A steady, careful, persistent manipulation of the uterine tumor during the expulsion of the child and placenta and continued until firm contraction is produced, insures safety in almost every case. His own experience fully justifies him in making the assertion that a strict observance or adherence to this rule will nearly always prevent post-partum hemorrhage.

Modern methods of Cæsarean section had given such good results in diminishing mortality, that the barbarism of craniotomy had practically ceased, and the morbidity which furnished such abundant gynecological material had correspondingly decreased. This great progress was practically due to anæsthesia, asepsis and improved technique, and for this credit should be given to gynecologists who had perfected the operative details of abdominal section, made possible by the discovery of anæsthetics and cleanly surgery.

Laceration of the cervix, especially of long-standing, was not always an indication for trachelorrhaphy, destruction or extreme atrophy of tissue of the cervix being a decided contraindication to the operation. Thousands of women suffered much more after trachelorrhaphy than before. The cervical canal was closed too much, drainage prevented, and often infection developed in the uterus and tubes, and the last condition was much worse than the first. Emmet never taught such gynecology as that. He did not even teach that all lacerations of the cervix required an operation. On the contrary, he believed that many of them did not require any interference, simply because they were not producing any morbid symptoms. The tendency had been too much in the direction contrary to Emmet's teaching, with the result that gynecology had been brought into disrepute. Many symptoms attributed to laceration of the cervix had been found to be due to disease of the other pelvic organs.

The plastic operation of perineorrhaphy, so often done by the general practitioner, to say nothing of the general surgeon, was far too often apologetic, when compared with the work of Emmet, Thomas, Marcy, and others throughout the country.

The best work for malignant disease of the pelvic organs had been done by gynecologists. Probably no man could show better results in the way of relief and even cure of cancer of the uterus than Dr. John Byrne. Whether hysterectomy in any stage of the disease was to be the ideal method was by no means well settled. He believed that a more careful examination and more close observation of women under the care of physicians would detect malignant disease in its earlier stages, at a period when hysterectomy might be the ideal operation.

Much yet remained to be done with plastic operations about the vagina, not only in relation to prolapsed uteri, but for vesicocele, and diseases of the urethra, especially that of caruncle. Incisions into the posterior culdesac for acute inflammatory attacks, whether attended with pus or not, well deserve the attention of the gynecologist. While this was one of the early gynecological operations for pelvic abscess, without reference to ulterior results, it was now well-known that thousands of women could be saved from long and painful illnesses and subsequent hysterectomy by the timely commonsense application of the surgical principle of removing the products of inflammation as soon as formed.

Treatment of Placenta Prævia—Cæsarean Section Not Justifiable.—Dr. Robert A. Murray of New York, in a contribution on this subject, referred to a paper read last year before the American Association of Obstetricians and Gynecologists, by Dr. Zinke of Cincinnati, on this subject, also to a discussion which it elicited. In Zinke's paper a strong plea was made for the treatment of placenta prævia by Cæsarean section. Dr. Murray protested against such a radical measure, and believes that, by proper treatment, one can avoid the performance of this operation in many instances. In fact, only a very small minority of cases of placenta prævias hould, in his opinion, be treated by Cæsarean section.

Dr. J. Whittredge Williams of Baltimore questioned the propriety of Cæsarean section for placenta prævia, and said the operation was done too frequently. Recent statistics as to the great safety attending this operation were liable to do almost as much harm as good. If the society did not take a decided position in regard to Cæsarean section in cases of placenta prævia, he feared that this operation might be practised as frequently and indiscriminately as was oophorectomy. In his opinion there was a small field for Cæsarean section in placenta prævia.

Dr. Edwin B. Cragin of New York said the conditions which would justify Cæsarean section in placenta prævia were so numerous that they were seldom found present, and among them were a good condition of the child, good surroundings for the patient, and a cervix so rigid that there would be great difficulty in dilating it and resorting to version. These three conditions were rarely met with in cases of placenta prævia. A fourth condition was central implantation of the placenta.

Dr. Philander A. Harris of Paterson, N. J., said that when the statistics were analyzed as to the mortality of the mother and child, it would be found that the more rapid, prompt, and effective the delivery, the less the mortality, and the better the general results. If the case could be seen when the first hemorrhage occurred, it would be a favorable time for Cæsarean section, but which he would not advise, but try to effect delivery by other methods.

Dr. Charles Jewett of Brooklyn said the results under modern obstetric methods of treatment of placenta prævia were good, whereas the mortality from Cæsarean section was much larger than had been claimed by its advocates.

Dr. E. P. Davis of Philadelphia said that the Cæsarean section in placenta prævia must have a very limited application at present. Among the poorer classes of women with placenta prævia the mortality among children must be great, with a considerable mortality among mothers. However, he was not willing to universally condemn Cæsarean section in placenta prævia, for his personal experience with this operation had led him to look upon it as successful under favorable circumstances.

Dr. A. Palmer Dudley of New York said the general practitioner should be educated in regard to placenta prævia. He should study his cases more carefully, and make a diagnosis of placenta prævia sufficiently early to refer them to specialists, thus saving the lives of many children and mothers which otherwise would undoubtedly be sacrificed. He thought there was not much use in performing Cæsarean section after a profuse hemorrhage had taken place. The danger of this operation, when properly and promptly performed, was almost *nil*.

Dr. Egbert H. Grandin of New York said he would treat a case of placenta prævia after the same manner that he would a case of carcinoma or sarcoma of the uterus. He would go at it with hammer and tongs, just as soon as he was sure of his diagnosis, and no matter what the period of gestation, he would empty the uterus. His experience had been fairly extensive, and his results from this hammer and tongs policy had been very favorable as regards saving the mothers. He had never had a mother die, although the mortality was considerable as far as the children were concerned. But usually these children were nearly dead when seen.

Two Conditions Simulating Ectopic Gestation.—Dr.

Edward P. Davis of Philadelphia read a paper with this title, in which he reported the following cases:

Case I.—A multipara had pelvic pain at intervals, with disordered menstruation for several months. She had been exposed to cold and wet during the menstrual period. Her husband, a physician, had made intrauterine applications and had introduced a sound. After nine months of such illness the patient developed an hæmatocele, filling the cavity of the pelvis. Abdominal section was declined and vaginal section permitted. Considerable clotted blood was removed by vaginal incision, the cavity washed out and packed with iodoform gauze. This gauze was gradually removed in ten days after the operation. After the removal of the gauze the patient gradually developed symptoms of septic infection, ending fatally. Abdominal section was declined, and autopsy was not permitted. The examination of blood clot removed after section gave no evidence of ectopic gestation. This case resembles others recently reported by Kober (*Centralblatt für Gynakologie*, No. 39, 1901), and also observed by others, in which pelvic hæmatocele has accompanied diseased conditions of the pelvic viscera other than tubal gestation.

Case II.—An emaciated, anæmic woman, aged twenty, had previously had an abortion between three and four months. Bleeding was very profuse and was controlled with great difficulty. Several months after she became pregnant, and had attacks of intermittent pain, with hemorrhage from the vagina and a rapid feeble pulse. Upon examination the pelvis was filled with a soft, boggy tumor, completely occupying the posterior culdesac. The body of the uterus could not be distinctly outlined, but was enlarged. The patient's condition indicated hemorrhage, and abdominal section was performed. A retroverted pregnant womb was found, filling the pelvic cavity, the tubes and ovaries being normal. The womb was replaced and pregnancy proceeded for some time, and the patient left the hospital. She subsequently returned and aborted at six months. The uterus was found lined with clotted blood at the time of abortion

Segond, Routier, and Varnier have recently reported to the Obstetrical Society of Paris similar cases. In obscure cases of hemorrhage in which a diagnosis is not evident he thinks abdominal section is safer than continued uncertainty. Conditions simulating ectopic gestation usually require prompt interference and surgical treatment.

Dr. **Charles P. Noble** of Philadelphia presented a clinical report on ureteral surgery.

Dr. **Edward Reynolds** of Boston discussed the principles underlying the repair of cystocele, and an operation founded thereon.

Dr. **E. E. Montgomery** of Philadelphia spoke of the relative advantages of complete and partial hysterectomy.

A New Method of Anterior and Posterior Colporrhaphy.—Dr. **I. S. Stone** of Washington, D. C., read a paper on this subject.

Anterior operation.—The vaginal wall is incised in the median line, and after clamping the sides of this incision, the bladder is pushed away, upward and backward, until its entire base is separated from the vaginal wall and from the anterior surface of the uterus, if desired. He extends this separation as far out laterally as possible, for the whole pelvic roof shares in the prolapse. He proceeds now to lift the bladder with fingers or gauze packing, or with a sound inside the organ as far upward as possible to assure the extent of liberation. The excessively long flaps which presented over the base of the bladder as a cystocele (the distended anterior vaginal wall) are now excised, and the wound brought together edge to edge, taking care to entirely obliterate the cystocele and to leave the new anterior vaginal wall straight across. The method of applying the sutures is important, for he invariably sutures the flaps near the center of the wound to the anterior surface of the uterus with silkworm gut, silk or chromicized catgut. This is done for the double purpose of holding the bladder high above the former attachment on the uterus. and to hold the uterus forward if it has been retroverted. The bladder is held away and the deep sutures passed through the uterine wall between the attachments of the round ligaments. The wound is then entirely closed with catgut sutures. It will be noticed that he has applied the Mackenrodt method of vaginal fixation to his operation, but it was primarily to hold the bladder higher upon the uterus rather than to cure the displacement. In very large cystoceles the vaginal wall is greatly lenthened and can be shortened by removing a V-shaped section from each side of the incision in front of the cervix. The longitudinal wound in the median line will then join one made transversely across the vagina in front of the cervix.

As a test of the efficiency of the method, two patients with procidentia were selected, each with large cystoceles, who consented to operation in two stages. Both women were nearly sixty years of age. One had prolapse of twenty years' standing; the other, a stout, fleshy woman, had not suffered so long, and her disability was largely due to increase in weight. The vaginal relaxation of the thin woman was extensive and complete. The fat woman had not sustained as severe laceration as the other, but was hardly as good a subject, owing to the size of her abdomen. The anterior operation alone was done on these women, and while the uterus was not entirely retained within the vagina as a result of the work done, the cystocele was cured. One of these women had the final operation upon the posterior wall before she left the hospital; the other returned nearly a year later, was treated in the same manner, and now both are well.

Posterior Secondary Operation.—Injury to the posterior vaginal wall and perineum differs greatly in its extent, and in the direction of the tear. The rent may be longitudinal or transverse, and in any event needs to be fully exposed below the vaginal mucous membrane, which in the past has borne the brunt of surgical attack, while the fascia, the objective point, is hiding with the much discussed and rarely seen levator ani muscle. and is only influenced by sundry excursions of needle and suture, which, after all, only hold a denuded or scarified mucous membrane together while union progresses. The crest of the rectocele is grasped with the left hand, making a transverse fold, which is divided with the scissors down to the rectum. Clamps are applied to the edges of the incision, and the rectum pushed away on both sides with a gauze sponge until it is quite free of all connection with the vaginal wall. The incision in the vaginal wall is extended above and below until we are satisfied that we can secure sufficient narrowing of the vagina to answer the purpose in view. The sutures are placed with greater facility when the rectum is separated freely on each side, and one need not have any fear of not obtaining good union after the operation. After he has completed the liberation of the rectum, and has clamped such hemorrhoidal vessels as give trouble, he closes the wound in the following manner: With tissue forceps he catches up two points, one on either side, which he wishes to unite in front of the rectum. These points are usually about one and one-half inches below the edge of each flap, but the size of the rectocele will necessitate a test in each case, as directed, so that good approximation of the fascia over the rectum may be secured, which will not exert undue traction upon the sutures. The fascia is firmly and thoroughly united along the entire length of the wound. In some instances he has used a double tier of sutures, which gives excellent support to the floor of the vagina, and makes a firm obstruction to the exit of a procident uterus. After the buried sutures are placed he exercises the long flaps from each side, and closes the vaginal incision with interrupted catgut down to and rather below the former site of the crest of the rectocele. Emmet's or Hegar's method may now be selected for the final stage of the operation, according to the predilections of the operator. The operation in some respects resembles that of Hegar, the chief difference being in the method of exposing the fascia.

A Consideration of Ovarian Fibromata, Based on a Study of Two Recent Cases and Eighty-two Collected from the Literature.—Dr. REUBEN PETERSON of Ann Arbor, Mich., read a paper on this subject. The writer's first case was a woman, aged 64, who noticed a growth in the lower left abdomen five years previous to her entrance to the hospital. The growth had increased in size until it reached the border of the left ribs. There was little or no pain—in fact, very little discomfort from the growth. Operation, performed December 24, 1901, disclosed a large tumor of the left ovary, weighing seven and one-quarter pounds. The tumor was bi-lobed, the smaller lobe being œdematous. The larger tumor showed points of calcification. Microscopic examination showed the tumor to be a fibroma. The patient made an uneventful recovery.

In the second case the patient was sixty years of age, and entered the hospital for distention of the abdomen from ascitic fluid of four years' standing. During this time she had been tapped sixty-five times. At the operation, April 25, 1902, there was found an irregular, hard, fibromatous tumor of the left ovary, weighing three pounds. There were a few adhesions present, and the other ovary was the size of a hen's egg from a surface papilloma. There were seven hundred cubic centimeters of clear ascitic fluid removed at this time. The microscopic examination showed an ovarian fibroma of the left side. Except for an attack of gallstone colic, proved by the passage of four gallstones, the patient made an uneventful recovery.

While fibroma is one of the rarest forms of ovarian new growths, it is by no means such a rarity as was formerly supposed, as has been conclusively shown by Dornan, Briggs and Coe. Briggs reported eight cases from his own practice, and the writer's two cases were met with within four months.

From a consideration of the eighty-four tabulated cases, it was found that the age is mentioned in all but one. As compared with fibromyomatous uterine tumors, it was found that these growths were about twice as often discovered from forty to fifty as are ovarian fibromata, the percentage of the former being fifty-one, as compared with 28 per cent. in the latter.

The conclusions to be drawn from the writer's cases and those collected were that (1) Fibromata of the ovary occur earlier and in relatively greater numbers during early sexual life than do fibrous growths of the uterus; (2) While relatively the largest number of ovarian fibromata are to be found during or just after the menopause, a considerable percentage of cases occur proportionately later in life than do uterine fibromyomata.

Of the sixty-six cases in which the social state was mentioned twenty-two were single and forty-four were married, shewing the disease to be twice as common in married as in single women. The statistics do not bear out the statement of Dartigue, that pregnancy prior to the development of the tumor is rather a rare occurrence, since 75 per cent. of the thirty-three women, where fecundity is recorded, had had one child or more. The twenty-eight women averaged four children each. The cases were carefully reviewed regarding the effect of the ovarian fibromata upon the menstrual function. In only two cases is it definitely stated that the tumors gave rise to irregularity in the menstrual period. In 49 per cent. the statement is made that the patients were regular; six patients, or 12 per cent., are recorded as having had painful periods, but there is no evidence to show that the pain was produced by the ovarian growths.

The author thinks that neither menorrhagia nor metrorrhagia is a very constant accompaniment of fibroma of the ovary. It is more apt to occur where both ovaries are affected by the disease. The growth of an ovarian fibroma may exist for many years before the tumor reaches large proportions or gives rise to marked symptoms. In other cases the growth is more rapid, reaching considerable proportions and giving rise to noticeable symptoms in a comparatively short time, say a few months. Pain is present to a greater or less degree in nearly one-half the cases of ovarian fibromata. Freedom from pain means, as a rule, the absence of adhesions of the growth to the surrounding organs. Pain is more frequently met with in tumors of moderate size. Dysuria is a symptom in about 15.6 per cent. of the cases.

The growths were described as fibromatous in sixty-three out of the eighty-four cases, or in 75 per cent.; forty-eight of these were fibromata; twelve pure fibromata, and fibroma with colloid infiltration, fibrous with mucoid degeneration, and fibroid with hyaline and myomatous changes, one each; seventeen, or 20 per cent., were found to be fibromyoma; two were called myofibroma, and there was one each accredited to the myomas and to the myofibromas with hyaline degeneration.

Closure of Suppurating Abdominal Wounds Following Laparotomies.—Dr. PHILANDER A. HARRIS of Paterson, N. J., read a paper on this subject. When abscess forms in the abdominal incision the skin is reopened in the line of incision to the upper and lower limits of the mural abscess. The wound is then treated as an open one until the flow of pus becomes greatly reduced in quantity All the granulations are then removed with a sharp curette until the muscle, fascia, fat and other tissues are distinctly recognizable. The separated edges of the deep fascia are then drawn together by a series of silkworm-gut sutures, which interlock each other at the opposition line of the fascia. Each one of these sutures is introduced through the skin about one inch away from the incision, and each one is brought out either just above or below the point of its introduction. If the first suture both enters and emerges from the right of the median line, the next one is introduced and emerges at a point to the left of the incision, and is so introduced as to interlock the first and preceding suture. The third suture is introduced and brought out from the same side as the first suture and interlocks the second one. The fourth suture is introduced from the same side as the second suture and interlocks the third or preceding one. This singular suture has for its chief object the coaptation of the deep fascia, and, when properly introduced and tied, it is claimed that the fat and opposing edges of the skin fall in apposition, adhere and heal without additional sutures. Most of the few cases thus treated heal promptly, and generally do so without suppuration. A not unimportant part of the technique of operation is the thorough and repeated washing with a solution of bichloride of mercury, always followed with a normal salt solution irrigation. The stitches are all removed on the twelfth and fourteenth day.

Fifteen photographs, which were exhibited, illustrate much of Dr. Harris' work in this relation. A not uninteresting part of the photographic illustration was the appearance of the wound after the sutures were introduced and tied, as they converted the area of the open and large wound into an elongated mound, at whose base, on either side, there appears a row of knots, while at the summit of the mound the opposing edges of skin simply lie in apposition, awaiting adherence and healing.

Dr. Harris is of the opinion that the stronger solutions of carbolic acid, or possibly other disinfectants, might serve as good, if not better, purpose than the solution of bichloride of mercury which he has employed for this work.

Officers.—The following officers were elected for the ensuing year: *President*, Dr. Joseph E. Janvrin, New York; *Vice-Presidents*, Dr. Edward W. Jenks, Detroit, Mich., and Dr. A. Palmer Dudley, New York; *Secretary*, Dr. J. Riddle Goffe, New York; *Treasurer*, Dr. J. Montgomery Baldy, Philadelphia.

Washington, D. C., was selected as the place for holding the next annual meeting, in conjunction with the Triennial Congress of Physicians and Surgeons, the first week in May, 1903.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, Held May 15, 1902.

ROBERT F. WEIR, M.D., PRESIDENT.

Stomach Vertigo.—Dr. CHARLES SUMNER FISCHER read this paper. He said that stomach vertigo was of that character in which everything whirls around the patient like a revolving wheel. Nausea usually followed the attack, and was associated with pain in the stomach radiating to the back, and usually with constipation. There was no loss of consciousness and no misconception of the hallucinations. The attack usually occurred on an empty stomach, but might take place after an ordinary meal. At times the gastric symptoms were very indefinite. Attempts had been made to associate gastric vertigo with well-defined pathological conditions in the stomach. A review of the literature showed a wide difference of opinion regarding the state of the stomach in these cases of vertigo, and also as to its frequency. There was reason for believing that gastric vertigo might result reflexly from either cerebral congestion or anæmia. Since the work of Bouchard in 1884, on intoxications, gastric vertigo had been included in the long list of affections supposed to be due to autointoxications. It had never been proved that there was any direct relation between gastric vertigo and abnormalities of the stomach secretions. In the early stages of chronic gastritis it was quite possible that hyperchlorhydria might exist, but in the later stages it was not present and the vertigo then would be associated with diminished acidity. In all cases of chronic gastric disease in which the nervous system was diseased, one should be slow to make the diagnosis of gastric vertigo. The most common form of chronic gastric disease met with in this country was the nervous atonic variety, and it was with this form that stomach vertigo was most often associated. It was possible that in this variety the general nervous system had suffered in nutrition to such an extent as to make it particularly vulnerable to stimuli from distant organs. Vomiting was a common accompaniment of vertigo, whatever its origin, and hence, the mere presence of nausea and vomiting was not sufficient to establish the diagnosis of gastric vertigo. To attempt to make such a diagnosis from the character of the vertigo was futile. The cases of gastric vertigo could be conveniently studied in three groups, viz.: (1) Those cases of vertigo accompanied by nausea, palpitation and intense fear, following indiscretions in diet; (2) Severe attacks occurring in the course of chronic disease of the stomach without any indiscretion in diet; and (3) Mild and fleeting attacks occurring in the course of chronic gastric diseases and general neurotic conditions. He was inclined to think that true gastric vertigo was rare and belonged only to the second of these groups.

Tympanic Vertigo.—Dr. WILLIAM P. BRANDEGEE defined tympanic vertigo as that form characterized by changes or pathological conditions in the middle ear. These conditions of the middle ear comprised all those tubal changes caused by difference in atmospheric pressure; those changes in the tympanum due to inflammatory products, either fluid or solid; those changes due to connective tissue products, and those changes the result of residual products. The vertigo arising from venous engorgement of the walls of the Eustachian tube or from hypersecretion of the lining membrane, was usually mild in type, but where there were hypertrophic changes the vertigo was often exceedingly severe. Frequent inflation, preferably by the catheter, was indicated in the congestive cases. The use of the nasal douche in congestive conditions should be prohibited as a prophylactic measure. In the acute catarrhal and purulent cases early incision of the drum membrane might be indicated. After the subsidence of the acute symptoms there should be given a course of middle-ear inflation in order to restore the hearing and break up any adhesions that may exist. In the more severe inflammatory cases it might be necessary to remove the ossicles or even do a Stacke operation. The patency of the Eustachian tube should be restored, and, in the speaker's opinion, this was best accomplished by electrolysis.

The Neurological Diagnosis of Vertigo.—Dr. PEARCE BAILEY read this paper. He said that iodide of potassium was often given in large doses by neurologists, and that it sometimes was responsible for attacks of intense vertigo. In migraine vertigo was often one of the symptoms of the fully-fledged attack. In neurasthenia and hysteria vertigo was usually subjective. It was less frequently complained of in the latter, and did not appear to be so constantly present. The more important cases of vertigo coming under the notice of the neurologist were those due to organic disease of the brain. In these the centers in the medullar and cerebellum were involved, directly, as by sclerosis, tumors, hemorrhage, thrombosis, abscess and trauma, and indirectly, by changes in blood pressure. In the pons and medulla tumor was the most common cause. Vertigo due to changes in blood pressure was observed chiefly in connection with that form of epilepsy known as petit mal, and in general paresis. Cerebral endarteritis was also a fertile cause of vertigo due to brain disease; indeed, vertigo was often one of the prominent symptoms of advanced arteriosclerosis. As a symptom of apoplexy, vertigo was important, and often occurred for weeks before the apoplectic attack. In the cerebral manifestations of syphilis vertigo was a symptom of the highest importance.

Dr. WILBUR B. MARPLE said that the form of vertigo most commonly seen by the ophthalmologist was that dependent upon diplopia following paresis or paralysis of some of the ocular muscles. The less conspicuous to the observer the ocular anomaly the more apt was the patient to suffer from vertigo. If closing one eye does not cause a disappearance of the vertigo, then the other eye should be closed, when it would at once disappear. The treatment was that appropriate to the underlying cause, and the patient should be made to wear an exclusion glass. In many individuals, especially if neurasthenic, very gratifying results often followed the correction of very slight errors of refraction. For the time being any muscular anomaly should be ignored, but if the correction of the refractive error brought no relief the lack of muscular balance must receive attention.

Dr. MAX EINHORN was of the opinion that vertigo was found in almost every known disease of the stomach, and in many disorders, also of the intestine. Vertigo should be attributed to the stomach if there was a gastric catarrh or a manifest abnormality of the stomach secretion. According to his experience, this form of vertigo was not so often due to autointoxication as to some reflex disturbance.

Dr. J. F. MCKERNON said that vertigo was sometimes caused by foreign bodies and growths in the external auditory canal, as well as by masses of impacted cerumen. He thought about one-half of the cases of vertigo coming to the notice of the aurist were due to residual inflammation or its results. Labyrinthian vertigo might be traumatic, syphilitic, alcoholic and endarteritic. He had seen vertigo in a number of cases of mumps not only in the acute stage but after the inflammatory process had subsided.

Dr. E. B. Dench said that the best type of labyrinthian vertigo was found in syphilis of the labyrinth, either of the hereditary or acquired form, and here, too, brilliant results were often secured. The aural symptoms might develop long after the primary lesion, and yet, by the the administration of pilocarp, into the physiological limits relief was usually afforded. The same treatment was applicable to the vertigo occurring in connection with mumps, with the omission of the mercurial. In cases of tympanic vertigo there was elevation of the lower tone limit and interference with the upper tone limit and an increase of bone conduction. On the other hand, if the vertigo were due to disease of the labyrinth, the bone conduction would be practically nil, the lower tone limit unaffected and the upper limit changed.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending May 31, 1902:

	Cases.	Deaths.
Measles	545	12
Diphtheria and croup	264	36
Scarlet fever	323	26
Smallpox	63	2
Varicella	65	..
Tuberculosis	212	138
Typhoid fever	26	5
Cerebro-spinal meningitis	..	3

New Street Cleaning Process.—Commissioner Woodbury of the Street Cleaning Department intends to make this city the cleanest one in the world. To this end he is willing to test every contrivance or apparatus brought to his attention which can be utilized to bring about this desirable end. A few weeks ago he tried a pick-up sweeper with nominal results. He is now testing a new cleaning apparatus, which consists of a tank made of steel, holding 618 gallons of water, which is charged with compressed air, used for forcing the water through a fine slit in a pipe, which juts down from the end of the tank at the rear of the wagon, from which is thrown in a fine sheet of water. This spray of water is thrown with such force as to loosen and drive the dirt and refuse to one side of the street into the gutter. In traversing the street it covers a space of about eight feet, and begins the work in the center.

It takes about 15,000 gallons of water to clean a mile of asphalt pavement twenty-six feet wide. After the system is installed and has been in use a few days, going over the street once a day will, it is asserted, keep it in a perfectly clean condition, but to start with, it is necessary to go over it two or three times in order to soften and remove the dirt which has dried to the pavement when in a slimy, sticky condition. One machine cleaned Fifth avenue from Twenty-third street to Washington Square in less than three hours' time, beginning work at about 5 A.M. One machine, with a clear street, under ordinary conditions, it is asserted, will clean 60,000 square yards in a day. Unlike street sweepers, it can do its quickest and most effective work on a wet day, as then the dirt of the street is thoroughly loosened from the pavement and it becomes a comparatively easy matter for the spray of water to push the dirt into the gutter. Under such conditions, it is declared, more than 60,000 square yards could be cleaned in a day. For a stone street it takes about 10 per cent. more water to clean the same amount of pavement and 10 per cent. more time.—*New York Tribune.*

A Large Filtering Plant.—A recent inspection by Mayor Ashbridge of Philadelphia of the great filtering plant of that city at Torresdale was most satisfactory The work has progressed so fast that the plant will be finished in a little over two years, its cost together with the conduits for carrying the filtered water to the city being about $6,000,000. The tract of land on which the filter-beds are being built covers 436 acres. The preliminary beds are on the bank of the river, and adjoining them will be erected the low-service pumping-station. Next will come the fifty-five slow-filter beds, connected with a clear-water basin, which connects with the big conduit, which carries the water over a mile to the pumping-station, which supplies three-quarters of the city with water. The manner of working the plant will be as follows: With the low-pressure pumps the water will be lifted out of the Delaware River to the two rapid filters, each having a daily capacity of 60,000,000 gallons. By gravity the roughly filtered water will go to the fifty-five slow-filter beds, the combined capacity of which will be 300,000,000 gallons a day. After the slow filtration the water will run to the clear-water basin, and then, by gravity through the big conduit, 125 feet under ground, to the pumping-station. The slow-filtration beds, covering about fifty acres, will be arranged in groups of eleven, and between the groups will be courts and thoroughfares. The top soil is being saved. and when the beds have been cemented over they will be covered with the soil and sodded, and will present the appearance of well-kept lawns. They have an elevation of 214 feet above the level of the sea. At the experimental station excellent water is being supplied by both the slow and rapid processes. The cost of rough filtration will be about fifty cents a million gallons, and of the slow filtration about $2.50 a million gallons.—*New York Evening Post.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service during the week ended May 31, 1902:

		Cases.	Deaths.
SMALLPOX—UNITED STATES.			
California, Los Angeles	May 10–17	5	
San Francisco	May 11–18	1	
Colorado, Denver	May 10–17	1	
Illinois, Chicago	May 17–24	14	
Kentucky, Covington	May 10–24	22	
Lexington	May 10–17	2	
Louisiana, Shreveport	May 17–24	1	
Massachusetts, Boston	May 17–24	28	6
Fall River	May 17–24	1	1
Lowell	May 17–24	3	
Malden	May 17–24	2	
Melrose	May 17–24	2	1
Somerville	May 17–24	1	
Michigan, Detroit	May 17–24	6	
Minnesota, Minneapolis	Apr. 18–May 17	23	
Winona	May 17–24	4	
Missouri, St. Joseph	Apr. 1–30	50	2
New Hampshire, Nashua	May 17–24	2	
New Jersey, Camden	May 17–24	2	
Newark	May 17–24	53	8
New York, New York	May 17–24	36	11
Yonkers	May 16–23		1
Ohio, Cincinnati	May 16–23	14	
Cleveland	May 9–16	8	4
Dayton	May 17–24	2	
Pennsylvania, Johnstown	May 17–24	4	
Philadelphia	May 17–24	30	3
Tennessee, Memphis	May 17–24	8	
Utah, Salt Lake City	May 10–17	1	
Washington, Tacoma	May 11–18	1	
SMALLPOX—FOREIGN.			
Belgium, Liege	Apr. 26–May 3		1
Canada, Winnipeg	May 10–17	3	1
France, Paris	Apr. 26–May 3		4
Rheims	Apr. 25–May 4	2	1
Great Britain, Glasgow	May 9–16	1	
Jarrow on Tyne	May 3–10	2	
London	May 3–10	248	44
New Castle on Tyne	May 3–10	1	
South Shields	May 3–10	6	
India, Calcutta	Apr. 18–26		6
Madras	Apr. 19–25		1
Italy, Palermo	May 3–10	9	2
Japan, Formosa, Tamsui	Jan. 1–31	15	
Nagasaki	Apr. 21–30	1	
Mexico, Vera Cruz	May 10–17	6	5
Russia, Moscow	Apr. 26–May 3	8	1
St. Petersburg	Apr. 26–May 3	7	1
Straits Settlements, Singapore	Mar. 29–Apr. 12		1
Turkey, Smyrna	Apr. 27–May 4		2
YELLOW FEVER.			
Mexico, Vera Cruz	May 10–17	14	8
CHOLERA.			
India, Calcutta	Apr. 19–26		146
Straits Settlements, Singapore	Mar. 29–Apr. 12		48
PLAGUE—INSULAR.			
Hawaii, Honolulu	May 8–13		5
PLAGUE—FOREIGN.			
China, Canton	May 19	Epidemic.	
Yityang	May 19	Epidemic.	
Taileung	May 19	Epidemic.	
India, Calcutta	Apr. 19–26		577
Japan, Formosa, Tamsui	Jan. 1–31	159	141

Medical Record

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Original Articles.

THE PRESIDENT'S ADDRESS.*

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NEW YORK.

SINCE the session held at St. Paul a year ago, a former president of this Association, paying the last great debt to nature, has passed

"To where beyond these voices there is peace."

Full of years and beyond the limit allotted by the Psalmist, Professor Edward Mott Moore, born in Rahway, N. J., July 15, 1814, died in Rochester, N. Y., March 3, 1902. He was one of the founders of the New York State Medical Association, a consistent and loyal friend of our national body and of an organized medical profession. Although his achievements in science were of a high order, his life was not circumscribed within the narrow limits of professional work. He was not only a skilful surgeon, bold and original, but more than this, he was a citizen of the highest type. The welfare of his neighbors, of his adopted city, state and the Nation were his May his noble example be emulated, for it is just as much our duty to be true to the obligations of citizenship as to our profession.

Before dealing with the more urgent matters of this meeting, your attention is called to the Fourteenth International Congress of Medicine, which is to be held at Madrid from April 23 to 30, 1903.

As your presiding officer I had the honor to receive an appointment from the Secretary of State as a delegate to represent this association at the Congress, and was requested by him to appoint five additional delegates from this body. In conforming to this request the following gentlemen have accepted commissions, and have received certificates from the State Department to the Congress: Dr. Nicholas Senn of Illinois; Dr. Maurice H. Richardson of Massachusetts; Dr. George Crile of Ohio; Dr. Richard Douglas of Tennessee, and Dr. Edward B. Dench of New York.

It should be the duty and pride of the separate state associations to send at least one delegate to this important meeting, and in doing this to correspond with Dr. Angel Fernandez-Caro, Secretary-General, Fourteenth International Congress of Medicine, Madrid, Spain.

This session marks an era in the history of the American Medical Association, for we meet under changed conditions, and in this our trial year, while we are adjusting ourselves to the new order, we confidentlly ask and expect to receive not only the consideration and forbearance, but the generous help which should be accorded to this experiment in government by which we earnestly hope to avoid the embarrassments and failures that under the old régime characterized the meetings of a body so large and unwieldy as the general session.

These changes involve not only the government of the association proper, but also a changed relationship of the state association to the national body, as well as the relationship of the county to the state organization. Under the old organization our business was transacted by delegates from state, district, and local affiliated societies in the proportion of one delegate for each ten members, while now, only affiliated state organizations have the right to send delegates, and these are only entitled to one delegate for each five hundred active members, or a fraction of this number These form the House of Delegates, which is further reenforced by two members from each of the scientific sections of the association, and one each from the Army, the Navy, and the Marine Hospital service. Under the old régime the state association bore the same relationship to the national body as did the city, county, and district organizations. Now, only the state association is represented, and they create the legislative body of the American Medical Association. In other words, the House of Delegates is a federation of all the state associations

The reorganization at St. Paul, having taken away from the county organization its right to send delegates, also deprived the city and district branches and other minor associations of the same privilege, requiring membership in the county society when such exists as a prerequisite to membership in the state and the American Medical Association. This ruling dropped, at least temporarily, from the rolls of the association a considerable number of physicians who had long been on the roster from state or local bodies which, by the laws then existing, were in affiliation with the National Association. While this action may have seemed unnecessary and unjust to these members (among whom were many of the most loyal and faithful supporters of the national body) for the common good, they should yield to the opinion of the majority, since calm reflection must convince any reasonable mind that one of the wisest steps the association ever took was when it made the county medical organizations the basis of membership in the national body. There will hereafter be excluded from membership that, fortunately, small, but none the less existing group of unworthy members of our profession who, on account of the clumsy rules which formerly prevailed, obtained a place on the roster of the American Medical Association.

To the date of the reorganization in June, 1901, the roster of this Association was so inaccurate and unsatisfactory that the secretary and president-elect undertook the difficult task of obtaining a correct list of members. While one might infer that each organized state and territorial association could, from its records, furnish, at short notice, the names of all eligible to membership in the American Medical Association, in only a very small proportion of these subordinate bodies was a reliable list available. It then became necessary to direct a circular letter, state by state, to every name on the roster then existing, asking for the necessary information. Since, for final confirmation, these names must be referred back to the subordinate organizations in which membership is claimed, it will be seen that some time must elapse before the completion of a perfectly reliable list. The lack of business-like methods with which our profession is charged is in a manner sustained by this admission, and it emphasizes the necessity of a thorough reorganization of all the societies in affiliation with the national body, upon practically a uniform plan.

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*Delivered at the Fifty-third Annual Session of the American Medical Association at Saratoga Springs, June 10–13, 1902.

Scarcely second in importance to a uniform scheme of reorganization is that of a uniform standard of requirements for the practice of medicine in the various states. It is of vital interest to the welfare of the profession that the question of reciprocity or interstate comity should be settled so that without any sacrifice of the very highest requirements, a physician in practice in one state, having gone before a competent board, upon change of residence might be permitted to practice without being subjected to a second state examination, in the place of his adoption. The House of Delegates will, without doubt, act upon this matter at this session.

Referring to the subdivisions of the scientific work of the association, Article V of the constitution empowers the House of Delegates "to authorize new sections which may from time to time be organized, as the necessity for their existence arises." With increasing membership and the consequent larger attendance, it may be imperative in the future to create new sections; but this should be done only after careful consideration, and not until it is demonstrated that the material of high scientific value offered to the twelve sections now existing is more than can be utilized in the time allotted for the meetings.

The by-laws require every member to register in one of the sections, and it would be well to limit each reader to a single paper before the section chosen. The association should insist that the officers of sections exercise a most rigid scrutiny of the papers referred to them. If we are to achieve our high purpose, if we wish to attract to our organization the great bulk of the better element of the medical profession, we must present through our sections papers which demonstrate not only the high scientific attainment of the author but the undoubted value of the material presented. We are judged by our works, and if at our meetings and in the publication of our papers in *The Journal*, which carries them to all parts of the earth, any unworthy material finds a place, it can but reflect discredit upon the association.

Article VI of the new constitution says: "The House of Delegates shall have authority to provide for and to create such branch organizations as may be deemed essential to the promotion of the welfare of the medical profession."

For the present I would not advise the establishment of these subdivisions, but ultimately it may be found necessary to divide the States and Territories according to population and geographical position into district branches where meetings may be held at the convenience of the States represented, and without interference with the annual session of the National Association

Let us hope that the various Tri-State societies and the sectional organizations, such as the Southern Surgical and Gynecological Association, and the equally successful Mississippi Valley Medical Association, and others of like character, attracted by the high and unselfish aims of this organization, may appreciate the vital necessity of a united profession and vote themselves into district branches of the American Medical Association. Truly in such a union there would be strength so potent, and influence so far-reaching that we could safeguard, without doubt, the material interests of the profession, elevate still higher the standard of medical education, secure the enactment and enforcement of just and rigid medical laws, enlighten and direct public opinion in regard to the broad problems of State medicine, and demonstrate to the world the practical accomplishment of our science.

Article VII of the new constitution, which deals with "Sessions and Meetings," refers the place and time for holding each annual session to the House of Delegates. They are also, under Article IX, empowered to appropriate funds for defraying the expenses of the annual meeting, as well as for enabling the standing committees to fulfill their respective duties.

I would recommend to the consideration of the association the propriety of selecting in each of the geographical subdivisions of the United States, in which the sessions are successively held, some suitable location which has been found to be well adapted to the work of the organization, and to which we could return when the meeting is again to be held in that section of the country. As a scientific body, intent upon fostering the growth and diffusion of medical knowledge, it is of vital importance to avoid in the selection of our place of meeting everything that could detract from the closest attention to the scientific program. The smaller cities with ample hotel accommodations and halls conveniently located, have always yielded a larger attendance before the sections, and consequently a greater benefit to our members than the cities of larger size with their multitude of distractions. Moreover, it seems scarcely in accord with the dignity of this great body to require through its committee of arrangements that the physicians of the State and place selected for the convention should be held responsible for the expenses of that meeting. Every suggestion of commercialism should be avoided, and this prosperous organization should assume the entire responsibility and management of these annual sessions.

One of the most important duties imposed upon the House of Delegates is the selection of those who conduct its business affairs. In the past, the association has shown a keen discernment in securing for its trustees and standing committees men, not only of executive ability, but held in high esteem as representatives of a profession which, according to the code of ethics, "should be temperate in all things, and which requires greater purity of character and a higher standard of moral excellence than any other calling."

You will in the regular order of business hear the reports of your five standing committees, and I am called upon to speak of but one, viz.: The Committee on Medical Legislation which the by-laws adopted in June of 1901 directs to be appointed by the president, and to consist of one delegate from each State. In accordance with this requirement I mailed to the president of each State and Territorial organization in affiliation with the American Medical Association a letter asking him to nominate one member for this committee. To all replies to this letter the name of the delegate was sent to the chairman of the National Committee on Medical Legislation, Dr. H. L. E. Johnson, Washington, D. C. It will be remembered that at the session in St. Paul in 1901 the association ruled that the National Committee on Medical Legislation, consisting of Dr. H. L. E. Johnson, Washington City; Dr. William H. Welch, Baltimore, and Dr. W. L. Rodman, Philadelphia, should be continued until the meeting in June, 1903, and should have the same power to act in the interest of the association that they had previously enjoyed. All the legislative affairs of the association I have referred to this committee at Washington, and have authorized them to call the full Committee on Medical Legislation for consultation, advice or aid whenever their services might be required.

In his message to Congress, December, 1901, the President recommended the establishment of a Department of Commerce and Industries. In its passage through the Senate the name was changed to that of Commerce and Labor. Before the national legislature at the same time was a bill known as the Perkins-Hepburn bill to increase the efficiency and to change the name of the United States Marine-Hospital service to that of the United States Health Service, transferring this from the Treasury to the new department

The American Medical Association has on several occasions expressed its desire for the establishment of a Department of Public Health, either as a separate department of the Government, or as one of the important bureaus of a department Probably on account of a lack of thorough organization and coöperation, it has not been able to obtain this important recognition for the medical profession. In view of these repeated failures it would seem advantageous to the scheme of establishing ultimately a Department of Public Health that the Perkins bill should become a law, because the United States Marine-Hospital Service could then with more propriety be removed from the new Department of Commerce and Labor into a separate and independent department. This department should be in charge of a medical officer to direct our foreign and insular quarantine, interstate quarantine, the medical supervision of epidemics, and, in fact, all matters pertaining to the general health of any group of States, or of the entire country.

The work of this office and bureau can only be carried out with success by the earnest coöperation of the health officers of the various localities and States, and of the advisory board for the hygienic laboratory provided for in the Perkins-Hepburn bill, for the national and local authorities acting in harmony would be better able to prevent the importation of disease, and to stamp out epidemics which may occur despite the greatest vigilance, and this with the minimum disturbance of the resident public and of the commercial interests of more remote sections.

As the representative organization of the medical profession of the United States, it is our duty to coöperate with the medical corps of the army in the effort to procure legislation which will not only uphold the rights and dignity of the medical officers in the public service, but will give better protection to the health and lives of our troops.

The status of the Medical Department of the United States Army is fairly stated in a circular issued by the medical officers stationed in the Philippines, in which they claim that the present condition of affairs "is regarded as a menace to the efficiency of the medical department, as it is felt to be unfair and unjust." In no other staff department is promotion so slow as in the medical department. It is graded for rank, promotion and pay below every other staff department of the army, and, with the exception of second lieutenant, is graded below the line. A medical officer, under the provisions of the present law, to obtain a colonelcy must pass through three times as many files as an officer of the Quartermaster's, Subsistence or Pay Departments; through more than twice as many files as an officer of the Engineers' or Ordnance Departments, and more than one and one-half times as many as an officer of the signal corps. Officers of the line having obtained the rank of major, have to pass through but four files to obtain the rank of colonel, while the medical officers have to pass through nine files. All these facts are fully appreciated by the younger physicians of our country and by the volunteer and contract medical officers, hundreds of whom are now serving with troops and are declining to become candidates for a position offering such an unpromising career and so little in the line of promotion and emolument.

The Secretary of War has been officially informed by the Surgeon-General that the number of available medical officers is being rapidly diminished, and he anticipates he will soon be unable to supply the demand for medical officers to replace those constantly returning from the Philippines, unless the prohibition placed by the Secretary of War upon the appointment of additional contract surgeons is removed. He says: "The service would no doubt be more attractive to well-educated physicians if the prospects for promotion were better, and I respectfully recommend that Congress be asked at the present session to add to the medical corps of the army, two colonels, six lieutenant-colonels and twenty-five majors. This would give thirty-three additional vacancies and would furnish an incentive to volunteer medical officers and contract surgeons now in service to seek admission to the regular army. I would also recommend that the age limit for volunteer surgeons and contract surgeons who have rendered satisfactory service for two years or more be raised to thirty-six years."

No one who has carefully studied the subject can but conclude that under the statues now in force many lives have been sacrificed and much suffering has resulted from lack of thorough coöperation between the officer in command and his chief surgeon, and without doubt it would be to the interest of the service if medical officers were always consulted with regard to the location of camps and military posts for the purpose of getting expert opinion upon sanitary questions.

In order to impress upon commanding officers the importance of military hygiene, and the greater necessity for this coöperation with the medical corps of the army, the Surgeon-General has insisted that there should be established at the Military Academy at West Point a course of instruction in military hygiene.

It is the duty of this association to lend its best efforts to the Surgeon-General, a former president of the American Medical Association, and one not only in a position to suggest the legislation which would best serve the interests of the army, but one whom we know to be zealous of the interests, rights, and dignity of the medical officers of the War Department.

The committee to whom were entrusted the question of vivisection has been diligent, and it would seem successful, it its efforts to prevent unwise and injurious restrictions upon this important method of research.

The wide dissemination of the contagion of smallpox in the United States within the last few years demands the most earnest attention of the medical profession Such ignorance or indifference to the immunizing power of vaccination is a matter of surprise in an advanced state of civilization and, while laws for compulsory vaccination would without doubt be to the best interests of the whole people, it seems so contrary to the spirit of our institutions as to be impolitic as well as impracticable. It falls upon us as physicians to labor unceasingly to impress upon the communities in which we reside the necessity and safety of this immunizing process

We will be wise if, from time to time, we make a critical analysis of our past, realize exactly what we are doing, and upon this base such conduct as will assure to our successors a more satisfactory condition of our profession and a higher achievement of this association. Being human we are too apt to shut our eyes to unpleasant truths; to exaggerate the value and the importance of our own performances, and to think that what we have been taught to believe, or what we wish to believe, is right and unchangeable. Let us ask ourselves plainly: Is the medical profession of the United States what it should be? Has it won the influential position to which it should aspire? Has it gained the power to secure just and proper legislation? Has it lived up to its obligations, and has the American Medical Association, which claims to represent one hundred and twenty thousand regular practitioners of medicine in the United States, fulfilled its mission? How many of us after due reflection can consistently answer these questions other than by saying plainly and regretfully —No. And wherein lies our weakness? To say we are part of a young and scarcely organized country; that our profession is widely dispersed over vast regions so remote from each other that contact and coöperation are difficult will not entirely satisfy the fairly critical mind. Such excuses might have been sufficient at an earlier date, but not now. It will not be sufficient to say that, despite these and other embarassments, we of the United States have given to mankind the unequaled boon of ether anæsthesia; that, through the achievements of members of our profession and of this association medical and surgical science has been greatly enriched; that great specialities recognized the world over have been developed; that operations bold and original have been established beyond controversy; and that by reason of these various contributions to the science and art of surgery and of medicine millions of lives have already been saved, together with the merciful mitigation of suffering which all this implies. While a repetition of this may flatter our vanity, it will not wholly satisfy us when in honest purpose we realize how great are our shortcomings.

It is a fact painful to acknowledge that of the three so-called learned professions, the ministry, law, and medicine, ours is accorded the inferior position, and we who, day in and out, in every home of the land, are close to the personal friendship of our patients, respected and loved as individuals, are incapable of wielding by organization and discipline the powerful influence of a united profession aiming at a high and honorable purpose. And what have been the results of this house divided against itself? Witness the snail-like progress which marked the various steps in securing our laws for elevating the standard of requirements in medical education and for medical practice. Witness the opposition to our efforts in securing better sanitary regulations, and in the struggle to protect the public from the horde of uneducated or misguided persons who under the guise of Christian Science, Osteopathy, and other schisms, insist upon being permitted to take charge of and treat human beings suffering from disease without submitting themselves to the State examination legally required of us.

There are, in my opinion, two principal causes of this evident weakness of the profession. First: The insufficient methods of medical education which have prevailed for the greater part of the first century of our national existence. Second: The lack of organization.

The Code of this association says: "Those admitted into our ranks should found their expectations of practice upon the extent of their qualifications." We stand committed as the champion of higher medical education and the elevation of the standard of requirements applicable not only to the entrance examination, but to a rigid examination before the degree is received, as well as by the State before permission to practice is granted. To this rigid examination this association, by its rules of conduct, demands another important essential. The highest order of learning, the greatest amount of skill, may not make one an honor to our calling, for "there is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical, and to attain such eminence is a duty which every physician owes alike to his patients and his profession."

The American Medical Association is the sponsor for organized medicine in the United States, and failure to accomplish this end implies the failure of this association. We must not fail, nor will we, unless we falter in carrying out the plan of reorganization in the liberal and progressive spirit which characterized the session of 1901. It is our plain duty to endeavor to bring about the adoption by the various constituent bodies of a practically uniform constitution and by-laws for each county, and for each State, modified only as the local conditions may require, and all governed by the same rules of conduct. These rules, as at present given in the Code of Ethics, adopted many years ago by this association, should be also a subject of serious consideration at this time, for we cannot claim consistency or be logical in argument until there is but one code for the national association and for all of the State organizations represented in the national body. This, as you well know, does not now prevail. Some years ago there lived and labored among us for the good of mankind and the honor of the profession a man whose genius was of the highest order, and whose fame carried the name of American surgery throughout the civilized world. He was one of those fearless pioneers in science who found his place ever on the frontier clearing the way for those who were to follow. In 1876, at a meeting of the American Medical Association, in Philadelphia, Dr. J. Marion Sims, in his presidential address, referring to the Code of Ethics, says: "The time will come when your organic laws, like the Constitution of our country, will require modifications and amendments to suit a higher intelligence, a broader education and a greater destiny." In my opinion, the time has come when we cannot absolve ourselves from the responsibility of doing away with the inconsistencies for which we may now be properly criticised.

Such have been the changes in the statutes of a majority of the States since the Code was adopted by the respected founders of this association that we find it insisting upon conduct on the part of our members which is contrary to the laws of the States in which they reside. For instance, one section forbids a member of the regular profession to act upon a board of examiners which has to pass upon the legal qualifications of persons not graduates of regular medical colleges, while in thirty-eight of the States represented here the civil statutes require these boards, which are composed in great part of members of the association, to examine, pass upon and sign certificates or licenses to practice of Homeopaths, Eclectics, and other subdivisions of medical practice. In six of the States, including the District of Columbia, the law requires three separate examining boards. In Mississippi, North Carolina and South Carolina the examining boards are entirely composed of regular physicians, and in one of these States (Mississippi), while none but regulars are allowed on the board, the law explicitly says: "Distinction shall not be made between applicants because of the different systems or schools of practice that may be chosen." In almost all the States and Territories regular physicians are compelled by the laws of the State in which they reside to disobey the injunctions of this section of the Code of Ethics.

A modification of this and other sections of the Code must be a part of the liberal plan of reorganization which we have essayed.

In conclusion, I ask this association to stand for more than the healing art. To labor for the alleviation of suffering and for the restoration of health is a noble avocation, but to teach our fellows how to avoid disaster is a prouder privilege and a higher duty. We should be teachers of men. How better can we protect the public from disease in all its various forms and insidious processes than by perfecting in every county and in every community an organization which shall be ever watchful and insistent upon obedience to the laws relating to the public health?

STATE MEDICINE, PAST, PRESENT AND FUTURE.*

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STATE medicine had its origin with Moses, the great legislator. The bloodthirsty Egyptians of the dark ages, who in superstitious ignorance destroyed the lives of those among them who differed from their belief or creed, left nothing which the human race could follow for the preservation of health and life. Thirty odd centuries ago, the great lawgiver, Moses, laid down sanitary rules, regulations and exercises which are followed at the present day by all civilized and semi-civilized nations.

The Sanitary Code of Moses.—Some 1,300 years before the Christian era, the code contained in the Mosaic Exodus laid down restrictions on every possible act that mankind may perform to impair or impede existence. Such as they are, it is hardly possible to improve upon them at this enlightened day. Moses instructed his people that those sanitary commands were inspired by a Supreme Being; that the only health officer in existence was the Almighty, who could watch over their trespasses against the law. No matter where they might be, or what they might do, the Supreme Overseer would bring them to justice for the violation of the code of health.

It was handed down to the Israelites in an oral way for about one thousand years, when it became corrupt and neglected, like other laws of long standing when there is no one to enforce them.

About six centuries before the Christian era, the great Sanhedrin was formed; it consisted of seventy-two men, who compiled the oral law to a written law, adding to it, besides the moral, every possible sanitary regulation that may benefit human health and life. This tribunal enacted laws to improve every possible means of securing healthy food, clothing and shelter, and established minor judiciary courts in every possible community, and gave these courts the right to bring before themselves anyone who violated the sanitary measures. The laws of the Sanhedrin were enforced and well kept for hundreds of years, during the time that Judea could establish and enforce its own laws, but when it fell under the sovereignty of the Romans, they were unable to enforce the laws with Roman influence; consequently, they were kept only by the pious Jews.

The Justinian Law.—The infidels could not be compelled to keep the commands under the Roman law. Hence the pious Jews of the sixth century appealed to the Roman Emperor Justinian, under whose reign a code was compiled by sixteen eminent jurists, establishing laws for all Roman States, and quoting decisions mostly from the Jewish Talmud, including many moral and sanitary measures, which is now termed the Justinian Law. Besides adopting many of the Talmudic laws, which did not differ from the Mosaic, they added many practical and sanitary regulations. It is to the Justinian Law that our present civilization is indebted for the abolishment of polygamy. It is to the laws of Justinian that we are indebted for the prohibition of the marriage consanguinity. The combination of the Mosaic, Talmudic and Justinian laws forms a fair code for the preservation of human life. The Bible itself is one of the very best textbooks on hygiene that has ever been written. He who strictly follows its teachings will be a perfect sanitarian. "We must learn," says a distinguished writer, "to regard physical as well as moral sins as greatly displeasing in the sight of God."

Features of the Mosaic Law.—Jewish hygiene and diet are well known for their regulation to healthy food, for the Jews are restricted to certain fish of the waters and certain beasts of the field. It is from the Mosaic Law that we have learned to legislate against unwholesome food, especially of animal food. Every one of us knows with what care the Jews kill their cattle and their fowl, and with what care the autopsies are made on the animals before they are declared fit for use.

The sanitary laws of Moses provided for the segregation of lepers and the fumigation and destruction of infected clothing. These had great influence on Christian nations when contagion was recognized in epidemics, and probably most of them were, from the standpoint of to-day, either directly or indirectly infectious, and a grand advance in preservative methods became possible. All European nations enforced laws for limiting the spread of leprosy, and these, which have been handed down from ancient times, had merely to be modified in their application in order to exercise a controlling influence on the spread of fulminant febrile diseases.

Pestilence and Superstition.—Before and after the beginning of the Christian era, plagues, pestilences and famines were classed together as of divine origin. The Greeks and Romans, from the evidences of their authors, resorted to forms and ceremonies to avert epidemics. Statutes were erected to Æsculapius and Apollo; Sibylline books were consulted, nails were driven into the walls of the Temple of Jupiter Capitolinus, and the Lectisterne ceremonies were among the remedies applied to epidemics before the time of Christ. Later, festivals, mournings, and founding of religious structures were resorted to in order to appease the divine anger, to which the epidemics were attributed. For hundreds of years, thousands and thousands of human lives were sacrificed from various causes and infectious epidemics, of which we now seldom hear. The so-called sweating plague of the latter part of the fifteenth and the fore part of the sixteenth centuries has not been heard of since 1551. Black death and epidemics of cholera with its ravages as late as 1848 and 1849, and the last of the tropical countries, yellow fever, to say nothing about the various other zymotic epidemics and infectious diseases, such as typhus, diphtheria, scarlatina, etc., have become a rarity among civilized nations. Livy tells us that during epidemics the Roman citizens shut themselves up in their houses and paid attention to nothing except how to preserve themselves from the pestilence. Boccaccio refers in his tales to the attempts made by Florence to preserve her citizens from the plague which overspread Europe in 1346 by denying access to all sick persons.

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*Oration on State medicine, delivered before the fifty-third annual meeting of the American Medical Association at Saratoga Springs, N. Y., June 10–13, 1902.

The First Quarantine.—The first arrangement for the isolation of the sick and quarantine establishment against infectious diseases reach back to the tenth century. Charles IV, in 1347, made a statute for German states, including certain measures for the isolation of the sick and quarantine establishment against certain diseases.

In 1348 a "Board of Supervision," a sort of council of hygiene, which in the end served as a model for all Italy, was first established in Venice. At Majorca, in 1374, a committee of officials presided over by a physician, Lucien Colomines, was appointed with extensive powers, to whom the local magistrates at the outbreak of the plagues were directed to report.

This committee was also allowed a hospital, and it was directed that no ship should discharge passengers nor unload freight without their knowledge, nor should any port sales be held without preceding notice to the sanitary council. Suspected ships were required to keep quarantine for forty days, hence the name quarantine.

In 1348, the year of the extension of the black death, it was noted by many observers, and especially recorded by Gabriel de Mussis, who fled from the Crimea to Plaisance in France, that ships and passengers from the East conveyed the disease. That same year Venice, then the center of maritime commerce, appointed three proveditors of health to take measures for the prevention of the plague. Count Barnabo, in 1374, issued a decree at Reggio, in Italy, that any person attacked by the disease should instantly leave the city, fortress or castle for tents in the open country, until recovered or dead; that persons attending the sick should not consort with others until after the lapse of ten days; that the priests should examine and notify the infected sick to the inquisitors, and that all goods and property of persons infected, or who conveyed infection, should be confiscated to the use of the church, and none but those appointed should, under penalty of death and confiscation, attend upon the plague-stricken.

In 1382 Chalin de Vinario demonstrated that contagion was the cause of the spread of the plague. The following year Count Barnabo prohibited entrance of persons from infected localities under penalty of death; and his successor, Viscount John, in 1399, ordered the city gates to be guarded against admission of strangers from infected places, infected houses to be fumigated and thoroughly ventilated for a long period, clothes and bedding to be washed and dried in the open air, bed-spreads to be exposed for days in the open air, and all refuse matter and rubbish to be burnt.

In 1400 the Berlin butchers were compelled under the law to take the following oath: "I will sell no suckling sow, no consumptive or one-eyed cattle, and no cattle purchased from poor people out of the hospitals."

Extension of Quarantine.—During the fifteenth century severe measures were employed in times of pestilence. Boards of health were frequently convoked and strict health ordinances issued. "It is forbidden to attend foreign markets and fairs. Whosoever, however, did attend fairs must undergo quarantine, the guard of the gates were strengthened, suspected persons were not admitted and strangers must bring evidence that they had not sojourned in places afflicted by the pestilence. 'Blotterhauser' were built, the attendants were forcibly pressed into service as nurses, the sick were shut up in their houses, suitable directions as to mode of life, even as to purification of the washings of the body and bed, on interment, etc., were published. The council sought to impress the use of secret remedies, sorcery and necromancy; amulets were interdicted and burned."

The first quarantine port was established at Marseilles in 1526, and during this century the system of quarantine extended to most of the maritime cities of the Mediterranean, and many inland cites adopted similar precautions.

In 1846 the work on contagions and contagious diseases, by Fracastor of Venice, declaring contagion to be exhaled by the body, infecting those at hand directly through the air, and those at a distance through the medium of fomites, induced greater measures of exclusion. By degrees, the practice of quarantine extended over the whole civilized world, and the penalty measures were increased in severity. Torture and death awaited alike those who remained in the city, when ordered out, and those who entered when forbidden access. In the sixteenth century not only were ships with their passengers and cargo detained in prolonged quarantine, but towns also were surrounded by sanitary cordons and completely blockaded for long periods, and even individual houses in the towns were closed against exit and entrance. Food and necessaries were obtained with difficulty and by the most circuitous methods of exchange, whilst politics, commerce, and social intercourse stagnated.

Quarantine in the United States.—The first quarantine act adopted in the United States under the colonial system was passed by the General Assembly of Pennsylvania in 1700, and was entitled, "An act to prevent sick vessels coming into this Government." It imposed a penalty of one hundred pounds on any infected vessel which landed in the province. Other quarantine acts of greater or less severity were adopted by Massachusetts in 1701, Virginia in 1722, Delaware in 1726, North Carolina in 1775, New York in 1758, Maryland in 1760, etc. The first general quarantine act adopted by Congress was passed February 23, 1799, and was designed to be supplementary to the various State acts. It was entitled, "An act respecting quarantine and health laws."

During the eighteenth century maritime quarantine and lazarets extended, especially on the Mediterranean coast, and increased in importance when inland pandemics subsided in severity. The quarantine services under boards of health, with their stations, lazarets, detentions, disinfections, numerous attendants and complicated ordinances, became large organizations. Europe was less frequently invaded by plague against which maritime quarantine was almost entirely directed; therefore the lazarets were neglected, and the administration became lax. At the end of the century John Howard made strong protests and, in the beginning of the nineteenth century, cholera and yellow fever made their advent. This revived the interest in the prevention of pandemics, and shook the confidence placed in quarantine, as it was practiced at that time.

International Sanitary Conferences.—The severe measures designed for plague in the seventeenth and eighteenth centuries were adopted for cholera and yellow fever in the nineteenth century, and they were embodied with modifications in a lengthy convention, accompanied by an elaborate international sanitary code. At the International Sanitary Conference held in Paris in 1851, and represented by twelve European powers. This convention did much to spread ideas of municipal hygiene in place of useless quarantines. Inspection of dwellings and destruction of sources of infection were strongly advocated. In the United States various yellow fever and other epidemics called attention to the subject. In the city of New York, in 1866, a metropolitan health board was established, organized on the same lines as the English sanitary acts. Later, in 1869, Massachusetts established a State board, and other States and cities rapidly followed. Ten years later, in 1879, Congress created a national board of health, and to-day municipal hygiene is receiving a great deal of attention.

Municipal hygiene in Europe has been carried to a much forther degree than in the United States. At the International Sanitary Conference, held in Vienna in 1874, much modification with regard to quarantine was commenced. Inland quarantine was rejected as inadmissible. The Conference of Constantinople recommended the establishment of a strict quarantine in the Red sea, for the purpose of preventing importation of cholera into Europe, and was met with approval. This was regarded as the strategic point in the line of defense, and therefore tended to weaken reliance upon quarantine in Western ports, and medical inspection was considered as a possible substitute in conjunction with local sanitary measures. Sir John Simon, Medical Officer of the Privy Council, in his memorandum, expressed the views of the local government board upon the prevention of cholera, which greatly influenced the opinions of the delegates. The precautions recommended in detail, the various means applicable for the removal of filth, and the protection of water supplies, combined with careful disinfection of the discharges of any person who might be attacked.

In 1881 an international sanitary conference was held in Washington, and was attended by the representatives of twenty-seven States, including all the governments of Europe, except Switzerland. They discussed measures desirable to prevent the spread of yellow fever and cholera. No uniform agreement was arrived at on all points, but some of the recommendations were adopted by many of the foreign governments. After the invasion of Egypt by cholera in 1883, and of Europe in 1884, an international sanitary conference was held in Rome in 1885. The interested powers were represented by their embassadors or other diplomats, assisted by technical medical delegates. They traced the course of shipping from its point of departure from ports and cities where cholera is endemic, for instance, Bombay, Calcutta, etc., and followed it through the Red Sea, the Suez Canal, the Mediterranean, to the open ocean. Later they considered the indications for inland precautions, and recommended the security of correct statements of sanitary conditions by the presence on big vessels of government medical officers independent of shipping companies, the disinfection on board, by means of steam chambers, of all soiled or dirty articles, the enforcement of strict precautions against the spread of cholera by the pilgrims to and from Mecca. Respecting the detention of ships, the powers represented expressed opinions that were arranged in the three following groups: Turkey, Spain, Mexico, Brazil, etc., favored the continuance of long quarantines. France, Germany, Austria, Hungary, Switzerland, Russia, Sweden, Norway, Italy and Portugal yielded to the data of modern science; whilst desiring short periods of quarantine they favored such detention as deemed necessary upon travelers and commerce; England and India advocated free passage without detention. Regarding quarantine, however, the opinions of Continental nations have been undergoing modification. At the International Congress of Hygiene, at Paris, during the exhibition of 1889, Dr. Proust, Inspector-General of the sanitary service of France, concluded a report on sanitation in seaport towns with the following propositions: "That it is the duty of governments and municipalities to render ports healthy; that sanitary works for seaport towns are more necessary than for other towns; that it is only after such works that any notable reduction in zymotic diseases and general death rates takes place, and that it is only when ports present a refractory soil for the penetration upon shipping can be suppressed." In spite of the dubious signification of the last resolution, there was ample indication that quarantine was slowly but surely being whittled down to small proportions.

Most of the microphytic diseases are found to prevail more or less in all parts of the civilized world. Certain are more prevalent in temperate zones; others are peculiar to the tropics, and are exotic in relation to this country. There are many diseases indigenous to certain tropical areas, but which are not naturalized in this country, such as Oriental plague, Asiatic cholera, yellow fever, dengue, yaws, elephantiasis, endemic hæmaturia, and chyluria. Oriental sore, and Madura foot. Besides these, some diseases, such as malaria and dysentery, appear in a more severe form in tropical than in temperate zones. On the contrary, scarlatina, erysipelas, whooping cough, cerebrospinal fever, and what is known as cholera nostras, are more common in temperate zones.

Epidemics in the United States.—According to the late Dr. Toner, the most important epidemics which prevailed in the United States during the eighteenth century were as follows:

Smallpox: In Boston in 1701, 1702, 1721, 1730, 1752, 1764, 1776, and 1792; in New York in 1721, 1731, and 1752; in Philadelphia in 1730–32, 1736, and 1756; in Charleson, S. C., in 1700, 1717, 1732, 1738, and 1760.

Yellow Fever: In Boston in 1796 and 1798; in New York in 1702, 1732, 1741, 1743, 1791, 1795, 1798, and 1799; in Philadelphia in 1741, 1762, 1793, 1797–99; in Charleston, S. C., in 1700, 1703, 1728, 1732, 1739, 1745, 1748, 1749, 1753, 1755, 1758, 1792, 1794, 1795, 1796, 1797, 1799; in New Orleans in 1769, 1791, 1793–95, 1797, 1799, 1800.

Scarlatina: (According to J. Lewis Smith, first imported into the United States in 1735.) In Boston in 1702, 1735, 1795; in New York in 1792–94.

Measles: In Massachusetts in 1713, 1739, 1769, 1773; in New York in 1788 and 1795; in Philadelphia in 1771, 1773, 1778, 1796; in Charleston, S. C., in 1747, 1759, 1772, 1775.

Angina (Diphtheria): In Kingston, N. H., in 1733–35; in Boston in 1735, 1769; in New England in 1737, 1742, 1787, etc.

Growth of the Hospital.—The first hospital, or rather pest-house, was established in 1403 by the proveditors of Venice, on an island near that city, but only those actually attacked by plague were at first admitted. Later several other maritime cities in the Mediterranean founded similar institutions.

Hospitals especially for the insane were established first at Feltre, in Italy, then at Seville in 1409, then at Padua, 1410; Saragossa, 1425; Toledo, 1483, and Fez in 1492.

These hospitals may be regarded, however, rather as houses of correction or penitentiaries—in Lubeck these houses of detention were called "Tollkisten" (insane boxes), and were under the charge of the jailer—than as institutions for the care and treatment of the inmates.

In 1460, in Frankfort-on-the-Main, there existed nine so-called insane asylums, each nine feet long, broad and high, one of which contained a crazy woman, another a priest, a third a crazy apothecary. Of medical treatment there was not the least thought. The insane wallowed about in chains and without clothing in these horrible dens, covered with filth and their own excrement, as long as they were able to endure. Toward the close of the Middle Ages, the treatment of the insane became a little better, especially in free cities, where compassionate citizens assumed their care instead of police jailers. This practice first started in Lubeck, in 1478. Proper houses for the guardianship of the insane were also called into existence, gradually, by the example, donations, etc., of others.

Medicolegal Beginnings.—We find that in the twelfth century there were State physicians and surgeons as advisers in forensic medicine. In 1249 Hugo of Lucca received from the burgomaster a commission to draw up a legal opinion, and as early as 1209 Pope Innocent III recommended the appointment of such physicians in canon law. In France and in the kingdom of Jerusalem sworn surgeons were employed by cities and courts, as medical experts, as early as the thirteenth century. Physicians and surgeons were employed as public witnesses, each in his own department.

In the fourteenth century city physicians were required to take an oath to conform to certain instructions, the transgression of which involved a penalty. In this same century there existed at Strassburg the so-called "Libenzüchter," who exercised supervision over the moral and sanitary relations of the inhabitants. Strassburg had its first city physician in 1328.

Growth of Pharmacology.—Arabians first started apothecaries in Europe, in Italy, about 1135, and in Spain in 1140, at Cordova and Toledo. Frederick II, in 1224, enacted a pharmaceutic ordinance differentiating the druggist from the apothecary. The former was dealer in spices, essential oils and raw drugs, the latter compounded medicines.

In the thirteenth century there existed in France an "instruction" for apothecaries. The latter formed a guild, about fifth in rank. In the early part of the fourteenth century they were raised to the second rank, their "masters" being allowed to wear long black gowns and wide sleeves and velvet facings, like the judges. They, with the merchants, preserved the standard weights of Paris. The physicians were their overseers. Many compound remedies were prepared by them in the presence of medical magistrates, chief among these compounds being theriaca, which was thus prepared even in the eighteenth century, so as to escape adulteration.

Germany boasts of its first pharmacy in 1233. London was the seat of the first apothecary shop in 1345. In France, in 1330, a law was enacted for the inspection of apothecary shop.

The first law under State Medicine regulating apothecaries was enacted at Strassburg in 1400, and at Stuttgart in 1486, which ordinance is still in force, and reads as follows: "That drugs must always be well selected and not decayed; that nothing except what is prescribed shall be put into a medicine, especially nothing dangerous by way of substitution, that the apothecary shall be responsible for his clerks, and shall not give any pernicious drug or any abortive; that the price list of the apothecary shall be correct; that in doubtful cases he shall apply to the physician," etc.

Since the time of Frederick, inspection of pharmacies has been added as a regular public function of physicians. It was practised at Ulm in 1426, in Frankfort-on-the-Main in 1461 and in Berlin in 1499.

The First Pure Food Laws.—Spain in 1283 passed an ordinance relating to adulteration of food and delicacies, the sale of poisons, and love potions, infection of the air by putrefying animal matters, etc. Strict imperial ordinances against the "improvement" of wine by sugar of lead, etc., were promulgated by an imperial diet in 1475, by the Emperor Frederick III in 1487, and by Maximilian in 1497.

The penal ordinance of the criminal court directed its attention to the falsification of goods in a special section on "Falscher mit Mass. Wag. und Kaufmannschaft," and their example has been followed in the modern German Empire. Beer, too, was kept under supervision, though this and other industrial productions were mainly controlled by the guilds.

Ordinances of medical police were issued in a few cities; one in Nuremburg in 1518 regarded the sale of food, popular amusements and adulteration of wine, a thing often done even by the ancients.

Early Rules Governing Autopsies.—Ordinances that came within the sphere of State Medicine existed even in the Middle Ages, Germany being among the first promoters. Autopsies were, everywhere, made in cases of poisoning. Charles V enacted a criminal ordinance in the year 1530 that definitely determined the cases in which the judge should summon expert medical assistance. These were all cases of infanticide, mortal wounds, apoplexy, poisoning, concealed pregnancy and childbirth, abortion, the practice of medicine by incompetent persons, etc. However, in this ordinance judicial autopsies were not directed. They were opposed by every superstition, and it was not until 1562 that Pare made a judicial autopsy, after which postmortems frequently took place. It was from this time on that reciprocal action upon each other of medicine and jurisprudence became permanent.

The Founders of Medical Jurisprudence.—State Medicine in the seventeenth century occupied considerable attention of the physicians at that time. Many contributed works on this subject; others devoted special time and study to anatomy. In the early part of the century, the Pope's physician, Paolo Zacchias, wrote an independent work, renowned not only for its medical information, but especially for the legal knowledge it contained. Zacchias, I believe, is looked upon as the founder of legal medicine. Later, N. Blegny, Gendrie d'Angers and others, in France, wrote on State Medicine.

But to the Germans, during the seventeenth century, are we indebted for active cultivation of this department. Ludwig von Hoernigy, in 1638, published a work on the duties of the medical profession as a whole; Paul Ammann and Hieronymus Welsch wrote works on the mortality of wounds; Melchior Sebiz, in 1641, likewise wrote on this subject, and on the signs of virginity. John Friedrich Zittmann, Bernard Suerus and John Bohn, the latter the scientific founder of State Medicine in Germany, wrote on these subjects. Conrad Berth Behrens, ordinary physician to the court of Brunswick, and J. W.

Pfeizer, wrote on the duties of the forensic physician. The Hollander, Feltmann, expatiated on the examination of corpses, and John Brown on the mortality of wounds.

Active Growth of Legal Medicine.—During the seventeenth century numerous ordinances of medical police or hygienic ordinances were enacted. This period may be styled the natal era of State police, and the law included ordinances relative to plague, clothing, food, the inspection of provisions, etc.

In the eighteenth century, State Medicine was in high state of cultivation, especially in Germany. Those who are acquainted with the works of Fabricius, Buttner, Ploucquet, Valentin, Ludwig, Tropanneger, Buchholz, Schlegel, Daniel, Platner, Teichmeyer, Alberti, Eschenbach, Metzger, Pyl, Uden, Delius, Baumer, Frank, etc., know to what extent forensic medicine advanced in that country.

In France the learned Bellocoque, Prevost, Verdier, etc.; in Spain, del Valle, and in England, Farr—all are standard authors on State Medicine.

In the beginning of the nineteenth century Pater Frank introduced the official distinction of medical police and forensic medicine. He became the champion of hygiene and was followed by Hebenstreit, von Huszty, von Nassynya, Scherf, and others.

The part of State Medicine which deals with practical instruction in sanitary science has, in Europe, been prosecuted in varying degrees in different countries. To such work as that carried on by Parkes, Klein, Creighton, Sanderson, Baxter, Smith and others in England; to the investigations of Pasteur, Chauveau, Duclaux, Chamberland, and others in France, and to the bacteriologic investigations of Koch, and the chemical studies of Pettenkofer, in Germany, are we to attribute the present position of practical knowledge of hygiene.

In some countries the instruction of public hygiene is limited, being usually confined to a course of hygiene in some medical school. In others there are institutes of hygiene on the most extended scale, as, for instance, those at Munich, Leipzig, and Copenhagen. In Hungary the province of instruction in State Medicine is of an extended character.

Knowledge of Anatomy by the Ancients.—Autopsies and dissection are said to have been made hundreds of years before Christ. The Talmud thoroughly describes the anatomy, pathology, and physiology of man, speaks of the dissection of animals, and also of the human being, teaches how to skeletonize, and cites the case of a prostitute whose body was boiled and afterwards skeletonized. We also know of the two great anatomists, Erasistratus and Herophilus, in 300 B. C.

Early Dissections.—Dissections have been made in every century; always with opposition by the laity. There was no regulation law by which a medical student could obtain material to study the elementary of medicine. However, we find that in the fifteenth century Italy turned over her condemned criminals to medical colleges. It is related by writers that all condemned criminals of Italy were sent to Pisa for execution, and were frequently turned over to the anatomists of the University, who poisoned and then dissected them.

Human Vivisection.—It is claimed in the History of Louis XI, that a human being was vivisected in France. It states that in 1474 a condemned robber was vivisected for the purpose of finding out where certain maladies were concreted, from which he and numerous other persons were suffering at that time. Opening and incision were accordingly done, the maladies searched for and examined, after which the bowels were replaced and the body was sewn up again. The patient's wound is said to have healed within fifteen days, and he was pardoned and given some money.

In the sixteenth century vivisection of human beings was charged against three men, viz., Berengar of Carpi, Vesalius and Fallopius in particular, and against the anatomists of the University of Pisa in general.

Berengar of Carpi is believed to have actually vivisected two Spaniards; Vesalius is accused of dissecting a Spanish nobleman, believing that he was dead, and Fallopius is said to have been his accuser. The following paragraph is found in the fourteenth chapter of his work, "De Tumoribus": "Fever resists 'colc' poisons, as I found at Pisa while anatomizing a man. For the prince commands them to give us a man, whom we kill in our own fashion, and anatomize. To whom we gave two drachms of opium, and an attack of ague coming on (for he suffered from quartan) prevented its action. He, delighted, requested a second dose, and that we should intercede for his pardon if he survived it. We gave him another two drachms, when he had no attack, and he died." Such history sounds possible, but not probable; however, it is from this sort of history that the ignorant public, both European and American, have become prejudiced against medical colleges, and believe that human beings are dissected alive.

The regular legal inquest of autopsies and postmortems was first established in Austria, in the early part of the eighteenth century. It was soon followed in France through the influence of Gardanne, and in Germany through that of Hufeland.

The first judicially authorized dissection in the United States was made by Dr. Shippen of Philadelphia, in November, 1762. The case was that of a negro who had cut his throat with a glass bottle, from the effect of which he died; after the coroner's jury had pronounced him guilty of self murder, his body was immediately ordered, by judicial authority, to "Dr. Shippen's Anatomic Theater."

Laws on Dissection.—The first American anatomy law is the New York Act of 1789; since that time thirty-four States allow dissection; nineteen States have liberal anatomy acts, while fifteen have illiberal ones; the laws of eleven States are silent regarding anatomy, excepting their laws on malpractice; thirty-one States forbid the desecration of graves, while the laws of fourteen States are silent regarding either dissection and disinterment; none of the three territories allowed dissection.

Ignorant and preposterous opposition of pretenders has always been a snare to the study of pathology. The county commissioners in charge of the Chicago Asylum, in 1884, raised religious prejudices against postmortems, and were found to be selling the bodies to medical colleges at $30 each for private profit.

Opposition to Vivisection.—The progress of medical science, especially of physiology, biology, hygiene, etc., has called increasing attention to a higher degree of research in anatomy and physiology; to that end, vivisection of the lower animals is necessary.

At every session of legislative bodies of the various States in the Union, and of every country in Europe, an attempt is made, by a set of so-called "anti-vivisectionists" to influence legislators to enact laws against vivisection.

The fact of the matter is that vivisection is, unfortunately, a most misleading term to the laity. They seem to have the idea that animals are cut up alive by medical men, and compelled to suffer great pain for unjustifiable objects. A small proportion of the public know that anæsthetics are administered beforehand, and that the animal is killed before sensation returns, and that such experiments must be carefully made and free from pain, otherwise they would be useless.

Value of Vivisection.—The question, value and character of scientific research, when carried out on living animals, has in late years been aroused by an attempt on the part of the enemies of science to entrap the influence of those who profess better things.

No physiology can advance without vivisection; experiments on living animals are as essential to its progress as is dissection for the study of anatomy. The law of sacrifice is the law of life; therefore, the law of nature, that one thing should be sacrificed for another. It is a common thing for a man to endanger his own life to save that of another. How many physicians, nurses, etc., have lost their lives while attending to the sick and wounded in infectious diseases and in war on the battlefields.

I maintain that any person who would deny the saving of a human life at the cost of a mere dog, cat, or rabbit, is a pretended humanitarian. For instance, a professor showed his students how he had saved the lives of several men by a certain operation on the brain. In order to demonstrate the operation, he performed a *fac-simile* operation on a monkey, which also recovered. The professor, in his lecture, informed his pupils that before he ventured the first operation he performed it on a living monkey. Now, according to the opponents of vivisection, it would have been a lesser crime to have let several men die than to have risked the life of a monkey.

Vivisection Develops Sympathy.—Regarding the false idea that a physiologist takes pleasure in making animals suffer, I will say that instead of developing cruelty, the practice of physiology tends to increase in us the feeling of humanity and pity. The physician who has closely observed human suffering, instead of being hardened by it, becomes more compassionate. So the physiologists, who are acquainted with pain, are full of pity for suffering beings, and I do not hesitate to state that not one of them would be guilty of brutality toward an animal.

Our Debt to Vivisection.—Take away from the science of medicine, and the art of surgery, all that with which physiology has enriched it, and the physician and surgeon of to-day would be no better than a mystery man or a quack vendor of chance-gotten drugs. Discard the present system of physiology, and all that has been gained by experiments on living animals, and the whole structure would collapse, leaving nothing but a few isolated facts of human experience.

The physiologic knowledge that we have and that we will gain in the future, if properly legislated in its favor, will benefit suffering humanity. The opponents do not stop to think that vivisection is as justifiable as the killing of animals for food. Physiology demands it for the good of all living creatures, and medical men should carry it out.

Moreover, I doubt if there is a single "anti-vivisectionist" who would miss a beefsteak for the sake of saving the life of a magnificent steer, or would deny himself of either a veal or a lamb chop in order to spare the life of a calf or that of an innocent lamb. Hundreds of millions of living creatures have already been sacrificed by epidemics, contagious and occult diseases, largely through the want of knowledge. It is unnecessary, therefore, to prove the utility and morality of vivisection. Nearly all physicians and all physiologists approve of it.

Vaccination.—As a prophylactic against dangerous variola, compulsory vaccination was established early in the nineteenth century. It was first made compulsory in Germany in 1807.

Austria, Prussia, and even Russia recognized the value of the vaccine prophylactic, and made the practice general and compulsory throughout its territories, in the early part of the nineteenth century.

In 1853, in England, an Act of Parliament was passed making it a penal offence for any British subject to fail to protect himself by vaccination. In 1864 the American Medical Association, at its fourteenth annual session, held at Chicago, appointed a committee to inquire into the expediency of a national law compelling every individual in the United States to be vaccinated. The committee reported at the fifteenth annual session, at New York, in favor of such a law, but came to the conclusion that general compulsory vaccination in this country, at that time, was impracticable, owing to the unpleasant condition of our nation at that period.

Tuberculosis.—But the time has now come when the medical profession should show the national supremacy, by their united action in demanding enforced national legislation for the protection of its inhabitants from infectious diseases by compelling every man, woman and child not only to be vaccinated, but also to take precaution against infectious tuberculosis.

Koch's first investigations revealed tubercle bacilli in the dust that had been contaminated by the sputa of phthisical patients, and the coma bacilli of cholera in the mud-banks of Indian water-tanks. Kitasto of Japan and other observers have found tetanus bacilli in the soil.

These and numerous other experiments have proved the presence of pathogenic microbes in the soil. Those investigations endured a great amount of experimental work under the auspices of various governments, such as France, Germany, Austria, England, Russia and the United States. The field of contagious animal diseases is in a much more advanced state, controlled, as it is, by the Bureau of Animal Industries, under the Department of Agriculture

Tuberculosis Mortality.—According to statistics, tuberculosis kills one-seventh of all the population of the world, and one-third of all deaths occurring between the ages of fifteen and sixty years are due to tuberculosis. Furthermore, it destroys four and a half times more people than do smallpox, scarlet fever, typhoid fever and diphtheria combined; that in America 1,200,000 people have the disease at all times, or one in fifty persons.

Dr. Mullins of Sydney, Australia, reports, for a period of twelve years, 17,114 deaths from tubercular disease in New South Wales. Of these 12,430 were from phthisis, 2,241 from tabes mesenterica, 1,325 from tubercular meningitis, and 1,018 from other forms of tuberculosis. During the year 1898, in the State of New York alone, there were 12,979 deaths due to consumption; of this number 7,825 were in the city of New York.

Bovine Tuberculosis Transmissible.—Dr. Charles Creighton emphatically says: "I cannot escape from the conviction that the peculiar errors of nutrition in the domesticated bovine species all over the world are the real fountain and source of human tubercle."

A strong confirmation of the view that bovine tuberculosis is transmissible, at least to young children, is contained in the fact that the mortality of children under five years of age from primary tubercular ulceration of the intestines, and from tuberculosis of the peritoneum and mesenteric glands (tabes mesenterica), is very high.

According to bacteriologic investigation, the bacilli of bovine tuberculosis have been found to be identical with those found in tubercular formations in the human organs, although the disease is anatomically different in man than in cattle. These differences are considered due to differences of soil in the human and bovine tissues, the bacilli engrafting themselves in those tissues which present conditions most favorable to their growth and development.

It has been found that the milk of tuberculous cows containing tubercle bacilli, when administered as food, produced tuberculosis in dogs, guinea-pigs and rabbits.

What Statistics Prove.—Woodhead states that in 127 cases of tuberculosis in children examined by him he found tubercular ulceration of the intestine in forty-three; whilst in 100 cases, or nearly 79 per cent. of the whole, the glands connected with the intestinal tract were in some stage or other of tubercular degeneration. Woodhead contends that tuberculosis connected with the intestine is of frequent occurrence in children, infection frequently taking place by the alimentary canal.

It is a curious fact that wise men occasionally fall into errors, strange and unaccountable. I trust that the error recently made by Dr. Koch, at the British Congress of Tuberculosis, that bovine tuberculosis is not infectious to man, will not retard the action and movements of scientists against the dangerous infection from bovine tuberculosis. If Koch does not believe the identity of human and bovine tuberculosis, we will simply refer him to the observations of Tscherming of Copenhagen, Pfeiffer of Weimar, Law of Cornell University, Williams of the Brompton Hospital, Cozette of Noyon, France, and many others who report infectious cases of bovine tubercular infection.

Illustrative Cases.—Tscherming relates the case of a veterinary surgeon, who cut his hand while making a post-mortem examination on a tuberculous cow. Although the wound healed, a swelling remained, which became ulcerated and refused to heal. Eventually, the whole mass was removed, and microscopic examination revealed the presence of tubercle bacilli. Pfeiffer relates a similar case of a veterinarian, aged thirty-four, of good constitution and free from hereditary taint, who wounded himself deeply in the left thumb. The wound healed, but about six months afterward a cutaneous tuberculosis was diagnosed at the site of the scar. A year later the patient manifested undoubted signs of pulmonary tuberculosis; the sputum was found to contain tubercle bacilli, and the patient died two and a half years after receiving the wound. Postmortem examination revealed tubercular arthritis of the wounded thumb, and extensive tubercle and cavities in the lungs.

Law reports another case of a veterinary surgeon, who was wounded in the hand while operating on a tuberculous cow, and suffered from a tumefaction of the resulting cicatrix, with distinct tubercle bacilli. The tumefaction was surgically removed, and was evidently the means of saving the patient from a generalized tuberculosis

Cozette, a French veterinarian, relates where a consumptive attendant had infected two cows, which, when handed over for slaughter, were condemned because of their markedly tuberculous condition; however, those two had infected seven others, who became ill, and were killed. Autopsies demonstrated clear cases of tuberculosis.

Law cites the case of a healthy child, aged one and a half years; while at a relative's house for one week it drank the milk of a cow which soon afterward was condemned and killed. Autopsy revealed generalized tuberculosis. The child gradually emaciated, death occurring three months later from abdominal tuberculosis.

Professor Gosse of Geneva cites the case of his own daughter, who died from intestinal and mesenteric tuberculosis, which he attributed to the milk the girl drank daily, fresh from five cows, on his estate. They were all slaughtered and two of them showed tubercular disease of the udder.

Demine of Berne reports the case where four infants in the Hospital Jenner, whose parents were all healthy, with no tuberculous history, died of intestinal and mesenteric tuberculosis as the result of drinking the unsterilized milk of tuberculous cows.

Brouardel likewise records a case where five out of fourteen young girls, living together in a boarding-school, became consumptive, subsequent to the daily use of milk from a tuberculous cow. We could cite hundreds of similar cases to convince our friend Dr. Koch of his mistaken ideas of bovine tubercular infection.

Now, if the lactile secretion is infectious, there can be no doubt that the meat from animals which suffer from even a localized tuberculosis is not fit for human consumption; furthermore, we have ample proof that a localized tuberculosis will naturally find its way into the muscular structure or other parts of the carcass used as a food; therefore, such meat should and must be condemned.

Importation of Diseased Animals.—Most all civilized countries have and should have some laws for the prevention of importation of epizootics by foreign live animals. Limited space and other considerations naturally prevent long periods of quarantine or observation and detention of those animals intended for exhibition or reshipment, or for other special purposes. Many infected animals are slaughtered at the port of arrival, and suspected live animals are frequently excluded.

In 1848 the English Legislature employed numerous means to prevent the importation of sheep, cattle and other animals suffering from contagious or infectious disorders, and gradually further powers were granted until their consolidation and perpetuation in the Contagious Diseases (animals) Act of 1869. Great devastations continued as the result of epizootics, and serious legislative efforts were made until again codified in the existing Act of 1876, to which amendments were added in 1884, 1886 and 1890; so that, as in certain human communicable diseases, the contagious diseases of animals are also subject to compulsory declaration, isolation, and disinfection, with the additional powers of prohibited importance, quarantine and slaughter.

Governmental Control—In July, 1891, a congress for the study of tuberculosis in man and animals was held at Paris, and the following resolutions were passed:

"It is necessary that all governments should decree the most efficacious prophylactic measures for preventing the extension of bovine tuberculosis.

It is urgently necessary to establish a special inspection of meat in all towns, without exception, provided with a public abattoir. It is equally necessary to suppress all private slaughter-houses in towns containing more than 5,000 inhabitants, and to replace them, as soon as possible, by public abattoirs; effectual inspection is impossible without this measure."

Tubercular subjects, man and beast alike, should be subject to quarantine restrictions; and its control should be part of the duties of either a national, state or municipal board of health.

The expectoration of sputum of tubercular patients should be prohibited in public places, public vehicles and even on the highways. If the oral secretion is infected with tubercular deposits and dries on the floor it is likely to pulverize and float about as dust; thus inhaled, it is a means of spreading tuberculosis. It may be difficult at first to enforce such an ordinance, but a law of this sort will certainly have a moral effect, and eventually an educative action on the public, who will consider it indecent and disreputable to spit in public places. It will likewise educate the public to look upon public spitters with contempt.

The National Board of Health, which was established in 1878, was appointed and supplied with grants by the Federal Government, which enabled the board to institute investigations of great importance regarding the causation of disease, etc., has, unfortunately, through political prejudice, withheld its influence, so that very little practical work has been done, and was finally abolished. But the Marine Hospital service, with the late Dr. John B. Hamilton, and the present Dr. Walter Wyman at the head of that department, protected the country against foreign importation of infectious and contagious diseases.

Tuberculosis Sanatoria.—S. A. Knopf of New York, before the conference of the State and Provincial Boards of Health of the United States, delivered an address upon the State and municipal care of consumptives. He believes that a commission should be provided for the examination and care of tuberculous subjects; to determine their physical condition; to investigate their surroundings and the danger to their families; to render their homes sanitary, if possible, and, if necessary, to endeavor to remove the patients to an institution. Anyone should have the privilege of being examined, and all physicians should have the privilege of recommending patients for examination. The institutions for the care of these individuals should comprise a reception hospital and dispensary, located in the city; a surburban sanatorium, in an elevated region, if possible, this to be used as a temporary hospital for patients subsequently to be sent to a mountain sanatorium, which should, if possible, be elevated from 1,000 to 2,000 feet above sea level. There should also be seaside sanatoriums for the treatment of children with tuberculous disease of the joints and glands, and a maternity sanatorium.

Knopf also quotes the greatest authorities of the world, who are in favor of such a movement—Dettweiler, Leyden, and Liebe of Germany; von Schrotter of Austria; Grancher, Letulle and Petit of France; Weber, Lindsey and Sangmann of Denmark and Sweden; and in the United States, Bowditch, Hamilton, Biggs and Prudden, Lee, Trudeau, Flick, Hinsdale, Otis, Shrady and others, all strong advocates for the establishment of State and municipal sanatoria for the care and treatment of the consumptive poor.

The crowned heads of Europe, such as the Czar of Russia, the Empress of Austria, the King of Saxony the King of Sweden, and the young Queen of Holland, have placed the sanatoria for the consumptive poor under their high protection, and have opened their private purses for their support. The nobility and the leaders in finance, art and literature have been eager to imitate the noble example set by their sovereigns, and the latter, too, have given freely toward the erection and maintenance of such institutions.

Thus, in the countries just mentioned, a number of establishments now flourish which are doing a world of good by curing the curable tuberculous cases, and taking care of the hopeless ones, thus diminishing countless centers of infection.

Dr. Knopf justly says: "Let me further advise the statesman, physician or philanthropist who doubts the need of such institutions in the United States, to visit the consumptive poor in the tenement districts of our large cities, and study the hygienic and social conditions of these sufferers in their surroundings."

National Board of Health and Examiners.—It is the duty of every citizen, as well as of the physician, to insist that our National Congress establish a medical bureau of the Department of the Interior, for the purpose of regulating the various professions that battle for the welfare of suffering humanity.

First, to establish a federal board of medical examiners, under the auspices of a medical bureau of the Department of the Interior, so that any physician, dentist or pharmacist may follow his profession in any part of the United States, or in any of its territories, thus granting the privilege to its citizens to invite a physician or dentist from any part of this country to ameliorate their sufferings.

Second, under the auspices of the same bureau, there shall exist a national board of health, consisting of men of learning and ability, competent to make bacteriologic and chemical examinations for the purpose of preventing the spread of the various contagious and infectious diseases, the adulteration of food, and the sale of infected cattle, and to restrict the sale of the so-called patent medicines.

Third, the bureau shall have jurisdiction over the registration of births and deaths, census and vital statistics in general.

Regulation of Marriage.—It is also desirable to have a national law pertaining to marriage and divorce. The unfortunate conditions of either, each State having its own laws, demand immediate action of Congress for the regulation of this evil.

Marriage should be prohibited to blood relations up to the second degree, and to all persons of either sex affected with either congenital or acquired specific or infectious disease, such as venereal or pulmonary affections, confirmed drunkards, criminals, anarchists and degenerate classes.

Each applicant for a marriage license should present a certificate from a medical examiner, appointed for that purpose, stating that the applicant is not affected with any disease or habit that would be derogatory to procreation or offspring. When parents are tainted with specific disease, it is almost invariably looked for and expected with the children. A taint of hereditary drunkenness, insanity, suicide, epilepsy, idiocy, deaf-mutism, cancer, syphilis, gout, rheumatism, tuberculosis or scrofulous diathesis in the blood, are all symptoms of degeneration, likely to be intensified by propagation in succeeding generations, until the tainted family becomes extinct. Intermarriage with those tainted diffuses weakness, deformity, and abnormality through the social structure, deteriorates and contaminates all who issue from such unions.

Intermarriage of distinct diseases are as dangerous as the union of two consumptives. A typical case, cited by Richardson, will corroborate this statement: "A young man, of marked cancerous proclivity, married a woman whose parents had both died of pulmonary consumption. This married couple had a family of five children, all of whom grew up to adolescencc, sustaining at their best but delicate and feeble existences. The first of these children died of lupus; the second of simple pulmonary consumption; the third, owing to tuberculous deposit in the brain, succumbed from epileptiform convulsions; the fourth, with symptoms of tuberculous brain disease, sank from diabetes, the result of the nervous injury; and the last, living longer than any of the rest, namely, to thirty-six years, died of cancer. The parents in this instance survived three of the children, but they both died comparatively early in life; the father from cancerous disease of the liver, the mother from heart disease and bronchitis."

While we have some States prohibiting consanguineous unions, there are others that have not kept abreast with modern civilization, and allow the marriage of near kin. There is not a physician who is entitled to that name who does not know the physiologic reason for prohibiting consanguineous marriages; but for the benefit of those who do not know, I will state that besides degenerations, a marriage between persons closely allied in blood is apt to produce an offspring feeble in body and a tendency to insanity in mind.

As to confirmed drunkards, I can only repeat what Plutarch says—"One drunkard begets another;" and Aristotle adds: "Drunken women bring forth children like unto themselves." Dr. Howe, in a report to the Legislature of Massachusetts, says, "The habits of the parents of 300 of the idiots were learned, and 145, or nearly one-half, are reported to be known as habitual drunkards." Howe cited a case in which the parents were drunkards, and had seven idiotic children.

Prophylaxis against Anarchy.—Another dangerous disease with which the world has to contend, and which has lately shocked our nation, and, in fact, the whole world, is anarchy. The murderous assault upon the President, aimed as it was at the life of the government, imperiled the security of the whole country. The right of self-preservation is as vital to the State as to the individual.

The entrance of foreign anarchists must be strictly prodibited as well as other infectious matter. Their teachings are as poisonous as the bite of a snake, and as dangerous as the swords and bayonets of a hostile nation. The pestilence of the teachings of the anarchists who dwell amongst us cannot but have influence upon their offspring; therefore there must be a law preventing their marriage. The characters possessed by an individual are mainly congenital, peculiar to each individual in type and variation; therefore, the offspring bear a typical likeness and character to the parents.

Criminals and murderers may regret and repent their crimes, confess and receive absolution, and, after their execution, may go direct to heaven, but society is better off with such individuals in heaven than on earth.

A great deal can be said in favor of a national law of divorce. But what mainly interests us is the medical portion. According to medical jurisprudence, impotence in man and sterility in woman, or any impediment to procreation of children, is absolute ground for divorce; however, what we desire to add is that specific and infectious disease endangering offspring shall likewise constitute grounds for divorce.

Public Baths.—The public bath is another necessity to municipal hygiene. The ruins of the caracallas of Rome speak clearly of the glorious bathing establishments of the fifth century; though in a state of decay, yet they show the inclinations and habits of the people who prevented municipal filth. It is said that Rome had at one time 856 public baths. In the middle ages nearly every village and town is said to have had its bath-room with wooden tubs. Russia, Turkey and Japan are renowned for their public baths, which are accessible to the poorest classes upon the payment of a very slight fee.

France, Belgium and Austria have kept apace with other countries. The United States, unfortunately, has done very little towards this hygienic problem. The only baths provided in this country by municipalities are a few floating or swimming baths in New York and in Chicago. The New York baths were authorized by the Legislature of that State. About twenty such establishments exist in that city to-day. Another act in the Empire State, in 1892, authorized any city, village or town in the State to establish public baths, and to loan, credit or make appropriations for that purpose. I trust that the great State of New York will continue its good work, and that other States will follow. It is admitted that if you deprive a man of his bath you lower his moral tone. "Soapology" and "scrubology" as well as "theology" are recognized by General Booth of the Salvation Army as potent Christianizing agencies.

Restriction of Venereal Diseases.—Compulsory examination of prostitutes is another necessity for the purpose of preventing the spread of venereal diseases. It is said that either the City of New York or Chicago contains, at the present day, venereal infection sufficient to contaminate the male population of the United States in a very short space of time.

We do not want legalized prostitution as it exists in European countries. I do not believe in authorizing houses of debauchery and making of prostitution a regular profession. The State has no right to regulate prostitution. I am proud of my country, which is, fortunately, free from the incubus of State-regulated vice.

All that is desired is a State law for municipal governments, to keep a register of all women known or suspected of prostitution, and that such women shall be liable at any time to be called in for examination. But no certificates should be issued to them, as to their healthy or unhealthy conditions, for such a certificate would simply encourage the vice. However, if found affected with a venereal disease, they should be sent to a detention hospital or sanitorium, and should be detained there until cured.

Detention of Syphilitics.—I firmly believe in the law of Massachusetts, for the detention of certain persons affected with syphilis, in which it is enacted that persons suffering from syphilis, and being inmates of any correctional or administrative institution, such as a house of correction, a penitentiary, or a work-house, shall be placed under medical treatment, and be isolated until the medical attendant shall consider further isolation unnecessary; and if, at the date of discharge of a person, syphilitic symptoms are still present, likely to prove a public danger, compulsory detention may be put in force to retain the infected person until such a time as dangerous symptoms have been pronounced to be no longer present.

A suitable hospital or sanitorium devoted to diseases peculiar to prostitutes should be established in each and every city, with the power to place and keep there all women so diseased until cured. The amount of accommodation required should depend upon the size of the population, and there should be at least one bed to every 1,000 inhabitants. Payment could and should be required from all who possess the means of expense actually incurred, and this would contribute a considerable sum towards the expenditures of such an institution.

It should not be intended as a prison, for such is directly contrary to reformation. Liberal arrangements as a hospital would afford no encouragement to vice, and certainly help wonderfully to eradicate the evil.

Abolish the Coroner.—There is one law, a relic of barbarism, that I should like to see abolished, and I know that the profession would heartily approve of it; that is, the office of county coroner; and in its stead a medical examiner should be created. Such a law was established in Massachusetts about fifteen years ago, and gives great satisfaction from both a scientific and financial point of view.

Conclusions.—All foregoing regulations, if established, will, I am sure, tend to improve the moral and physical welfare of our nation.

State Medicine is a creation of necessity in times of public danger, but its future development will be in proportion to the scientific character of its work, and to the appreciation on the part of the public of the economic and beneficent results of such work.

The world's rapid transit and intercommunication brought on the high state of civilization, and made the whole human race one family, so that people of every color, clime, language, government, and creed have become one brotherhood, with a law of love and care for one another which fulfills the golden rule—"love your neighbor as you do yourself."

SUTURE OF HEART WOUNDS.*

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The Recorded Sutures of the Heart.—In 1896 three operations for the suture of wounds of the heart muscle were done. Two are recorded as having been done in 1897. Four are credited to 1898. In 1899 the heart was sutured eleven times, in 1900 three times, and in 1901 nine times, three of this last set being done in this country. This year two operations have thus far been reported. This makes a total of thirty-four operations in the six years following the first attempt to treat, by a simple surgical procedure, an organ usually supposed to be particularly vulnerable—in fact, so vulnerable that any interference, even for surgical purposes, might be followed by immediate fatal results.

There is more than enough material here for our consideration at this time, and I beg you to follow me in the necessarily brief discussion which I offer you.

In order to start with some knowledge of the results of these operations, before any discussion, in general or in detail, is attempted, a short review of them will be necessary.

Review of These Cases.—As regards the manner of wounding, all these cases, except two, were due to punctured or incised wounds, the two exceptions being bullet wounds. The particular injury to the heart was inflicted on the ventricles thirty-two times, the left ventricle being implicated seventeen times and the right thirteen times. In two cases only were auricles opened, once the right and once the left, and there are three cases in which my information is incomplete. In most of the cases where details are given the pleura is reported wounded, and usually there was a hemothorax, the collection representing, in large part, the overflow from the pericardium.

The practical questions which usually come to the mind of a surgeon in planning an operation to meet these conditions, relate to the method of exposure of the heart, the detail of the treatment of its particular condition, and the method of closing and dressing the wound of the operation.

In the cases reported the heart was reached variously, depending on the location of the original wound in the skin and the choice of the operator, but either a flap of all of the tissues of the thoracic wall was turned up, or a resection of two or more ribs was practised. The particular detail is of no great moment, provided that the heart is properly exposed. The special method of treating the heart wound is of interest, for it involves the choice of suture material for a novel situation, the time at which the suture is introduced and tied with reference to the heart beat, and the depth of the stitch in the heart muscle. In our cases three operators are recorded as having used catgut, Fontan of Paris, Marion, and Launay; in all other instances where the suture material was specified silk was used, and in most cases the sutures were interrupted, though in a small number a continuous suture was practised. It is of interest to note that these operators particularly avoided including the endocardium in the suture. One of them definitely reports introducing and tying the suture during diastole.

As regards the closure of the wounds—the tissues involved in the flaps or incisions were, of course, replaced; in seven instances drainage of the pericardium and pleura was practised, and in four the pleura alone was drained. The other cases are said plainly to have been closed without drainage, or nothing is said of the matter at all.

Results of These Cases.—Now, of the total number of these cases five died on the operating table of hemorrhage, and ten died very soon afterward of the effects of hemorrhage or the shock of the operation; so that nearly half of the cases that survived the injury long enough to be subjected to operation died during or very shortly after that operation. The other group, nineteen in number, had various fortunes, but thirteen of them recovered and only six died. I think it is fair to stop a moment and consider these facts. Surely the fifteen who died of hemorrhage or shock with operation would probably have died of hemorrhage exactly the same without operation. No fatal traumatism is inflicted by exposing the heart; and stopping the hemorrhage from an incised or punctured wound in the ventricles is a simple matter when the heart is once exposed; indeed, pressure with the finger or a tampon will stop it temporarily. At all events the operation and suture did not add materially to the amount of blood lost and so cannot be counted as having hastened the death from hemorrhage, and the average amount of shock I cannot estimate. But I believe that it is fair to say that these patients had, from the first, practically no chance to recover, and that, if this had been known, the operations need not have been done—but I say this with full appreciation of the fact that the inevitable fatality could not have been definitely predicted in any case. Of the other nineteen, the comment is, plainly, that they had a chance to recover. In each of them the suture of the heart was a successful procedure; in not one instance was the fatal outcome due to a secondary hemorrhage. The six who died succumbed to the common matter of an infection, sequent to wound and operation. Of the thirteen who recovered four did so in spite of a concurrent infection. But the point is that of these thirty-four cases, fifteen had, really, but very slight expectation of benefit from the operation and died, probably, neither in spite of it nor because of it—nineteen had expectation of recovery from operation, and in thirteen that expectation was realized.

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I do not wish you to think that I am trying to make these cases give a better percentage of recoveries than they really do. That percentage, as the whole list stands now, is about one-third. But if we wish to consider only the final success or failure of the suture of the heart muscle we must limit our inquiry to the cases in which this procedure was really tested, and then we see that the percentage of recoveries may be considered a little more than two-thirds.

Slow Advance in Heart Surgery.—The road to the heart is only two or three centimeters in a direct line, but it has taken surgery nearly 2,400 years to travel it, for I take it that the operation of opening the chest for an empyema, which was known to Hippocrates, was a direct predecessor of the attempt to treat other thoracic viscera. It does not need to be said that during most of this time surgery stood still and that the advances were little by little. We all know that before the antiseptic and aseptic eras pleurotomy for empyema gave very terrible results, and there could be but scant encouragement to draw surgeons to fresh fields. However, more than a century ago (1798), Desault, with the logic and precision which still characterizes the French school, laid down the rules for opening the pericardium for an empyema situated in that sac, and anticipated much of the technic of to-day, and it took surgery ninety-eight years to pass from the pericardium to the epicardium across a space that is such only potentially.

It is a little odd that surgeons have hesitated so long to go to the aid of the wounded heart in man. Physiologists for years have experimented on the hearts of animals selected from nearly all the species of the animal kingdom. The special references to this matter are not needed here, but it is germane to the subject to note that the tolerance of the mammalian heart for manipulation, and its persistence of action in spite of wounds and obstacles, have long been known.

The experience of the various operators has been, as might therefore have been expected, that the heart of man was no more resentful of intervention than were the hearts of other mammals, and that it not only could be handled, and even partially lifted from the pericardium, but that its muscle could be sutured so as to close a wound, just as can be done with the skeletal muscles. However, in the case of the systemic muscles rest can usually be enforced, either completely or partially, during the process of healing, but this cannot be done with the heart. Here comes the great difference between the heart muscle and the skeletal muscles, both as regards suture and the reparative process, the heart must continue to act for the whole of the time.

The question now centers, first, on the possibility of properly suturing, that is, placing a practical suture in the moving heart, and second, on the result of the healing process. The first question is one of only technical moment, for the work on animals has shown that it can be done, and the experience of those who have sutured the human heart has not disclosed any special difficulty in the procedure, but the matter and manner of the sutures are debatable. The general advice is that the sutures of muscle should be of silk, and it has been most frequently used in the heart muscle, but three of the successful cases, the two of Fontan's and the one of Launay's, were sutured with catgut. Elsberg has advised, as the result of his experiments on rabbits and dogs, that the suture material should be silk, and that the suture be an interrupted one, and very superficially placed, believing that deep sutures will tear out while superficial ones will hold. He also advises that the suture be placed and tied during the diastole of the heart.

Experimental Research.—To discover, if I might, the exact value of these somewhat confused matters, I have exposed the hearts in eleven dogs, and made wounds of various sizes and in different directions in the left ventricle, limiting myself to that particular cavity, as it was the one most frequently wounded. In each instance, except perhaps one, I verified the opening of the cavity of the ventricle by passing an instrument into it so as to get a free spurt of blood during one or two systoles. It was found that this verification was a practical necessity, for the non-penetrating wound of the myocardium will give forth, during systole, a spurt so large that it could easily be confused with one from the cavity of the ventricle. These wounds were then sewed with ordinary commercial cumolized catgut; in some deep and superficial stitches were combined; in some very deep, so as to surely penetrate the endocardium, were used, and in others very superficial stitches; and the variations of interrupted, continuous and recurrent continuous were practised.

In the earliest operations toothed thumb forceps were used to pick up a few muscular fibers to steady the organ for the making of the incision and placing the sutures. At the first pinch the heart, of course, delayed a systole and then began to beat rapidly and violently and continued this as long as the forceps were in place. It was exactly as if the heart were surprised and at first checked by the intrusion of the forceps' teeth, and then recovered to make violent and strenuous efforts to escape from the grip, and if the forceps' hold was continued it usually succeeded in this by the tearing of the fibers. One of my dogs died on the table from hemorrhage due to the tearing of the muscle in the bite of the forceps and my inability to at first catch the edge of the open wound in the bottom of a pericardium overflowing with blood, and, although I did finally succeed in getting in two sutures, they were placed too late.

A Method to Hold the Heart During Suture.—To overcome this difficulty with the forceps I put into the heart, before incising it, two long suspension loops of silk, dipping the needle carrying them deep into the ventricular wall. These gave complete control of the organ, for they did not tear out, and even though the heart was hanging from them its function continued, and much less tumultuously than it did in the bite of the forceps; and with them the heart could be lifted quite halfway out of the pericardial incision, or it could be swung to one side or the other, or rolled over in either direction, its range of motion being limited only by the great vessels at the base.

I placed these loops side by side and about a centimeter apart, and could then incise between them, hold the wound open, by traction on the loops, to verify penetration and then, crossing the loops, could absolutely stop bleeding and steady the heart, for under this control the point of the incision seemed to be the starting point of the systolic waves.

Diastolic Suture Unnecessary.—Now, even with the incision coapted and held relatively motionless by the crossed and taut suspension loops—so that the placing of a suture was no more difficult than in a different tissue—I found it impracticable, yes, impossible, to make a diastolic thrust of the needle, to pull the suture into place in the succeeding diastole, and to tie the knots in the one following. To do this would require a man to work with accuracy, and yet with perfectly-timed breaks in his work, in various fractions of successive seconds—for these hearts are always beating more than 100 times to the minute. And the impossibility which I encountered has made it very difficult for me to believe that anyone, even if he has attempted it, has ever really done it. Nor can I see what is gained by it.

The heart does not bleed in diastole, it bleeds in systole, and the suture must be tied to be efficient at that time, and the way to do it is to tie quietly and firmly, during the rapid beating of the heart, and to take no account of split second diastoles, but watch the knots as one should watch the knots of the ligature in a major vessel. And the same judgment which controls the tension of the suture should control the depth to which it reaches. I cannot agree, from what I have seen of the actual working of the matter, that a superficial suture will hold where a deep one will tear out. One is suturing the myocardium, not the epicardium. Of course, it is inadvisable to penetrate the endocardium, but it is, at the same time, and fortunately, a difficult thing to do. I did it once because I intended to do it, and I had to take a larger needle than I had ordinarily worked with, and definitely carry it through the heart wall and return; and from this I learned that, with the medium-sized, full-curved needle, which one would commonly use, the penetration of the left ventricle is not to be feared.

On this point it only remains to be said that, in the case in which the endocardium was included in the stitch, the strand of suture stretched across the cavity of the ventricle was the occasion of the formation of a little globular clot, which was found at the autopsy to be firm and white, and surrounded by a large post-mortem clot.

Elsberg's very complete studies of the healing process showed that the muscular fibers in the bight of the suture atrophy and are replaced by fibrous tissue, and he points out that, very evidently, there would be less of this lower grade tissue in the case of an interrupted suture; but, so far as I have been able to judge, the difference amounts to very little practically, and the saving of time in the continuous over the interrupted suture is manifest, and it is the method finally advised by Terrier and Reymond a year ago. I had thought that the lessening of the number of knots on the epicardial surface by the use of the continuous suture might be a special point in its favor, but the matter seems to be unimportant, for all knots quickly sink into the tissues, leaving a flush surface, which is covered with fibrin.

Causes of Death.—For my experiments I have used dogs—primarily because of the size of the heart in the larger dog—and I had the same difficulty that other experimenters have had with the animal, for there is no mediastinum, the whole thorax being lined by one continuous membrane, and as soon as this is opened both lungs collapse, so that artificial respiration by bellows is needed. There are two important points in connection with this fact: a very large serous surface is exposed to the air and to infection, and it is practically impossible to avoid leaving a certain degree of pneumothorax when the chest is closed. Collateral traumatism and infection then led to the early death of most of the dogs; indeed, only two lived ten days and then both died of empyema and pyopericardium. This makes it impossible for me to speak as confidently regarding the catgut suture as I should like, for *a priori* I should prefer in this place the absorbable suture, because a stitch once in is there to stay, and the opportunity of going back and removing it, if its presence is resented by the tissues, cannot be looked for. Still it is to be noted that one operator, Fontan of Paris, has the distinction of having twice sutured the heart with the recovery of both patients, and Launay has successfully closed two wounds in one heart, the suture material in all three cases having been catgut, and on the other hand, Nietert of St. Louis has also two successful heart sutures to his credit, his suture material being silk. Still, if it can be shown that the healing process takes place to a practical extent during the persistence of the catgut, it will be reasonable to argue that no great objection can lie against the absorbable suture. In Elsberg's paper he asserts that reparative processes are in train in twenty-four hours, in forty-eight hours there is a dense round-cell infiltraton, by the fourth day spindle cells appear, by the seventh day they replace the degenerated muscle fiber, and by the tenth day the granulation tissue is becoming fibrous tissue. He reports several rabbits killed on the fourteenth day, with the wound in the heart firmly healed, and in one instance a rabbit, dead of sepsis, had a firmly closed heart wound on the eighth day. In two of my dogs, both dead of sepsis on the tenth day, the heart wounds were firmly closed, with no evidence of leakage or hemorrhage, although in one the infective process had attacked the epicardium and penetrated the myocardium. It does not need to be said that these dogs count for very little; but the inference is simple, from the whole evidence, that wounds of the heart muscle heal very rapidly, and that the process may be practically completed quite within the life of a catgut suture. And the evidence of Fontan's two patients, one of whom was infected, and Launay's case of two wounds in one heart, is on the same side, and I shall therefore assume that catgut is, at least, a permissible suture material.

Success of the Closure of Heart Wound.—Finally, it has to be said that in my dogs these sutures, however placed or tied, always controlled the hemorrhage and closed the opening, and that the healing processes, as they were studied, followed a course practically similar to that in Elsberg's experiments on rabbits, up to the death of my animals. They show that the repair in heart muscle is in no way different from the repair in skeletal muscles, and that it is no more interfered with by the action of the heart than are the nutritive processes of the organ.

I do not know of any of the successful cases of heart suture in man having died later, but there is reference to a case of Izzi's, in which the heart was wounded but not sutured, and the man recovered, but on the twenty-eighth day, having left the hospital, he made considerable effort to lift a weight and had rupture of the cicatrix in the heart wall and sudden death. Of course, the wound in this heart had been filled by a coagulum, and in the process of healing this was organized or replaced by cicatricial tissue, and there had never been the proper coaptation of the heart muscle in the edges of the cut.

So far as the heart itself is concerned the proposition for its suture, in case of wound, is properly established; and if it were a superficial organ and easy of access, and if the path by which it is reached could easily be closed again, the whole matter would be eminently simple. The operation would be more frequently done, for the occasions demanding it would more frequently arise, and the whole technic would be quickly worked out in detail. But the heart, while it is close to the surface of the body at one point, is not a superficial organ, and to reach it the bony and muscular hest wall has to be traversed—a matter of no special import—and two serous sacs have to be invaded. Herein lies the great difficulty.

Interference of the Pleura.—It is true that in a dissection the pericardium can usually be reached without a wound of the left pleura, but it can only be done by taking the pleura definitely into account. The anterior limits of the sac are very various and in the dissecting room it has been found to extend across behind the sternum almost to the right border of the bone. Commonly, it overlaps and lies just internal to the left border of the sternum as far down as the fourth cartilage, and from this point gradually passes downward and outward, crossing the sternal end of the fifth cartilage, and just internal to the middle at the sixth. A wound, therefore, to reach the pericardium and heart without injuring the pleura would have to be placed in the sixth interspace and close to the sternal edge, and be directed almost exactly backward. This place is so small that practically it is never found, and it is necessary to consider that all wounds which penetrate the pericardium have traversed the pleura, and it is across the same tissue and sac that the surgeon must pass who attempts to repair the wound. There is another point to be considered here. The opening of a serous sac, either accidentally or surgically, exposes it to infection, and the serous membrane, by a power inherent in it, deals with such infection as occurs unless the latter overwhelms it. The question has been thoroughly studied by all, in its relation to the peritoneum, but I wish merely to refer to the fact that the peritoneum offers opportunities for the localization of an infection which cannot otherwise be disposed of, and that intestinal rest may contribute greatly to this localization. Both the pleura and pericardium differ from the peritoneum in this respect—the surfaces of neither offer pockets or recesses in which an infection may be confined, and constant motion incident to breathing and the heart beat, tends to disseminate pathogens and to quickly distribute them over the whole surface of the sac.

So far as the arrangement of the lymphatics of the pleura is concerned, its power of absorption should be greater than that of the peritoneum, and in certain cases of infection, as in the empyema of pneumonia, it does show considerable ability to deal with the condition; but, in view of the great frequency of infection of the left pleura in connection with heart wounds, I am obliged to believe that the inability to obtain surgical rest for the tissue is a prominent factor in producing and perpetuating the condition.

In writing on wounds of the pleura and lung, Terrier and Reymond claim that infection of the pleura is not likely to occur unless there is a coincident wound of the lung. They argue that the infection, probably, comes from a bronchus, and base the treatment necessary for a traumatic hæmothorax on the presence or absence of hæmoptysis. In no one of the clinical histories of these heart wounds which I have seen is there mention of homoptysis, but they nearly all had hæmothorax, large quantities of blood being in the pleura, and a large percentage had a subsequent infection.

Sepsis and Drainage.—Of the thirty-four cases nineteen lived long enough for the development of an infection, and in ten it developed, and of these six died, showing that infection so affects prognosis in these cases that a man infected has not so much as half a chance to recover; or, to put it differently, more than half of the cases were infected, and of these more than half died. It is of particular interest to know the time of the implantation of the infection, and I have found records of nine other cases of wounds of the pericardium and heart which were not submitted to any primary operation, and of these three had local infection, and one had primary local healing but died of a peritonitis. The number of cases is very small, but so far as they go they show that about one-third of them are infected by the wounding instrument and that primary operation increases the chance of an infection to more than half; this, however, must not be taken as counting against the doing of the operation, for its object is to control conditions which lead to certain death, and even with an infection recovery is not impossible. The knowledge of the great likelihood of an infection at the time of the receipt of the wound must be made use of, and one must consider if such a wound is not to be treated as one already infected. If this is done some method of drainage will be employed, and the detail of its arrangement is complicated by this fact, that one serious sac, the pericardium, must be drained across or through another, the pleura. The advice is given, probably in view of this difficulty, that both pericardium and pleura be closed without drainage, but some operators have drained and their results merit consideration. So far as I can learn, eleven of the thirty-four cases had primary drainage arranged, four for the pleura alone, and seven for the pleura and pericardium. Of the eleven seven recovered though two had infection. Of the four who died two died of sepsis, and two of collapse before the possibility of knowing if sepsis was to develop or not, and if we exclude these last two we have nine cases drained and seven recovering.

Now, on the other side, there were nine cases that had no primary drain, and did have infection, and of these five recovered. The number of cases is small, seven out of nine and five out of nine, but in these cases as in many others, a hair, perhaps, divides the chances of success from those of failure, and where we have only small statistics at hand it is with those that we must work, and on them base our future actions.

In the drainage of the pericardium there is a point worth mentioning. The material should, of course, be gauze, it may be put in a small space left unclosed at the lowest point of the wound (Mignon et Sieur), and it does not need to go deeply into the sac, for with the patient supine or reclining the heart will sink in any effused fluid toward the dorsal side of the sac, displacing the fluid toward the ventral side, where a drain may easily reach it; but the fluid must pass upward from the pericardium toward the skin opening, and this is, of course, a disadvantage. For the pleura a drain may be arranged to make its exit by the same opening as that for the pericardium or, and this seems the wiser plan, it may have an independent opening near the posterior axillary line, where it will be of most service if empyema does develop, and may, in such a case, obviate the need of a secondary thoracotomy. Of course, if no sepsis supervene all drains should be very shortly removed.

Other Points to Consider.—In the time allotted this paper on the program of the association it has only been possible to discus the two technical points of suture and drainage, and the matter of the symptoms and the anatomic detail of the wounds which have been put on record have, in spite of their importance, been passed by. Very briefly, the symptoms may be listed as consisting of the external wound in the precordial region, the general evidences of hemorrhage, the disturbance of the heart function sequent to the trauma and the acute anæmia, and the local signs of the filling of the pericardium and, secondarily and in most cases, the pleura. As regards the wound itself, I believe, from examining the hearts which I have punctured and incised, that the endocardial wound is always smaller than the epicardial wound, excepting, I should imagine, in the bullet wound cases. This difference in the size of the wound at its two limits will explain the living of some with apparently large wounds, but from which the amount of bleeding has not been commensurate with the size of the visible wound. It is necessary only to revert to the fact that the different parts of the heart behave somewhat differently when wounded. The thicker wall of the left ventricle offers a greater obstacle to hemorrhage and a better opportunity for suture than any other part; wounds of the right ventricle bleed more, and are more difficult to suture, and the thin walled auricles are saved from a lethal hemorrhage, when they are wounded, by the comparatively low pressure of the blood in them, while in their loose structure a practical suture is a difficult thing.

Conclusions.—The operations which have been recorded mark only the beginning; the heart is now

CASES OF SUTURES OF WOUNDS OF THE HEART.*

Operator and Year.	Location of External Wound.	Chamber Wounded and Size of Wound.	Time of Operation After Injury.	Anesthetic.	Results and Remarks.
1. Farina. 1896	Just above the margin of the left sixth rib, near the sternum.	R. V.; ¼ inch; 3 stitches.	....	....	Death on sixth day, from bronchopneumonia.
2 Cappelen. 1896..	Fourth left intercostal space in mid-axillary line.	L. V.; ⅜ inch	1 hour		Death after several days; pericarditis; branch coronary artery cut.
3. Rehn. 1896	Fourth left intercostal space near sternum.	R. V.; 3 stitches	Following evening.	....	Recovery; empyema.
4. Parozzani. 1897 .	Seventh left intercostal space in mid-axillary line.	L. V.; ¾ inch	5 hours	None	Recovery.
5. Parozzani	Third left intercostal space	L. V.; ⅜ inch	½ hour......	None	Death on second day from anæmia (?). Interventricular septum had been cut.
6. Fummi. 1898 ...	Under left nipple.................	Apex; cavity not opened; 1 stitch.	Several hours	....	Recovery; empyema.
7. Ninni. 1898.....	Fifth left intercostal space	L. V.; 3 stitches	Quickly	None	Death on table.
8. Parlavecchio. 1898	Fifth left intercostal space	L. V.; 1½ inch; apex	8 hours	Chloroform	Recovery.
9. Giordano. 1898 .	Second left intercostal space	L. A.; ⅜ inch; 4 stitches.	½ hour......	None	Death on nineteenth day from empyema; abscesses of right lung.
10. Nicolai. 1899 ...	Fourth left intercostal space, midway between margin of sternum and nipple.	R. V................	12 hours	Yes	Death after twelve hours.
11. Tuzzi	Fourth left intercostal space	Two wounds; non-penetrating.	....	None	Death on twenty-second day from empyema; pericarditis.
12. Longo...........	Fifth left intercostal space; ⅜ inch internal to nipple.	L. V.; 3 stitches	At once	None	Death in fifteen minutes.
13. Ramoni	At third left cartilage; ⅜ inch from sternum.	R. V.; 2 wounds; 1 non-penetrat.; 4 stitches	....	None	Recovery.
14. Marion. 1899 ...	Shot through breast	R. V.; catgut suture ..		....	Death.
15. Rosa. 1899	Fifth intercostal space	L. V.; ⅜ inch; not certain it penetrated ventricle.	....	None	Recovery
16. Horodynski. 1899	....	R. V.; 1½ cm. long ...	....	....	Death.
17. Maliszewski. 1899	....	....	....	....	Death.
18. Maliszewski. 1899	....	....	....	....	Death.
19. Bufnoir. 1899 ...	Sixth left intercostal space.........	R. V.; gunshot: 22-caliber.	....	....	Death; necropsy showed perforation of ventricle and the anterior opening only had been sutured.
20. Pagenstecher. 1899	Fourth left intercostal space beneath the nipple.	L. V.; near apex; 2 stitches.	16 hours	None	Recovery.
21. Nanu. 1900.	Third intercostal space, 4 cm. from edge of sternum.	R. V.; 2 cm. long; 2 interrupted sutures.	....	....	Death on fifth day from infection of pericardium and pleura.
22. Maselli. 1900. ...	Below and internal to left nipple, cutting sixth rib.	L. V.; near apex; 1 stitches.	½ hours	....	Death in twelve hours.
23. Fontan. 1900....	Six wounds with scissors between third and seventh ribs in cardiac region.	L. V.; 12 mm. long; continuous catgut sutures; 3 stitches..	6 hours	Chloroform	Recovery.
24. Nietert. 1901 ...	....	R. V.; penetrated; 3 silk sutures.	....	....	Death after thirty-six hours.
25. Vaughan. 1901. .	Fifth left costal cartilage divided....	L. V.; 2½ cm. long; continuous silk sutures; 7 stitches.	¾ hour	Ether.....	Death on table from hemorrhage about completion of operation.
26. Nietert. 1901 ...	Left of sternum	L. V.; not sure cavity was penetrated; 2 sutures.	....	....	Recovery.
27. Ninni. 1901.....	Left of sternum	R. A................	....	....	Death in four days; sepsis.
28. Mignon et Sieur, 1901.	....	R. V................	....	....	Death.
29. Fontan. 1901 ...	....	L. V.; catgut sutures.	....	....	Recovered; had empyema.
30. Brenner.[7] 1901. .	Left of sternum, near sixth cartilage	R. V.; 7 cm..........	Following day.	Yes	Death on table; degenerate heart muscle.
31. Watten.[8] 1901 ..	Fourth right intercostal space......	R. V.; 3.5 to 4 cm. ...	....	....	Recovery; right pleura wounded: pneumothorax.
32. Lastaria. 1901...	....	L. V................	....	....	Died soon.
33. Launay.[9] 1902. .	....	L. V.; ant. and post. walls; pistol shot; catgut sut. in each..	....	....	Recovery; no complications.
34. Nietert.[10] 1902. .	Left sixth interspace, to right of papillary line.	L. V.; far back, 2 cm.; penetration uncertain; 2 interrupted silk sutures.	14½ hours ...	....	Recovery; purulo-sanguinolent effusion and thoracotomy.

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[7] *Wiener klin. Woch.*, 1901, No. 11.

[8] *Deutsche med. Woch.*, 1901, No. 37

[9] *La Presse Médicale*, March 29, 1902.

[10] *Phil. Med. Jour.*, May 3, 1902.

* Cases 1 to 26 inclusive from table of Geo. T. Vaughan, M.D. *Medical News*, Dec. 7, 1901.

destined to be submitted to many manipulations, provided they may be done without stopping its action at once. It is a very unsafe thing to prophesy, but that more will be attempted can easily be inferred, for interference with the mitral orifice has already been suggested, and the immediate neighborhood of the heart has been invaded and a saculated aneurysm of the aorta has been tied off, the success of this well-executed maneuver being prevented only by the failure of the atheromatous vessel walls to heal. Possibly, the next step may be delayed as long as the application to the heart of common surgical methods was delayed after Desault had taught us to open the pericardium. Perhaps it may come soon. It is not impossible that a new surgical technic may have to be created, but it is most probable that the next step will be based on the new application of the very old matters of the suture and drainage.

MEMORANDUM OF EXPERIMENTS.

Case I.—Mongrel Newfoundland dog, ether, thorax opened to left of the sternum by turning up a flap of bone, muscle and skin. Triangularis sterni was carefully incised, but the pleura was opened and both lungs immediately collapsed. Pericardium was quickly opened and heart was massaged, as its action failed, to keep it going until the trachea could be opened and the bellows apparatus attached. Manipulations were not quick enough and the dog died on the table. A dissection showed that there was but one pleural sac for both sides of the chest, and that the lungs surrounded the heart much more completely than they do in man.

Case II.—Mongrel Newfoundland, hypodermic of morphine 0.1; ether. Tube in trachea and connection made with a bellows apparatus, which permitted the use of air alone, or of air and ether vapor. Sternum exposed and then split by a costotome. In doing this the left lung was wounded, but the right was not and its inflation proved sufficient for respiratory purposes. Thorax widely opened, pericardium picked up and opened and then, by seizing the edges of the opening with hæmostats and lifting, the heart was brought up into the opening in the chest wall. The heart's action was strong and regular. Heart wall caught with toothed forceps; systole postponed, and then rapid and tumultuous heart action, tugging forcibly on the forceps. Punctured wound into left ventricle, parallel with the superficial fibers. Spurt of blood, dark in color (because of collapse of one lung), systolic in time. The action of the heart was so rapid that it was impossible to estimate the amount of diastolic hemorrhage. Two interrupted cumolized catgut sutures, passed deeply, but not intended to penetrate the endocardium. Hemorrhage controlled absolutely. Pericardium sponged out and closed by a continuous catgut suture. Chest wall sutured, the sutures drawing together the sides of the split sternum, and dog left with a certain amount of pneumothorax, the right lung being easily inflated, but the left being wholly collapsed and at the back of the chest. Deep and half-deep sutures in the subcutaneous tissues and a subcuticular stitch for the skin. Gauze and collodion over suture line and gauze pads and a body bandage over all. The tube was taken out of the trachea—each cut cartilaginous ring sutured and also the membrane between. The separated muscles put in place, and deep, half deep, and subcuticular sutures as in the chest wound, and then same kind of dressing applied. As soon as the bellows apparatus and the tracheal tube were removed active respiration began. After five minutes it was 17 to the minute and fifteen minutes later it was 16 to the minute. The character of the respiration was good. Twenty-four hours later the dog was in a bad state—he would not stand, nor eat, nor drink. Respiration was deep and labored. Dog found dead on the morning of the second day. Heart only examined. The two sutures were easily seen.

Microscopic Examination of the Wound Area.—Exudate on pericardium is comparatively thin, and consists chiefly of coagulated fibrin, in which are polymorphonuclear leucocytes and a large number of small round cells. The pericardium had lost its typical glistening appearance. It is taking part in the imflammatory process on its surface. Considerable amount of altered blood pigment is found in the pericardial exudate. Sutures surrounded by a mass of leucocytes can be seen in this section and the incision extends direct from the pericardium to the endocardium. It is characterized by extensive extravasations of blood, coagulated fibrin, and platelets in which are numerous polymorphonuclear leucocytes. The heart muscle cells on either side of the incision are undergoing either hyalin degeneration or coagulation necrosis. Karyolysis is marked in these cells. In the intermuscular septa between the different fasiculi of muscle fibers are found extensive accumulations of leucocytes, many of which contain pigment granules derived from the blood. No definite evidence is obtained from the section that the repair is advanced to an extent marked by the new formation of blood vessels. The endocardium is somewhat thickened, and is covered with an exudate composed of fibrin, leucocytes, red blood corpuscles and blood platelets. The wound in the endocardium is not closed.

Case III.—Big short-haired mongrel, hypodermic morphine 0.1; ether. Tube in trachea. Sternum split with a strong knife and lungs not wounded. Bellows at work and thorax opened widely. Pericardium split open and heart lifted to surface as in Case II. Punctured wound as before, heart steadied by toothed forceps grasping fibers. Strong systolic jets of blood. One suture, cumolized catgut, controlled it, though it was not passed deeply. A second suture, more superficial, was put in. The pericardium was cleared of blood and sutured and all the other tissues closed as in Case II. Chromicized catgut, thick and strong, was used for the sternum. As the final stitches which closed the subcutaneous tissues over the sternum were placed and tied the lungs were fully inflated to expel all the air possible from the thorax. The dog came out of the ether quickly and whined and struggled. Pulse 156, respiration 18. Two days later the dog was up and about and ate and drank and was friendly. At the end of the week the wound was open somewhat and the dog was weak and sick. He was found dead on the tenth day.

Postmortem.—Tracheal wound healed throughout and without suppuration. Sternal wound healed in part per primam and in part per secundum, except that from the upper and lower ends were open sinuses leading in, and from them came seropurulent fluid. The lower sinus communicated by a tortuous narrow (2 mm.) path with the pleural cavities. Muscles and cellular tissues of the thoracic wall show intense inflammatory reaction. Both sides of chest cavity full of serosanguineous exudate. with purulent flocculi. Entire pleura covered with a fibrino-purulent exudate and lungs adherent at places by fresh adhesions. Lungs atelectatic, free borders and surfaces shriveled and puckered. Cut surface of lung shows congestion but is otherwise normal. Pericardium adherent to inner surface of sternum, the incision in it opened and cavity communicating directly with the incision. Pericardial cavity contains small quantity purulent exudate and same is on epicardium and pericardium, and an adhesion between these exists along the line of incision in the myocardium. Incision may not have opened ventricular cavity. Diaphragm and liver pushed down by the amount of pleural exudate. No changes in abdominal viscera.

Note.—In the laboratory where this dog was operated upon other dogs had been used for experimental abdominal work, and some bone work had also been done. This dog had had an intestinal suture a month before the heart operation. The intestinal and other abdominal work had been followed by clean aseptic healing. The incisions for the bone filling, which were over the trochanters, had in two instances been torn open by the dogs. The heart operation was done with the utmost care to secure aseptic conditions, and in spite of it a massive infection occurred.

Microscopic Examination of the Wound Area.—The epicardium over the incision in the heart muscle is covered by a thick partially-organized exudate, which consists chiefly of coagulated fibrin with numerous polymorphonuclear leucocytes embedded in the meshwork formed by its filaments. A considerable number of new-formed blood vessels and fibroblasts can be seen making their way from the pericardium into the mass of the exudate. This also contains numerous fat globules. The catgut sutures can be distinctly seen in the myocardium and are surrounded by an intense zone of reaction, the chief part of which consists of polymorphonuclear leucocytes and numerous round cells. Evidence of the formation of a few new blood vessels seen at the periphery of the zone. Specimen not stained for microorganisms, but the tissues at these points had the appearance of being infected and look like early abscess formation. For a considerable distance beneath the epicardium over the whole area covered by the exudate there is a marked degeneration of the heart muscle cells. They stain poorly, the outlines are not clearly marked, the nuclei show bizarre arrangement of the chromatin and occasional instances of karyolysis. No evidence of fibrillation can be seen in the degenerated cells. In the interspaces between are numerous polymorphonuclear leucocytes and small round cells. Along the line of incision in the heart muscle there is some evidence of healing, the extravasated blood is mostly absorbed and the adjacent walls of the wound bound together by coagulated fibrin. Here and there are occasional spots suggestive of the formation of new blood vessels. Either the incision does not extend to the endocardium or the section of the heart muscle has taken an oblique plane, so that in this section at least the endocardium remains unaltered and intact.

Case IV.—Big shepherd dog, hypodermic of morphine 0.1; ether. Tracheal tube and bellows. Thorax and pericardium opened as in Case III and without wounding lungs. Transverse punctured wound in left ventricle, close to apex, violent systolic hemorrhage, the heart beating very rapidly. Muscle in bite of forceps tore out and heart escaped, beating rapidly and bleeding profusely. Finger in apex partly controlled bleeding, but position difficult to maintain because of the action of the heart and a little force tore the opening, making it a 2 cm. rent, and finger passed into ventricle. Dog began to make respiratory efforts in spite of bellows. Edge of wound finally caught with forceps and two sutures hurriedly passed and apparently closed opening and checked bleeding. Heart action getting weaker, but suture of pericardium begun. Heart stopped before completion of pericardial suture.

Heart removed—wound found to be larger than had been thought, and only half of it sutured. Pericardium and thorax full of blood clots. Heart muscle had been torn by the forceps and the finger, and apparently was more than ordinarily friable.

Case V.—Big mongrel Newfoundland, hypodermic of morphine 0.1; ether. Tube in trachea and bellows attached. Usual technic to expose heart. Two loops of silk, medium size, each loop about 15 cm. long, put transversely into wall of left ventricle 2.5-3 cm. from apex, and about 1.5 cm. apart. The needle carrying the upper loop punctured the coronary vein and it was tied by a catgut suture, carried around it by a small needle. The heart could be easily lifted by the loops and swung to right or left, or rolled over in either direction and the complete control was very satisfactory. A transverse puncture was made between the loops and the wound held open by them. The jet of blood, systolic, was very forcible. The loops were then crossed and the opening closed. The taut loops now steadied the immediate field of operation and made the placing and tying of the sutures a simple matter. Three interrupted catgut sutures were put in, penetrating only 2-4 mm. into the myocardium, and controlled the hemorrhage. Silk loops were removed, and there was no particular bleeding from their track.

Early in the operation the left internal mammary had been wounded near the upper part of the incision. As more dissection would have been needed to tie it, pressure was tried and seemed to be enough. Bleeding recurred as the chest was being closed, but pressure again seemed efficient. Usual method of closing all cut sutures. In spite of efforts to avoid it, considerable air was apparently left in the chest. Usual dressings. Half hour after chest was closed, respiration 26, somewhat labored. Death in less than twenty-four hours.

Postmortem.—Dressings blood-stained. Superficial and deep tissues on both sides of wound infiltrated with blood and a large clot under the right pectoral. The catgut sutures around the sternum had yielded. Pleural cavities full of whipped blood, and large clot in left side—lungs deeply congested, with fibrinous exudate at places on pleura. No healing in pericardial incision, pericardial sac filled with fluid, epicardium injected, but smooth and with no adhesions. Left ventricle in systole, right in diastole. Incision in wall 2 cm. long, closed by three sutures. Slight fibrinous exudate over wound. Internally, wound 6 mm. long, and covered by small fibrinous flake or globular thrombus.

Case VI.—Boston terrier. Morphine 0.1, ether. Tube in trachea and bellows attached. Usual method of access to the heart; two silk loops in the left ventricle, transversely, near apex. Incision, transverse to superficial fibers, 1 cm. long, between the loops. Systolic spurts of blood, and hæmostat introduced into the heart to verify penetration. Three catgut sutures—the middle one superficial, the two outer ones deeply placed to penetrate endocardium—the sutures turned in the edges of the incision somewhat. Usual method of closing incised tissues, except that the halves of the sternum were fastened with heavy black silk. Fifteen minutes after the removal of the tracheal tube, respiration 66 per minute, easily, as a dog breathes when running a little. Death in about forty-eight hours.

Postmortem.—Extensive submuscular emphysema, and a hemorrhage under the left pectoralis major. Silk sutures on sternum held perfectly. Pneumothorax, with emphysema of the connective tissue in the mediastinum. The air had followed along all structures that traversed the chest, especially the phrenic nerve, the lymph glands and the larger vessels, and it worked along the sheath of the vena transversa from the first rib outward into the left axilla with the subclavian vein and so produced the submuscular emphysema, and on the right side, too, it had followed the subclavian vein through the costocoracoid membrane. The left pleura contains about 10 c.c. of bloody serum. Pleural surface covered with fibrinous exudate. Pericardial wound healing. Sac contains about 10 c.c. bloody serum. Pericardium slightly adherent to epicardium by thick fibrino-serous exudate, and when the two membranes are pulled apart the "buttered bread" appearance of the surface is presented. Heart, left ventricle in systole, right in diastole. Wound in myocardium extends 1 cm. upward and medianward from apex, through septum into left ventricle. Closed by three interrupted catgut sutures. Wound covered by fibrinous exudate. Endocardium smooth, except just about wound, where there is red subserous hemorrhage. A white thrombus hangs from the strand of catgut in the ventricle, with post-mortem clot about it.

Note.—The emphysema in this case had an interior source, and could only be accounted for by some wound of the lung, which could not be located. Perhaps there was a rupture or a wound when the lungs were distended to fill the chest at the time of the last suture.

Case VII.—Mongrel Newfoundland, morphine 0.1, ether. Tracheal tube and bellows. Usual approach to heart. Two loops, longitudinal, in left ventricle. A long incision, 2.5 cm. between the loops, opening the ventricle widely. Furious systolic hemorrhage. Loop-crossed and opening closed and hemorrhage stopped. Rapid, continuous catgut suture from top to bottom of wound and return. One knot. Usual method of closing wounds. Very little air left in thorax. Six days later, dog alive. Later failure of strength and death on the tenth day.

Postmortem. — Body emaciated. Tracheal incision partly healed. Wound in thorax healed, except at lower part, where it is somewhat open with sero-sanguineous discharge. Thorax deformed and looks like the pigeon breast of rachitic children. Pericardium adherent to chest wall; two halves of sternum not united, but held by the sutures. Pleura everywhere injected and covered by fibrino-purulent exudate. Some adhesions. Some blood-stained fluid in right pleura and more in left. Lungs congested, but no consolidation. Pericardium thickened and injected, and incision only partially healed. Contains a little sero-purulent exudate. Numerous adhesions between epicardium and pericardium, especially on the dorsal aspect, and when separated gave the "buttered-bread" appearance. Incision in myocardium covered by fibrinous exudate, and purulent necrotic mass underneath it. Endocardium not examined. Peritoneum injected and with occasional areas of fibrinous exudate. In small intestine, about 30 cm. from the ilio-colic junction, an area of gangrene, 4 cm. long on the lateral aspect of the gut, and in the middle of this a perforation. In the gut the mucosa was discolored, and covered by a soft brownish necrotic mass. Nothing else of moment in the abdomen.

Microscopic examination of wound area.—The exudate of the pericardium is even thicker than that of dog No. II. It has the same constituents, except that it is richer in fibrin and platelets and in R.B.C. Exquisite examples of new blood vessels can be followed from the pericardium into the exudate, but these vessels do not appear to be quite as old as those in dog No. III. The reaction in the endocardium is extensive, but does not penetrate deeply into the heart muscle, as in the case of the first section described. The heart muscle cells show just under the pericardium some evidences of degeneration, namely, in the pallor of the sarcoplasm marked karyolysis and in vacuolization. The line of incision in the heart shows an extensive area of coagulation necrosis, which corresponds to the cheesy area described in the gross specimen. Sutures, surrounded by a mass of polymorphonuclear leucocytes and small round cells, showing all the stages of nuclear fragmentation or karyorrhexis. The area around the stitches has almost reached the stage of abscess formation. In many places the degeneration of the heart muscle has extended so far that the karyolysis is complete in the muscle cells, and they appear as a pale pink staining mass of cytoplasm, which do not even show the characteristic striations of the heart muscle cells. Neither the large nor the small disc of MacCallum are visible, nor are Krause's membranes made out. Under the immersion lens, even with hæmatoxylon stain, small masses of bacilli and cocci are visible. These are gathered in the spaces between the dead muscle cells, and are also found along the line of incision and in the exudate on the surface as well as about the stitches.

CASE VIII.—Big water spaniel, morphine 0.1, ether. The incision in the sternum, made with a costotome, failed to hold to the middle line and the lung was nipped. In opening the pericardium the coronary artery was cut and bled freely, but was easily ligated. In placing the silk suspension loop the rapid motions of the heart prevented accuracy, and the artery was wounded again, and again ligated. The left ventricle was opened by a punctured wound close to the apex, and then a closed hæmostat was put in and opened so as to make the endocardial side of the wound the larger. A continuous very superficial suture controlled the hemorrhage. About 5 c.c. normal salt solution (NaCl 6. KCl. 2.5 Ca Cl 0.5 Aqua 1000), with some carmin in it, was put into the pericardium and the incision sutured. About 500 c.c. of the same salt solution was poured into the pleura to displace any residual air. The punctured point on the lung was ligated and cut off. The usual method of closing the thorax. The dog lived about forty-eight hours, and the autopsy appearances were like those of Case VI. The use of the salt solution made no particular difference in the result.

CASE IX.—Big mongrel, morphine 0.1, ether. Tube in trachea. Usual approach to heart. Lung nipped by costotome. Heart punctured with needle—as point entered myocardium a postponed systole, which, when it came, was violent, and followed by rapid action, gradually slowing to the usual rhythm. The needle was withdrawn after the postponement. This was done to see if the acts of placing a suture could have been done in successive diastole, and the experiment was repeated, but no diastole long enough for a definite act, like pulling through a suture or tying a knot, occurred. The bleeding from the needle wounds stopped spontaneously and quickly. The right coronary artery was cut and bled by spurts during systole, and was then tied. Transverse incision, 1 1-5 cm. near apex. Two interrupted stitches stopped all hemorrhage. Two c.c. salt solution with carmin in pericardium just before last suture. Pericardium and chest closed in the usual way. Heart beating rapidly and not very forcibly. Dog died in about forty-eight hours.

Autopsy showed conditions similar to those in Case VI.

CASE X.—Mongrel fox terrier, morphine 0.1, ether. Tube in trachea. Heart approached in usual way with no collateral injury. No incision in heart. Usual closure of pericardium and thorax. At this point the heart stopped and the chest was reopened and the heart massaged, exciting only feeble fibrillary arhythmical contractions. Strychnine in the femoral vein and in the heart muscle produced no effect.

Death was ascribed to overdose of ether, as the apparatus was set for the administration of ether with the air.

CASE XI.—Small mongrel. Same operation as Case X. Again symptoms of heart failure and some delay in the resumption of active respiration, but 4 mgr. of strychnia stimulated both functions. This dog lived two weeks and then had an open wound over the sternum with the loose ends of the costal cartilages projecting from the surface of the wound. He was in good condition and begged for a dead rabbit which was in the laboratory. He was given morphine 0.1 and ether. Tube in trachea through new incision. An attempt to dissect into the pericardium past the lungs, which were assumed to be adherent to the deep side of the cicatrix, failed, and the pleura was again opened. Pericardium was adherent to the cicatrix, was opened, the line of suture had healed perfectly and the visceral side was smooth. Very little fluid in endocardium. No adhesions to heart. As it was out of the question to again close the thorax the dog was permitted to die.

CASE XII.—Small mongrel, morphine 0.1, ether. Tube in trachea. Usual approach to heart. Suspension loops. Punctured wound, longitudinal 1 to 1.5 cm. Three moderately deep interrupted sutures. Usual closure of pericardium. A change in the method of closing the thorax was a failure and the dog died in a few hours.

Two Belgian hares and two rabbits were also used, because of their having two pleuræ separated by a mediastinum, but we failed to be able to open the pericardium without opening the left and, sometimes, also the right pleura in this quartet, and there was no time for further trials.

Closing Remarks.—The early death of these dogs was a disappointment, for I had especially desired to see if the cicatrix in the heart muscle would stretch with the lapse of time, or would yield under the strain of rapid and forcible action. As it was, in no instance was death due to the rupture of the wound or to hemorrhage from the failure of a stitch, and in the two dogs, which lived long enough to permit a satisfactory observation, the wound in the heart was rapidly healing. The supervention of sepsis and its usually rapidly fatal effect was apparently unavoidable, for all the technic of the operating room, even to having the preparation of the dog and the instruments and the operating table in the charge of a male trained nurse, was practised. As I have said in the body of the paper, the pleura lacks the mechanical arrangements which favor the localization of infection in the peritoneum, and an originally minor infection has opportunity to become a general and extensive one. Drainage of the pericardium and pleura in the dog is not to be thought of, because the pericardium is in the middle of the one pleural sac, and could only be drained through it; and drainage of the pleura would inevitably result in the collapse of both lungs. Therefore, the dogs were permitted to die, and no effort was made to help them out of their septic state.

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THE RELATION OF MEDICAL SCIENCE TO COMMERCE.*

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I have been informed that there is no rule of the association which fixes the subject of this address. I hope I may be pardoned when I depart from the custom which my predecessors have usually followed when they confined the subject of the address to the progress of medicine during the year just past.

We live in a period of the greatest activity of the history of the world. Modern inventions annihilate time and distance. Electricity and steam approximate the most distant parts of the civilized globe. Vast amounts of capital are invested in electrical, steam and other related interests.

Large commercial enterprises are carried on or launched into new fields, which require money, the employment of the brightest intellects and of skilled and common labor.

Competition is great in all the affairs of men. The struggle for supremacy between nations and between men was never so fiercely contended as now. The world is richer than ever before. Great individual fortunes, the result of the efforts of the few years of a single span of life, are seen everywhere. The wage of the laborer in our country is larger than ever before and he may command the necessaries as well as many of the comforts of life.

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This modern restless activity, with its nerve-racking; the evil results of a luxurious life; the moral obliquity which it may breed, as well as many other conditions which affect the health of individuals, while of interest to medicine, do not concern us in the consideration of the broader subject of this paper.

The Broader Application of Medical Science.—Medical science is interested in and is of greater importance to the world than ever before, in protecting individuals, States and nations from infectious diseases, which are rendered more dangerous than formerly because of a denser population, increased facilities of communication between the peoples of the earth, by travel and by national and international interchange of food and other commercial products.

Medical science, too, is closely identified with the vast monied interests of the merchant marine and of national and international commerce. Quarantine against the spread of infectious disease is applied wisely or foolishly in direct ratio to our knowledge or ignorance of the cause, the means of transmission and the evolution of disease. So, too, medicine has to do with the knowledge which will enable man to escape from and finally remove the conditions which cause infection and which render a country uninhabitable to civilized man.

Medical science must safeguard man against infection and intoxication from parasitic diseases of animals used for food and from contaminated and adulterated food and drink. Not only from a humanitarian standpoint is medical science related to commercial pursuits, but the sciences related to medicine have done much to preserve animals used for food and to protect agricultural interests of many kinds from disease and destruction.

One may say, I think, that in no other pursuit which engages the serious attention of men are there as many earnest, unselfish and philanthropic workers as there are to-day in the broad field of medicine.

In the various departments of science related to medicine one finds educated, skilled, energetic, earnest workers after truth, willing to sacrifice home, friends, health and life for the advancement of the science which has for its primary object the conservation and prolongation of human life. Pecuniary reward for them is never large and never commensurate with the character of the work.

Furthermore, great and astounding as are the modern commercial inventions, the progress made in medical science during the last twenty years is equally great.

Is modern medicine prepared to meet the demands of modern progress concerning the questions which interest humanity and commerce? Let us answer the question by a brief retrospect of the progress of medicine and by a statement of the present status of medical science.

First Application of Physical Sciences to Medicine.—From the latter part of the eighteenth to the beginning of the last quarter of the nineteenth century the science of medicine developed steadily upon a rational physical basis. Jenner's discovery of the protection of the human race against variola by vaccination with cowpox illuminates, with noonday splendor, an era otherwise gloomy with its hypotheses, theories and superstitions concerning disease.

This single brilliant achievement of the end of the eighteenth century was the beginning of the evolution in medical science which made the nineteenth century notable. The application early in the nineteenth century of physics, of physiology, of pathologic anatomy and of chemistry, to the study of disease, developed a more exact knowledge than before existed. To Auenbrugger that early period owes much through the discovery of methods of physical examination which were slowly developed and perfected by Corvisart, Laennec, Piorry, Skoda, Wintrich, Traube, Louis, Cheyne Stokes, Graves, Corrigan, Flint, Scudamore, and others. Pathologic anatomy made wonderful strides under the labors of Virchow, Rokitansky, Arnold, Stilling and their students. Physiology was developed by the labors of Johannes Müller, Brücke, Helmholtz, Trousseau, Vierordt, Foster, Carpenter, Magendie, and their disciples; and the fuller knowledge embraced in physiologic chemistry was added to the rapidly-broadening field of medicine by Hoppe-Seyler, Schwann, Stricker, Prout, Liebig and others.

Bacteriology.—The development of the microscope during the second and third quarters of the past century added a mighty weapon to the armamentarium of the physicist. The microscope was an aid to the investigators of pathologic anatomy, of physiology, of chemic physiology and of other subjects, and it was the one necessary means by which the teeming world of bacteria was made visible. This discovery and the knowledge which has come from a study of these infinite and yet often mighty beings has revolutionized medicine.

It was Pasteur's brilliant studies of the infective microbes of air which led to the discovery of the source of contamination of wounds, and which made it possible for Lister to evolve a method of protection of wounds from air infection. The aseptic surgery of to-day is but the evolution of Listerism, which had its basis of existence in the discoveries of Pasteur. With the microscope Pasteur rid the world of the superstition of spontaneous generation. He proved the infectiousness of dust-borne air through the microbes it carried. He blazed the way for others in the study of bacteria as agents of putrefaction, fermentation and of pathologic infection in animals.

Bacteriology became an exact science with the discovery of Robert Koch of cultural methods which made differentiation of bacteria possible. The causative relation of bacteria to all infective processes was practically proved by the laws promulgated by Koch. In twenty years the bacterial cause of tuberculosis, typhoid fever, cholera, diphtheria, pneumonia, pyogenic processes, erysipelas, gonorrhœa, epidemic meningitis, epidemic dysentery, the plague, charbon, glanders, tetanus, influenza, and lepra has been proved.

Parasites.—The discovery of the hematozoōn of malaria by Laveran; the recognition of the ameba of dysentery by Loesch; of the ray fungi and especially the actinomyces as infective agents in the lower animals and in man, and the more exact knowledge of other animal parasites infecting man and animals, which the microscope has made clear, have been as epoch-making in parasitology as the discoveries of Pasteur and Koch in bacteriology.

The recognition of the relation of bacteria, protozoa and animal parasites to infective disease has been the means of a more exact knowledge of the clinical phenomena of disease, of morbid anatomy of physiology and of physiologic chemistry than would have been possible without it.

Transmission of Infection.—The knowledge of the cause has led to a study of the life-history of infective organisms outside of as well as in the animal body. The mode of propagation, the means of transmission of infective microorganism by fomites and other agents, has become known. The rôle which insects which infest animals play as definitive or intermediate hosts has been studied and proved. The discovery of Manson of the transmission of *Filaria sanguinis hominis* by the mosquito was of vast importance as a suggestion of the mosquito as a definitive host in malaria. The investigations of Manson, Ross, Celli, Grassi, Dionise, Marchiafava, Bignami, Koch, and others have made our knowledge of malaria exact. With the microscope we may now not only recognize malaria and differentiate it from the other infective fevers, but we may also at the same time recognize by an examination of the blood the type of malarial infection and foretell its course. Not only may we recognize the disease definitely and apply the drug treatment more rationally, but the knowledge of the means of its transmission from man to man enables us to apply preventive measures which, as we shall see later, are of the greatest importance from a commercial as well as from a humanitarian point of view. The recognition of the rôle of the mosquito in malaria has been, furthermore, a stimulus to the study of the same insect in relation to other infections.

The brilliant research work of our own Reed and Carroll in 1900 in Cuba, by which they proved that the mosquito of the genus stegomyia is the sole means of the transmission of yellow fever from man, to man is of great importance as a scientific fact. The influence of this discovery upon mankind as a prophylactic against a disease which has killed multitudes and also from a monetary point of view, in reference to commercial pursuits, is not appreciated at this time as it should be.

Hardly less important is the fact that the *Bacillus pestis* may infect fleas, and these, in turn, infect rats, mice, and man. It is important, too, to know that pests like the house fly may be carriers of infective bacteria from refuse filth to our kitchens and tables and contaminate food and thus infect us with typhoid fever, cholera, and, perhaps, other diseases which are propagated by filth.

The study of bacteria in the laboratory and in the blood tissues of infected animals has led to the discovery of the means by which bacteria disturb the animal economy and produce phenomena expressive of disease. The fact that the blood and tissues of infected animals contained a toxin which could also be isolated from pure bacterial cultures in the laboratory and that this toxin when introduced into an animal was capable of exciting the same phenomena of disease as the bacteria themselves, was positive proof that bacteria excite disease phenomena by means of a toxin which they form. The elaboration of antitoxins in the body of the infected animal was also promptly recognized and not only served to explain the self-limitation of many of the infective diseases, but this discovery also helped us to understand the immunity which one attack of some of the bacterial diseases affords.

Protective Inoculation.—Long before bacterial toxins were recognized as the cause of disease phenomena, Pasteur established the principle of protective inoculation with bacteria of lessened virulence, which was brought about by attenuation of the bacteria by a modification of cultural methods and also by serial inoculation of certain lower animals. This he successfully applied to charbon in sheep and cattle and to chicken cholera. In both of these diseases the bacteria were known and the problems of attenuation could be carried on in the laboratory by direct study of the bacteria before inoculation and afterward when they were recovered from the bodies of the animals experimented on.

His final life's work was no less important, in firmly fixing the immunizing influence of attenuated bacterial inoculation in rabies. Here the discovery of the infecting bacterium escaped every known means of recognition by examination of the tissues and blood of the infected animals microscopically and culturally. Apparently, there are pathogenic bacteria which we do not know, because we have not yet recognized the proper culture material for the successful artificial cultivation of them, nor have we discovered the tinctorial reaction which they may possess and, finally, it is not improbable that they may be infinitely smaller than other bacteria and, therefore, more difficult to recognize.

Pasteur recognized the fact that in hydrophobia the brain and other nervous tissue of an infected animal are capable, when inoculated into another animal's brain, of producing the disease. That the infected brain, used for inoculating animals, contained the bacteria, which caused the disease, was proved by the fact that a stage of incubation occurred in the inoculated animal and that a series of animals were successfully inoculated consecutively from the first. Pasteur then successfully attenuated the unknown bacterium of hydrophobia present in the nervous tissues of an inoculated animal by desiccation of the nervous tissue in a sterile apparatus by methods too well known to repeat. Nor is it necessary to occupy time in repeating the well-known methods pursued by Pasteur and his pupils in the use of the graduated doses of attenuated bacteria contained in the nerve tissues in the prophylactic treatment of rabies. To Pasteur, therefore, do we owe the scientific recognition of the principle of protective inoculation.

It is now a well-known fact, however, that inoculation against disease was practised by the Chinese 1000 years ago. They inoculated the healthy with smallpox as a protection against the disease. Variolization was also practised in Europe in the seventeenth and eighteenth centuries. We read that in 1718 Lady Montague caused a son to be inoculated with variola in Italy and that two years later her daughter was inoculated in England. The practice was followed in Ireland long after the successful establishment of vaccine as a protection against variola. Inoculation against syphilis, or syphilization, was also practised in Europe during the nineteenth century.

To Jenner, however, do we owe the first example of the protective inoculation by means of an attenuated virus. This attenuation we now know was established by the accidental inoculation of milch cows with smallpox, producing a modified disease, vaccinia. That vaccinia, produced in man by inoculation direct from the cow, would protect against smallpox was proved when, in 1798, Jenner successfully vaccinated, direct from the cow, the five-year-old lad William Summers.

The thousands of successful vaccinations which have since been performed and the thousands of lives which have been saved by vaccination are proof of its validity and utility. The immunity established by protective inoculation is apparently the same as that induced by an unmodified attack of variola.

Serum Therapy.—When chemistry had revealed the nature of bacterial poisons and experiments established their relation to the phenomena of disease, it was proved that substances were formed in artificial culture media and in the blood and tissues of infected animals which had the power to neutralize the effect of the bacterial poison in other animals infected with the same organism. Further investigation showed that an animal inoculated with the laboratory preparation of antitoxin was protected against the disease.

Furthermore, it was found that the blood serum of an animal inoculated with bacteria in a non-fatal and repeated dose contained an antitoxin. When the blood serum of the infected animal was injected into a healthy animal, the latter was protected against the original disease.

Antitoxin was, therefore, proved to be formed in artificial media of bacterial cultures and in the bodies of infected animals. When the antitoxin thus formed was injected into an animal it had the power to protect it against the particular bacterial infection or, if given subsequent to the infection of the animal, to mitigate the severity of the disease or to entirely check it.

Thus, by Koch and his students, was serum therapy established as a principle. Upon this principle there has been established and given to the world the antidiphtheritic serum of Behring and of Roux.

A curative or immunizing serum has been developed for Asiatic cholera, tetanus, erysipelas, plague, epidemic dysentery, streptococcus infection and other diseases. While the serum treatment has not proved successful in all the diseases in which it has been used, it has been so successful in some—diphtheria, for instance—as to firmly establish the principle of serum therapy.

Influence of Bacteriology upon Practical Medicine and Surgery.—These practical results in specific prophylactic and curative therapy is but a part, however, of the influence which bacteriology has had upon medicine. The stimulus, given by bacteriology to the study of pathologic anatomy, physiologic chemistry, clinical phenomena and of physical and chemical changes of the fluids and tissues of the body. has resulted in a knowledge so comprehensive that medical science has been revolutionized within the last twenty years. Speculative theories and hypotheses have given place to facts based upon sound principles proved by experiment and clinical observation.

Bacteriology made possible the comprehension of perfect cleanliness and enables the surgeon to invade every part of the body without fear of infection and has saved thousands of lives which twenty-five years ago perished miserably as the result of disease at that time inoperable, or the result of infection from contact with the surgeon. By means of cleanliness and skill, induced by a broader experience, the surgeon has been able to add to our knowledge information of great value, which could have been obtained, probably, in no other way. He has been able to study disease in the living body and show the relation of a disease process to infection. He has thus been able to clear away many of the misconceptions of symptomatology and diagnosis, especially in disease of the abdominal organs.

Bacteriology has stimulated laboratory clinical diagnosis. Bacterial reaction to sera and blood cultural tests are of the greatest aid to diagnosis. Clinical research work has command of an armamentarium consisting of a knowledge of pathologic anatomy, of physiology, of bacteriology, of chemic physiology and of physics, which allows of a precision in diagnosis never before at the command of the physician.

From the foregoing it seems sufficiently demonstrated that to-day medical science possesses a knowledge so exact that we may answer definitely the question of our relation to the commercial affairs of the world. Infectious diseases which affect agricultural interests, like swine plague, rind pest, fowl cholera, glanders, tuberculosis, actinomycosis, trichinosis, and many of the parasitic diseases of plants and of animals have been studied by scientists with most definite results.

Prevention of Infection.—To-day no sane man believes in spontaneous generation. The presence of an infective disease, whether bacterial, protozoic, parasitic, or fungous, means the recognition of progenitors in the near environment of the infected organism. In practically every one of the diseases of animals above named the scientific investigator has already discovered the nature of the infecting agent, knows its life-history, what conditions are most necessary for its propagation and multiplication and what will remove and annihilate so dangerous an enemy.

Our Department of Agriculture, and especially the Department of Animal Industries, has done much to place comparative medicine on a scientific basis. Briefly stated, there is not a fungous-parasitic, animal-parasitic, protozoic or bacterial disease of the lower animals which cannot, with our present knowledge, be stamped out for all time.

Why do the acute epidemic infections attack the swine, fowl, and cattle of the agriculturist? Because the causative germ is allowed to live and multiply after a former epidemic, or, it is transplanted from place to place by infected animals or by fomites. All of these acute diseases of the lower animals are preventable. One has but to read of the labors and investigations of Pasteur, in relation to charbon, to the silkworm disease, and to fowl cholera to know what indifferent and careless methods may do to prolong and propagate an infection. On the other hand, proper precautions as to the destruction by fire of the infected bodies of animals and plants, the application of cleanliness through the use of abundant pure water, pure food, air and sunlight would extinguish an epidemic.

This may imply the loss of infected property by the individual, the municipality, the State or the national government, but fall the loss where it may, it is often necessary to destroy absolutely the infected organism, that the greater commercial interests as well as the health of the people may be preserved. For example, actinomycosis of cattle, trichinosis of swine, tuberculosis of cattle, may be absolutely controlled and finally obliterated by proper sanitary measures. The expense of such an undertaking would be relatively great, but under the direction of scientists it can be done. Pasteur, with the aid of the government of France, abolished swine plague, charbon, silkworm disease and other conditions harmful to the agricultural interests, with the result that millions of francs were saved to individuals, to corporations and to the government.

The same happy result would occur here and, in addition, the health of our people would be protected against the possible infection with tuberculosis, actinomycosis, trichinosis and intoxication from other infected animal foods.

Smallpox.—But what of the epidemic scourges of the earth, smallpox, yellow fever, cholera and the plague? No rational individual can for a moment doubt the protective influence of bovine vaccination against smallpox. Let one but look up the statistics of the mortality of this disease in the anti-vaccination period and he will become convinced of the utility of protective vaccination. In London the annual mortality from smallpox from 1660 to 1810 per million of the population was 2,040 to 5,020, while with vaccination, not adequate, however, the death rate per million was from

1831 to 1835	830
1838 to 1853	513
1854 to 1871	388
1872 to 1882	262
1883 to 1892, only.	73

In Germany where variola had decimated the population in the prevaccination period, thorough vaccination has practically stamped out the disease. Compulsory vaccination, properly enforced, would effectually eradicate the disease and would free commerce of the losses due to quarantine regulations. The question of individual rights, especially under a republican form of government, is debatable when one considers that science has proved the efficacy and utility of protective vaccination against variola; that with modern methods the process is free from the danger of inoculation with any other disease; that vaccinia is practically a harmless disease and, finally, that an individual right may become an evil when the practice of it subjects others to unnecessary risk of health, life and property.

Medical science, therefore, possesses the knowledge to rid the earth of variola. From a humanitarian point of view, this knowledge is priceless. Still, let one but compute the sum saved to the nations of the earth by vaccination, estimating each life saved at $5,000, the usual valuation placed upon human life by statute. Great as would be this sum, it is many times less than that saved to the commercial interests of the world by the control of the disease which even inadequate vaccination has afforded. Think for a moment of the loss to commercial interests by quarantine and other restrictive measures, in the event of an epidemic of variola, without protection from vaccination.

The Plague.—The plague, the Black Death, which was first recognized in Europe in the year 543 as the *Peste Justinienne*,[1] became pandemic in the fourteenth century and 24,000,000 people are said to have died of it. In 1655 London alone lost 70,000 people from the plague. It disappeared from Europe about 1720. It continued, however, in Egypt, Asia and other Eastern countries in small foci, occasionally occurring as severe local epidemics. In 1830 60,000 people died of the pest in Bagdad. During the remainder of the nineteenth century it appeared sporadically in Asia, Turkey, Tripoli, Persia and other Asiatic countries. In 1891 it reappeared, in epidemic form, in middle China. From that date to the present time it spread over China, reaching Canton in 1894, Hong Kong, in epidemic form, in 1896, and in Bombay the same year. It appeared in Oporto, Spain, in 1899; in Glasgow in 1900 and in San Francisco in 1901, not to mention sporadic cases elsewhere in seaports of Europe and Central and South America.

In 1894 Dr. Yersin, Director of the Pasteur Institute at Hong Kong, discovered the *Bacillus pestis*. He elaborated a serum which has since been used with success as a prophylactic and curative agent. Haffkine prepared a protective vaccine which has also proved successful as a protective inoculation. It has been used in hundreds of thousands of cases in India with no harmful results and is said to reduce the susceptibility at least 75 per cent. and the mortality about 90 per cent.[2]

The plague, the Black Death of the fourteenth century, still exists and rages with fearful mortality in communities which have no regard for hygienic surroundings. It is communicated to people through the abraided skin, or by flea bites, through the respiratory tract, apparently by vacteria in dust-laden air, and also through the alimentary tract by contaminated ingesta. Modern hygienic measures, which consist of perfect cleanliness, isolation, the destruction of vermin and the use of Haffkine's vaccine as a prophylactic and Yersin's curative serum, serve to control the disease. There can be no doubt that if sanitary authorities will take proper precautions to recognize the disease, proclaim its presence and then control it by the means which science has discovered, that the terrible scourge may be safely held in check and finally abolished from every civilized community.

The value to commerce of the discoveries of science in relation to the plague cannot be computed. While the knowledge of its cause and prevention is exact, the impossibility of controlling the unsanitary conditions of the countries of the East and even of our own Western world makes it necessary to continue the quarantine regulations which so often restrict commercial ends.

Yellow Fever.—The mortality from yellow fever in the United States during the last one hundred years, 1798-1897, has been about 80,665.[3] This gives an average annual mortality of 807. Several severe epidemics have occurred, and it has prevailed extensively in smaller towns where the mortality records have not been kept. Hence the above figures do not represent the full annual death rate from the disease. Yellow fever has been the scourge of the West Indies, Central and South America, Mexico, and our Gulf States.

Recognized as an infective disease, indefatigable search has been made for the bacterial cause by many earnest workers. Apparently up to the present time the specific infective germ has not been found. Indeed, from a recent paper[4] by Reed and Carroll, it would seem that the bacterium must be infinitesimally small.

Although we do not know the specific bacterium of yellow fever, a most brilliant discovery has been made of the means of transmission of yellow fever by means of the mosquito (*Stegomyia fasciata*) by two of our countrymen,[5] Walter Reed, Surgeon U. S. A., and James Carroll, Contract Surgeon U. S. A. Twenty years ago Finlay associated the transmission of yellow fever with the mosquito, but no proof of this was given until the epoch-making and decisive experiments of Reed and Carroll. Furthermore, these experimenters proved that fomites contaminated with the vomitus and discharges of yellow fever patients do not transmit the disease to man.

In Havana, Cuba, the sanitary authorities of the United States have attempted during the last year or more to test the fact of yellow fever transmission by the mosquito. To this end the city was made clean; the breeding places of mosquitos in and about Havana were destroyed as far as possible, and persons suffering from yellow fever were isolated and protected from the mosquito. Thus the number of mosquitos were much diminished, and care was taken that remaining mosquitos did not become infected by biting yellow-fever patients. As a result yellow fever disappeared from Havana, and for the first time in years no case had occurred up to May 1 of this year. The usual marine quarantine regulations of the United States restricting the non-immune travel from Cuba were postponed. Furthermore, the Congress of the United States will probably modify the quarantine regulations in reference to yellow fever to meet the more hopeful conditions which the researches of Reed and

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[1] Ph. Hauser, "La Peste dans les temps anciens," etc., Paris, 1900.

[2] *Pacific Medical Journal*, January, 1901.

[3] Obtained from the records through the kindness of Surgeon-General Walter Wyman, U. S. M.-H. S.

[4] "The Etiology of Yellow Fever." *American Medicine*, February 22, 1902.

[5] "Experimental Yellow Fever." Transactions of Association of American Physicians., vol. xvi, 1901.

Carroll have established in relation to the definite transmission and control of the disease.

There can be no doubt of the practical value of this important discovery to mankind. Proper sanitary measures in reference to cleanliness, the destruction of mosquitos and their breeding-places and proper precautions against the infection of the few undestroyed mosquitos by isolation of every imported case of yellow fever will eradicate the disease from every civilized country.

Malaria.—Malaria has not borne as important a relation to commercial communications between peoples as yellow fever and the plague. Nevertheless, it has had an enormous influence upon the health and prosperity of the inhabitants of certain regions where it is endemic and, at times, epidemic in its prevalence. The principles which prevail to induce malaria in a certain region is the existence of human malaria and of the mosquito of the genus *Anopheles*.

The mosquito is annoying but harmless until she becomes infected with malaria by biting a human being infected with the disease. Such an infected mosquito may inoculate all the people she subsequently stings. In this manner a region ordinarily free from malaria may become infected by the importation of a case of malaria from a distant point. It is also possible that a mosquito infected with malaria could be transported by railroad or ship in the luggage or clothing a considerable distance and then sting and infect individuals in its new environment.

We have many examples of infection of people in localities usually free from malaria, through its introduction by means of imported laborers imployed in the construction of railroads, canals, etc. Malaria was rarely found in Chicago until 1891 when the construction of the World's Fair buildings was commenced. Then it was attributed to the excavations and the turning of virgin soil. The construction of the Chicago Drainage Canal began at the same time and continued until 1900. During that period malaria was constantly present in Chicago, and in 1898-9 was augmented by importation of infected soldiers from Cuba and other malarious regions. No one can doubt that malaria was imported in the persons of some of the foreign laborers employed in the above-named enterprises and that the previously innocent anopheles became infected and afterward inoculated many people who suffered from malaria at the period named.

The mortality of malaria in malarious districts with a considerable population is large. Thus Professor Celli[6] says that the mean mortality from malaria in Italy is about 15,000 victims annually, and that about 2,000,000 cases occur in Italy each year. As the mean duration of malaria is generally long, sometimes infecting the individual for years, the loss of labor and of production and the expense entailed in dealing with the disease, amount to several millions of francs. Furthermore, Celli says that, owing to malaria, about 5,000,000 acres of land remain uncultivated with a resulting large economic loss. According to the very accurate calculations of Ricchi, the Adriatic Railway Company with 1,400 kilometers of road and employing 6,416 men, spend on account of malaria alone, 1,050,000 francs a year. In the Italian Army in the twenty years from 1877 to 1897 there occurred more than 300,000 cases of malaria. Finally, Celli says malaria annually costs Italy incalculable treasure.

Malaria is so widely disseminated over the world and the opportunity for continued infection of the mosquito so great that it seems almost hopeless to try to eradicate the disease. The principle upon which malaria may be fought has been suggested by science and has proved of value. This consists of the destruction of the mosquito and its breeding places. The prevention of the infection of the remaining mosquitos by isolation of the malarious individual from the mosquito, and the diminution of malarial material in man by an attempt to cure him with quinine and other anti-malarial remedies.

Experiment has already demonstrated that non-immune individuals may live safely in the most malarious districts, with adequate yet simple protection from the sting of the mosquito infected with malaria. Man thus protected against malaria may now explore, settle in, and develop regions of the earth hitherto inaccessible because of the danger from the deadly tropical malaria.

This address would become too long were one to take up other infectious diseases, although in some of them the science of medicine has made such successful investigations that the knowledge of the cause, means of propagation, and dissemination is exact.

Typhoid Fever.—I cannot close without saying that if in typhoid fever we could employ, unembarrassed by the great cost of the necessary measures, the precautions which science affords to prevent water and food contamination, that the disease would be effectually abolished. The great cost of the measures necessary to stamp out typhoid fever would, however, be an economic measure, inasmuch, as the immense value to the State, of the conservation of the labor of the thousands sick and the lives saved each year would more than compensate for the treasure spent.

Value of Medical Science Not Recognized.—However much medical science has done for humanity and great as the value of the knowledge of infectious disease is to the commercial interests of the world, scientists have not, especially in our own country, received the recognition and financial aid from the State, from corporations or from wealthy individuals which they deserved.

Medical Science Should Receive Financial Support.—Medical science should receive the moral and financial support of States and municipalities in the employment of the measures which science has proved to be efficacious in modifying, restricting and abolishing infectious disease. Wealthy corporations and individuals should establish institutes of original research in properly-constructed and equipped hospitals and laboratories. There the many earnest, indefatigable, and conscientious medical investigators could make more perfect the knowledge we already possess of many of the infectious diseases and, unembarrassed by financial needs, could search for the cause, the means of transmission, and the prevention and cure of the diseases of which we know but little.

Funds, too, should be created to support the cost of committees of scientific investigators in regions now dangerous to the white man. By such means the many plagues of the tropics would be investigated and conquered. Regions uninhabitable or dangerous to the Caucasian would become accessible to settlement and commercial intercourse. Civilization, humanity, and commerce would be advanced and multiplied.

It is right, therefore, that medical science should demand of the monied interests of the world the recognition which, though long withheld, is her just due. This she asks, not that individuals may profit in either fame or fortune, but that she may the more readily rid the world of infectious diseases for the sake of humanity.

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[6] Malaria According to New Researches, 1900.

MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE SARATOGA MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE meeting of the American Medical Association at Saratoga Springs, to a report of which the greater part of this issue of the MEDICAL RECORD is devoted, will be a memorable one in the history of the Association. It is a very long time, measured by the length of years of the Association, since a meeting has been held in New York State, and for the greater part of the interval the State Medical Society, the parent we may say of the National Association, has been under the ban, and its members have been subjected to much that was unpleasant to bear. But time has done its usual work, the heresy of the State Society, when viewed at close range and with eyes unclouded with prejudice and passion, is seen to be little or not at all different from orthodoxy, and Saratoga will doubtless be remembered as one of the resting places on the road to final harmony. A committee on revision of the code of ethics was appointed, but no action will be taken until next year. It is understood, however, that certain obstacles to the complete union of the medical profession in this State will soon be removed.

The meeting was also the first under the plan of reorganization, the House of Delegates being charged with all the political and non-scientific business coming up for consideration, to the great and manifest improvement in the character of the general sessions. The fact that only the first of the general sessions was held in the morning relieved the pressure on the program of the sections, and gave the members more time for serious discussion. The new plan worked with less friction than had been anticipated, but it was suggested that hereafter the routine business of the House of Delegates be despatched just prior to the first regular session.

The attendance was very much smaller than had been looked for, not more than fifteen hundred members having been registered. Dr. Wyeth, as it was known he would, made a dignified and acceptable presiding officer, and to him is due much of the credit for the success attending this fifty-third meeting of the Association.

THE ETIOLOGY OF DENGUE.

SINCE the article contributed by Professor Graham of Beyrout, Syria, attributing dengue to the bite of infected mosquitos, was published in the MEDICAL RECORD, much interest has been manifested in the matter. The Surgeon General of the Marine Hospital Service has requested the medical men attached to the service situated in tropical countries to investigate closely any cases of dengue which may come under their notice and to communicate the result to headquarters, so that data may be collected, and if considered advisable further close research may be prosecuted.

Writing upon the characteristics and spread of dengue epidemics in Allbutt's System of Medicine, Dr. Patrick Manson says: The most remarkable feature about epidemic dengue is the rapid way in which it spreads through a community and the large portion of individuals affected; so rapid is its diffusion, that it may be described as bursting upon a place, both in suddenness of epidemic rise and in the large number attacked, it is comparable to influenza.

Referring to the nature of dengue the same writer says: "There can be little doubt that dengue belongs to the same class of disease as measles, scarlatina, and the other exanthematous fevers. Analogy distinctly points to this. Certain writers, however, oppose this view, principally on the ground that the epidemic extension of dengue is so rapid and so wide that there can be no time for the operation of infection from person to persons. Such writers invoke some vague telluric or atmospheric influence to explain the rapid extension of the disease in epidemics, and the tendency it exhibits from time to time to become rapidly pandemic. But if we bear in mind the shortness of the incubation period, the almost universal susceptibility of a population unprotected by a recent visitation of the disease, the frequency of mild attacks, which, even during their height, do not incapacitate the subject of them from walking about the streets and thus diffusing the infection far and wide, and the marked tendency it shows to prevail especially in towns and densely populated quarters, one can readily understand that the entire population of a city may be exposed to and acquire the disease within a fortnight of the importation of the first case. Dengue in this respect closely resembles influenza.

As to the nature of the poison or germ of dengue, there are no well established data on which to base a very definite opinion. Bacteria, of course, have been described in connection with this as with every other fever, but the value of the observations is at least doubtful. Probably the germ of dengue resembles those of the other infectious fevers, which, with the exception of that of relapsing fever, are still hypothetical. It is a singular and suggestive circumstance that although some of the exanthematous fevers prevail and spread during the cold season in the tropics, as readily as during the hot, there are others—yellow fever and dengue—which cease at once to extend when the temperature of the atmosphere sinks below a certain point. Analogous and similarly suggestive contrasts in their heat-resisting capacity are supplied by the malarial germ and by the hypothetical germs of beriberi and rheumatism.

These are the views as to the cause of dengue propounded by one of the greatest authorities on tropical diseases, and one who has had many opportunities of observing the idiocyncrasies of the first named malady. There are two points in Dr. Manson's remarks which are particularly worthy of notice. The well-known fact that dengue in its onset and many of its symptoms closely resembles influenza, and that dengue and yellow fever disappear with the occurrence of cold weather. The mosquito has been shown to be the principal if not the only means of spreading yellow fever, and the disease ceases with the advent of cold weather, because the mosquito is inactive at that time.

If a coincidence, it is a somewhat peculiar one that dengue acts in exactly the same manner. This similarity between the two maladies lends weight to Dr. Graham's theory that a species of mosquito is the intermediary host of dengue and man.

There would seem to be an inherent probability that Dr. Graham has discovered the cause of dengue, although his views will need further confirmation from independent investigation before being regarded as in any way conclusive.

SO-CALLED IDIOPATHIC HÆMATURIA.

The term idiopathic could well be dispensed with in medicine. It is unnecessary, and it may be misleading, if not obstructive. Sifted to the final analysis, no disorder can be considered truly primary. There may be an initial cause, but the effect may be multiple and varied. While, on the one hand, the assumption of knowledge we do not possess is to be deprecated, and, on the other hand, confession of ignorance is not essential, all obstacles to the attainment of a clearer insight into the ultimate causes of morbid conditions should so far as possible be removed. There are not a few disorders concerning whose nature and etiology we are not as yet fully informed, but this fact constitutes no reason for giving up the quest for this knowledge, and designating them idiopathic. Such a course is likely to obstruct rather than to promote progress. Far better is it to recognize the hiatus in our knowledge, and to devote our energies to bridging the gap.

Cases of hæmaturia of renal origin are on record in medical literature, in which, after exposure of the kidney, with or without further operative procedure, the hemorrhage has ceased. In some instances nephrotomy was performed, while in others the kidney was not even opened, being sometimes palpated and sometimes replaced from an abnormal to a normal situation. In many of these cases no lesion was found, although in some slight vascular and inflammatory alterations were present, and it may be that in all some such change would have been discovered if carefully looked for by approved methods, although it would seem that at times nervous influences are possibly operative factors. Similar conditions have also been found in cases in which it became necessary to practise nephrectomy for the control of the hemorrhage.

In a recent communication D. Leonard G. Guthrie (*Lancet*, May 3, 1902) reports a condition that he designates "idiopathic," or congenital, hereditary, and familial hæmaturia, and he reports a family, in twelve members of which the disorder was present, namely, two sisters and two brothers and five children—four girls and one boy—of one of the sisters, and three children—two boys and one girl—of the other. He describes as characteristic of the disorder its hereditary, familial, and congenital occurrence, its persistence for many years in varying degree, with recurring attacks or paroxysmal exacerbations, and its dissociation from œdema, ascites, and the cardiovascular changes following ordinary nephritis. Except for the presence of blood, and occasionally of a few crystals of uric acid or of oxalates, the urine contains no abnormal ingredient. None of the patients was a bleeder. It was thought that calculus, new growth, tuberculosis, nephritis, and congenital syphilis could be excluded. The kidneys were not movable, palpable, or tender, and there was no definite or constant local pain. Three cases of recurrent hæmaturia occurring in one family, all in females, reported by Dr. W. H. W. Atlee (St. Bartholomew's Hospital *Journal*, December, 1901) are believed to be of the same nature. In explanation of the hæmaturia in these cases, it is suggested that there may be some inherent weakness or varicosity of the walls of the renal vessels leading to what has been called renal hæmophilia or renal epistaxis, or that the vasomotor system may be at fault (angioneurosis).

THE LOWEST FORMS OF LIFE.

Dr. Gary U. Calkins of Columbia University, according to the New York *Tribune*, during the past two years, has been pursuing experiments to determine whether it be possible to prolong life in the lowest animal forms. The paramæcium or infusorium, regarded as the lowest form of animal organism, was the subject of these investigations. The paramæcia, like other protozoa, multiply by fission, but with this species of infusoria the division is crosswise. This fission occurs, at least once a day, so long as the organism and vitality is maintained, but after a time reproduction ceases, unless two specimens fuse temporarily. Then the same process of splitting continues. It is said that Dr. Calkins has discovered a method of extending the life period of these protozoa by artificial means. With its natural sustenance, a paramæcia averages about 170 generations. Dr. Calkins has lengthened this term by no less than 330 generations. The first agent employed was beef broth, which was successful in increasing the capacity to multiply by a very considerable extent. Dr. Calkins then concluded that it was the mineral salts of the meat that exerted the revivifying effect upon the vitality of the infusoria—in fact, that the action was a chemical stimulus. These suspicions were substantiated by experiment with weak solutions of potassium phosphate. One of the most interesting results of the foregoing researches has been the demonstration that, while the chemical treatment renders more active multiplication by fission, it tends to diminish the vitality of the progeny of those who have received their stimulus from mineral salts Dr. Calkin's investigations would seem to show that, by chemical stimulus, the life of the protozoa may be extended almost indefinitely. The processes of life are now declared by certain scientific men to be ruled by chemical action, and experiments of the nature undertaken by Dr. Calkin, Professor Loeb, and others, may serve to make clear some of the obscure points of metabolism.

Dr. A. N. Richards, assistant in the department of physiological chemistry at the College of Physicians and Surgeons, has been appointed to a research fellowship in the Rockefeller Institute for his recent investigations in the field of physiological chemistry.

News of the Week.

The Surgeon-General of the Army.—The President has sent to the Senate for confirmation the nomination of Colonel William H. Forwood, Assistant Surgeon-General, U. S. A., to be Surgeon-General for a period of four years, with rank of Brigadier-General, *vice* Major-General George M. Sternberg, retired.

The Congress on Tuberculosis.—The third annual session of the American Congress of Tuberculosis and the Medico-Legal Society opened June 2 at the Hotel Majestic in this city. Besides delegates from many States and Territories, there were present representatives of Canada, Mexico, and Central and South American Republics. The United States Government was represented by officers of the army, navy, and Marine Hospital service. The honorary president, Dr. A. N. Bell of Brooklyn, first defined the purpose of the congress, which is to discuss measures of protection and resistance to tuberculosis. Then Dr. Henry D. Holton of Vermont read the presidential address. He said there are more than half a million tuberculosis patients in this country, and of this number at least 400,000 are doomed to die of the disease. Intemperance, insufficient clothing, dampness, filth, overcrowding, and improper food are the chief direct causes. Among the preventives he placed as the most important the education of the masses in better methods of living.

The first discussion was on "Preventive Legislation," and at its close a resolution was adopted declaring it to be the "duty of every government, municipality, and individual citizen to adopt organized methods for lessening the spread of a disease which is causing, directly or indirectly, probably one-fifth of the total deaths in almost every country in the world. The majority favored the establishment of county sanatoriums for the treatment of subjects in the early stages of the disease and hospitals for the segregation of incurables. Dr. Wm. Oldright of Toronto drew attention to the prominent position of female school teachers in the tuberculosis mortality lists of this country and Canada; and he proposed a resolution, which was adopted, drawing attention to the fact that the average amount of air space in schools is less than half that recommended by sanitarians, and urging upon the authorities the necessity of providing larger accommodations and better ventilation in school buildings.

The discussion of bacteriology and pathology was opened by Dr. L. L. Kinyoun of the Marine Hospital service, who expressed his belief in the identity of human and bovine tuberculosis. He did not believe in the curative power of any of the anti-tuberculosis serums, and said that disinfection was the most important factor in the prevention of the disease. Dr. H. E. Lewis and others contended that the chief bulwark against the disease was the improvement in the power of individual resistance.

The dinner was held on the evening of the second day of the session, and at this a silver loving cup was presented to Mr. Clark Bell, the secretary and treasurer of the congress and of the Medico-Legal Society. Dr. T. N. McIntosh of Thomasville, Ga., made the presentation.

At the closing session the discussion was on the "Veterinary Aspects of Tuberculosis," the opening paper being by Dr. Adami of Montreal. Before adjournment, the congress adopted a series of resolutions urging the health authorities to disseminate correct information as to the manner in which this disease is produced and the means to be employed in its prevention," calling upon the national, State and municipal governments to enact rational methods for the prevention of tuberculosis, and recommending the establishment of institutions for the care of indigent consumptives. It was further resolved that there should be State and municipal supervision of public conveyances to suppress spitting, and that appropriations should be requested for the "publication and distribution of literature as a means of education in the prevention of the spread of tuberculosis." Finally, "that all cases of tuberculosis should be reported by the attending physician to the health boards for the purpose of the disinfecting of houses occupied by consumptives."

The election of officers resulted as follows: *Honorary President*, Dr. H. D. Holton of Vermont; *President*, Dr. Daniel Lewis of New York; *First Vice-President*, Dr. J. A. Eagan of Illinois; *Second Vice-President*, Dr. Frank Paschal of Texas; *Third Vice-President*, Dr. E. J. Barrick, of Toronto; *Fourth Vice-President*, Dr. J. A. Watson of New Hampshire; *Fifth Vice-President*, Dr. Romola of Guatemala; *Secretary*, Dr. George Braun of Georgia; *Treasurer*, Dr. P. H. Bryce of Toronto.

Vaccination Charged as Assault.—The principal of a public school in Brooklyn and an inspector of the Health Department were brought to court recently on the complaint of the father of one of the pupils, charging them with assault in the third degree. The complainant alleged that his daughter, six years old, was forcibly vaccinated by the physician at the direction of the principal. The parents had been informed that all the children in the school would be vaccinated unless they could produce a physician's certificate that this operation had already been done. The father of the child in question did not produce the necessary certificate, although he claimed that he had one, and so the child was told she must be vaccinated, and to this, the accused physician and principal assert, she gave her consent. The case has not yet been tried.

Ophthalmia a Notifiable Disease.—The Board of Health has declared ophthalmia, both acute and chronic, to be a contagious disease. Under this decision, physicians will be required to report promptly to the Department of Health all cases of the disease that they may find. The Board of Education will also be asked to lend its aid toward stamping the disease out of the public schools, where it is now prevalent.

Medical Appointments at Columbia.—At a recent meeting of the trustees of Columbia University, the resignation of Dr. Abraham Jacobi from the chair of pediatrics was accepted. He was appointed professor emeritus, and Dr. L. Emmet Holt was designated to succeed him. Other faculty appointments in the College of Physicians and Surgeons were: Dr. L. E. Lefetra to be instructor in the diseases of children; Dr. A. E. Schmitt to be assistant in operative surgery; Dr. Joseph H. Bair to be assistant in anthropology; Dr. R. E. Buffington to be assistant in normal histology; Dr. Russell B. Opitz to be demonstrator in physiology.

The American Roentgen Ray Society will hold its next meeting in Chicago on December 10 and 11 of the current year, under the presidency of Dr. G. P. Girdwood of Montreal. The secretary of the society is Dr. James B. Bullitt, 205 West Broadway, Louisville, Ky., and the chairman of the committee of arrangements, Dr. Ralph R. Campbell, 414 Marquet Building, Chicago.

The Board of Health in Brooklyn.—In order to lose no time in the investigation of cases of diphtheria and smallpox which are reported at night, Dr. Raymond, Sanitary Superintendent in the Borough of Brooklyn, has decided to keep the Health

Office open all night, and to keep an inspector in the building at all times. The Health Department has established a culture oven in which diphtheria cultures will be tested. Cultures from the infected person can now be sent direct to the Brooklyn office, instead of being left at drug stores, collected in the morning by inspectors, sent to the bacteriological laboratory in Manhattan, and returned to Brooklyn.

The Late Dr. Arthur T. Muzzy.—The following was read at the meeting of the Society of the Alumni of the City (Charity) Hospital, held on Wednesday, May 21, 1902: "Dr. Arthur T. Muzzy, who was, at the time of his death, the President of the Society of the Alumni of the City (Charity) Hospital, deserves our thoughts as we are gathered at this the one hundredth meeting of our organization. Previous to his election to the presidency, Dr. Muzzy had served the society with a conscientious devotion to its welfare that was not always recognized, because, with an unfailing zeal, there was so much modesty that we did not know of his efforts. He never mentioned his own part, but praised others. Such a man is rare, especially in a great city given over to commercial pursuits with personal advancement always prominent. Our late President was a man of broad and scientific training. He expressed his opinions in a simple, direct manner, that showed him to be a well-read and experienced clinician. Not only was he a valued consultant, but he was a painstaking practitioner in the specialty to which he gave so much of his professional life. Expert in his operations, he had a knowledge of pathological processes that enabled him to carry to a successful issue many a doubtful case. He wrote little for publication, but all that he put in print will bear comparison with similar articles. Dr. Muzzy's personality was gracious and winning. Honest and true, he never expected others to be anything else than honorable. In his death this society has lost more than its presiding officer; it has lost its association with a man who not only was a scientific physician, but also a friend, one who was an upright Christian gentleman. We can bear him no better testimony than to acknowledge the benefits that accrue to all who realize the value of a high personal standing among the members of our profession." Signed: J. B. Bissell, William L. Stowell, Walter Lester Carr, Committee.

The Medical Society of the State of West Virginia held its thirty-fifth annual session in Progress Hall, at Parkersburg, on Wednesday, May 21, and the two following days. The following papers were read and discussed: "The Hygienic Treatment of Tuberculosis," by. Dr. C. F. Ulrich, Wheeling; "Pulmonary Tuberculosis, Its Treatment in the Remote and Recent Past," by Dr. J. L. Dickey, Wheeling; "Pulmonary Tuberculosis, Its Treatment at Present," by Dr. Wm. A. Caldwell, Morgantown; "An Analysis of 150 Operations for the Radical Cure of Hernia," by Dr. Frank Martin, Baltimore, Md.; "Movable Kidney," by Dr. R. J. Reed, Wheeling; "Some Features of Medical and Surgical Study in London and Berlin," by Dr. A. S. Grimm, St. Marys; "Intestinal Anastomosis," by Dr. J. R. Cook, Fairmont; "Tonsilitis," by Dr. V. T. Churchman, Charleston; "Tubercular Peritonitis," by Dr. J. Schwinn, Wheeling; "Some of the Effects of Typhoid Fever on the Nervous System," by Dr. C. C. Hersman, Pittsburg, Pa.; "Spinal Anæsthesia with Report of Cases," by Dr. O. O. Cooper, Hinton; "On the Management of Rectal Diseases," by Dr. Wm. M. Beach, Pittsburg, Pa.; "Quarantine," by Dr. T. L. Barber, Charleston; and "The History of a Bullet in the Apex of a Man's Heart for Thirty-five Years," by Dr. E. T. W. Hall, Weston. President Aschman's address was an interesting résumé of the achievements in medicine and surgery in the past century in general and in the past year in particular. In addition, it dealt in a highly practical manner with the problem of reorganization. In accordance with his recommendations, the Society has been reorganized, assuming the name of the "West Virginia State Medical Association." Dr. H. B. Stout of Parkersburg was elected President, Dr. William W. Golden of Elkins was reelected Secretary, and Dr. V. T. Churchman of Charleston was elected Treasurer. The next meeting will take place at Charleston in May, 1903.

The Famine in Russia.—It is reported that the situation of the famine-stricken peasants in many of the provinces of Russia continue to grow worse. Great numbers of the people who have not actually died of starvation have succumbed to scurvy. In 241 villages in one district 6,815 cases of this disease were recorded in one month, an increase of over 4,000 cases over the figures for the preceding month.

Army Nurses.—The War Department has issued an order prescribing the duties and status of the Army Nurse Corps. The pay and allowance of a nurse on active service is to be $40 a month when on duty in the United States and abroad. Chief nurses get $5 extra, but when they have five or more nurses under them they get $10 extra, and $25 extra when they have ten or more subordinates. The uniform of the Army Nurse Corps will consist of a waist and skirt of suitable white material, adjustable white cuffs, Bishop collar, white apron, and cap. The badge of the corps is the cross of the Medical Department, in green enamel, with gilt edge, pinned on the left side of the collar of the uniform or on a corresponding part of her dress when she is not in uniform. After appointment nurses serve for at least three months in the United States, during which period they will receive special instruction in army nursing. The appointment of an army nurse will be for three years, two of which will usually be passed in service in the island possessions of the United States.

Obituary Notes.—Col. Dallas Bache, surgeon United States Army, retired, is dead at his home in San Diego, Cal. He entered the army as assistant surgeon in 1861, and served in the field during the entire Civil War. After the war he was stationed for a time in San Francisco, and for a number of years was the chief surgeon of the Department of the Platte, with headquarters at Omaha. Later he was at Washington as assistant surgeon general. He remained on duty there until his health failed, and then went to San Diego.

Dr. Benjamin A. Church of Oneonta, N. Y., died very suddenly on June 6. He was born in 1865 at Coventry, and was graduated with honors from the Medical Department of the University of New York in 1878, being later connected with the university. He was a prominent member of the Medical Association of the State of New York.

Dr. William Armistead Nelson died in this city on June 5. He was a descendant of the Nelson family of Virginia, prominent in Revolutionary times, and was born at Fredericksburg in 1817. He studied medicine at the University of Pennsylvania, where he took his degree in 1839. He was soon appointed as assistant surgeon in the United States Navy, and accompanied Commodore Perry on his expedition to Japan. In 1854 he was appointed surgeon. He resigned shortly before the Civil War, and on the outbreak of that conflict joined the Confederate Army as surgeon, serving at Yorktown, Richmond, and in Louisiana. After the war he moved to Missouri, where he practised medicine for many years.

Progress of Medical Science.

Journal of the American Medical Association, June 7, 1902.

A Brief Summary of the Clinical, Pathological and Bacteriological Features of Cutaneous Blastomycosis (Blastomycetic Dermatitis, of Gilchrist).—F. H. Montgomery reports the results of joint observations made by J. Nevins Hyde and himself. Their views are summarized in the following propositions: Under the term "cutaneous blastomycosis" (or "blastomycetic dermatitis") have been collected a series of cases presenting a clinical picture differing from that of all other recognized dermatoses. The disorder has also a characteristic histopathology. The organisms in tissue have been in every case of the budding variety. In cultures they have appeared as budding or as mycelium-forming fungi, of which there are probably several varieties. While the disorder occurs independently of all other diseases, it has been followed in at least one instance by tuberculosis. Secondary pus infection of the lesions is common, and there is no reason apparent why secondary infection with tubercle-bacilli or other bacteria should not occur. It is possible also that the fungous disease is capable of implantation upon the lesions of other disorders. Practically all cases of the disease in which potassium iodid has been employed in large doses have improved decidedly under its administration, but only a small percentage of patients recovered entirely under that treatment alone. Cutaneous blastomycosis and protozoic dermatitis are undoubtedly closely related disorders, if not varieties of the same process. It is possible, however, that the blastomycetes and other fungi are capable of producing in man a series of disorders of different clinical types.

Notes on Aneurysm.—William Osler contributes several clinical histories illustrating certain points. Case 1 was that of a bullet wound of the right subclavian artery and vein with the formation of an arteriovenous aneurysm. Operation was not advised and the patient was in good health two years later. Cases 2 and 3 furnished illustrations of the "humming-top" murmur in thoracic aneurysm and are thus summarized: Case 2 was that of a young man. Syphilis three years before admission. Cough. Shortness of breath. Aneurysmal tumor to right of sternum. Loud continuous murmur with systolic intensification. Post mortem. Communication of a large branch of the right pulmonary artery with the aneurysmal sac. Case 3 was that of a man who had had syphilis two years before observation. Cyanosis. Shortness of breath. Great congestion of the veins of the upper-half of the body and of the arms. Gradual development of compensatory circulation in the mammary and epigastric veins. Over the manubrium and aortic regions a continuous murmur with marked systolic intensification, limited to the area about the aortic cartilage and the middle of the manubrium. Death. No autopsy. Case 4 illustrated the value of the fluoroscope in the diagnosis of obscure cases of thoracic aneurysm. The main features were cough and dyspnœa for six months, much emaciation, flatness to the left of the sternum, leading to a diagnosis of mediastinal sarcoma. Examination with fluoroscope showed a characteristic pulsating tumor, and subsequently there was slight pulsation of the thoracic wall. The sac was wired. Death resulted from hæmoptysis. Osler insists upon the value of a careful examination of the barrel chest in cases of suspected aneurysm.

Medical News, June 7, 1902.

A New Method of Treating the Morphine and Alcohol Habits.—H. A. Hare reports the treatment suggested by Lott, of using massive doses of hyoscine in the treatment of various forms of drug habit. The patients can take as much as one-quarter grain each day hypodermically, with no evil effects on any vital function. They suffer very slightly, if at all, from the immediate withdrawal of the morphine, and the desire for the drug largely or entirely disappears after a few days. The writer then reports several cases in which he has used this treatment with gratifying success. One of the patients was not only a morphine but also an alcohol-habitué. She is at present progressing toward what seems to promise a permanent cure. Hare thinks the results obtained by this method of treatment have been remarkable and justify its further use.

The Comparative Physiology of Faith Cures.—Pearce Bailey gives the following characteristics of the two selves which are present in every man: The higher is attentive, reasons, analyzes, criticizes, acts with purpose rather than from impulse; in it memory is active and accurate. The secondary self is antithetical to this; in it attention is unstable; the ideas leading to conclusions are disconnected; the conclusions which lead to action are arrived at by impulse rather than by reason; deliberation is well in the background, credulity well in the fore. The subconscious self is devoid of originality, its reaction to external stimulating essentially automatic and traveling the paths of least resistance. According to which self is in control, the character of the individual is proclaimed. From the physiological standpoint, what are commonly regarded as the instincts of animals are not instincts in the sense that they result from memory or volition on the part of the animal, but they are a series of reflexes which affect the animal's whole organism, and which are performed independently of volition or consciousness. So what the psychologist calls subconscious action, the biologist calls atropism; both terms indicate automatism unguided by intellectual control. No man is so perfected as to be free from it, but when it becomes the dominant expression of nervous activity, when a civilized human being in his automatism remains the puppet of inane suggestion, deaf to the higher callings of reason and reflection, he represents the mental state which we believe man held when the difference between him and the lower animals was narrow. He shows that in the process of brain elaboration he has been passed over. Crazes of all kinds are self-limited and self-destructive. Although they come and for a time flourish, they will as surely pass away.

The Advantages of Early Surgical Intervention in Border-Land Cases.—Roswell Park presents a most interesting paper on this subject. One of the greatest disadvantages with which the surgeon has to contend is the late hour at which many surgical cases are referred to him. Park reviews various lesions of various organs and the advantages of surgical treatment for the same. A well-founded suspicion of cancer justifies an operation for its determination and relief. As to epilepsy, the author states that not once in five times is he consulted early enough to give a fair prospect of accomplishing what might have been done earlier. Lumbar puncture has not yet come into sufficient favor. In regard to the surgical treatment of nerve-trunks, it is often sought so late, and after the patient's strength and powers of endurance are so lessened by suffering and drugs, that recuperative power is at a low ebb. As to disorders of the ductless glands, even in exophthalmic goiter, when drugs fail, either early extirpation of the thyroid or Jonnesco's operation of excision of the cervical sympathetic, has in many severe cases given better and quicker results than any other means. Asthma is often dependent upon intranasal conditions or lesions of adjoining parts. The primary treatment of cervical tuberculosis must usually begin in the oro-, or nasopharynx. As to empyema, pus allowed to remain will do more harm than can a surgeon's knife if judiciously used. In cases of pericarditis it should be emphasized that when the pericardium is distended with serous fluid it should be aspirated, and when this fluid is pus, thoracotomy should be done and the sac opened and drained by gauze or tubing. Abscess of the liver should be explored early with the aspirating needle. Success in the treatment of tumors of the liver is in proportion to the promptness with which it is instituted. The writer believes that not only a suspicion of cholelithiasis justifies an exploration of the gall-bladder, but also when a patient suffers from dyspeptic symptoms with pain and tenderness in the region of the gall-bladder, and especially with any evidence of biliary pigmentation, this region should be explored whether or not the gall-bladder can be felt from the outside. The more acute the lesion of the pancreas, the more is immediate surgical intervention indicated. In lesions of the kidneys, decapsulation is often performed. This not only relieves the tension on the organ, but also produces adhesions between the decorticated surface and the surrounding tissues, so that by the new-formed vessels new circulation is established and the function of the organ is renewed—even epithelium is regenerated. The three non-malignant diseases of the stomach, ulcer, benign obstruction, and dilatation, are all amenable to surgical intervention. As to cancer of the stomach, the writer believes that every case of progressive stomach disturbance should be operated upon or at least explored, when to the stomach symptoms themselves are added any two of the following: (1) Rapid emaciation; (2) Achlorhydria; (3) reduced proteid digestion; (4) Lactic acid; (5) Oppler-Boas bacilli; (6) Suspicion of tumor. As to the lesions of the bowels, both malignant and benign, surgical interference is often the method par excellence. Finally, the delay in surgical treatment is often due to the dread of the knife by the patient. The laity need to be educated to the point of early consent where surgical treatment is indicated

American Medicine, June 7, 1902.

Dermatitis Medicamentosa.—J. B. Shelmire believes it to be of the greatest importance in making the diagnosis of a skin disease to take into consideration the fact that there are many drugs which, taken internally, cause eruptions on the body. He reports the case of a man, aged forty years, who suffered from an unusually extensive and severe erythemia, invariably produced by the ingestion of mercury. The first experience was after the use of a mercurial inunction which he used to rid himself of crab lice. Sever dermatitis followed. The other attacks followed the internal use of calomel. One time the patient had taken it in ignorance of its nature, and learned from the physician, after the appearance of the eruption, what he had been given. The eruption was deep red, smooth and shining, an erysipelatous in appearance. There was intense burning with slight itching. The skin also felt very stiff.

A Case of Meningomyelitis Occurring During Convalescence from Typhoid Fever.—Theodore Diller reports this case. The patient was a girl of sixteen and one-half years, who had previously been in good health, till she was stricken with an attack of typhoid fever. This was about May 20. A month after the onset a large bedsore developed over the sacrum and several weeks later several smaller ones appeared in the same locality. About July 20 the fever left her and by October 1 the bedsores were all healed. On August 28 pain in the legs developed, and extended along the entire spine. Three days later the leg pains were extremely severe, the thighs were flexed upon the abdomen and the legs upon the thighs. Both legs the bladder, and bowels were completely paralyzed. The skin of the lower legs was hyperæsthetic. This condition of absolute paralysis that developed in three days lasted for two months, since which time the motor power has been slowly returning. Treatment consisted in very careful nursing, gentle turning fron one side of the bed to the other, use of air cushions, hot and cold applications, sedatives, gentle sponging, and, for some time, of the daily administration of two grams of potassium iodid. The evidence indicates that the inflammatory process confined itself pretty closely to the lower cord region, its upper boundary being about the eleventh thoracic segment. To the symptoms already enumerated must be added the presence of exaggerated knee-jerks.

New York Medical Journal, May 31, 1902.

Conservatism in Abdominal and Pelvic Surgery.—E. Ricketts call attention to the growth of abdominal surgery and to the fact that it is often overdone by younger men. He believes that the polyclinic six-weeks' courses in abdominal and pelvic surgery, the so-called "touch-courses," are not without responsibility in this direction. The opportunities for pre-operative and post-operative responsibility, as to history, duration, and those symptoms that lead up to and show when best to operate, are not equal to the importance of the occasion. Technique, with much stress laid on how to be chemical high executioner of the innumerable little beasts, is too seriously considered. The importance of the shortest possible and intelligent anæsthesias, the meeting of any or all emergencies promptly, are often of the greatest consideration. After a six or eight weeks' course too many men return home thoroughly imbued with the idea that the doing of this work is of the easiest, and so they launch into the abdomen and pelvis. Often they succeed in hysterectomies and in removing a simple ovarian cyst, but in conservatism in the surgery of the uterus and ovaries, they fail in the majority of cases. They are too slow, tedious, and uncertain operators, and inoperative ability in diagnosticating between a healthy ovary and one that demands resection after the abdomen has once been opened, they are very often rank failures. No man ought to operate on the rectum one day and do an abdominal section the next.

Colon Bacillus Infection.—J. H. Burch has seen a series of cases which he is inclined to regard as due to a mixed infection of typhoid and colon bacilli. The duration of the cases is from seven to ten days. The attack is usually ushered in by a period of malaise that continues several days, the patient becoming progressively worse, until at last he is confined to his bed. The seizure is accompanied by a gradually rising temperature that reaches its limit at the end of the third or fourth day, from which time it remains at about 102° F. in the morning, and from 103° to 104° F. in the afternoon. There is almost always a certain amount of gastrointestinal disturbance; sometimes diarrhœa, and less frequently constipation. The abdomen is at times distended, and nearly every case is accompanied by iliocæcal gurgling. The tongue is dry and often charged with a foul coating. There is sometimes a mild delirium, and almost always more or less headache. In fact, the whole clinical picture is that of typhoid fever. In every case seen there has been diminished leucocytosis. The urine in many cases contains traces of albumin and sometimes a few granular casts. Its reaction is always acid, it is often turbid, and swarms with peculiar motile organisms resembling the Eberth bacillus. Indican is present in every case, and the Ehrlich diazo-reaction has been, as a rule, well marked. The Widal-Johnson reaction has been absent in every case throughout its entire duration; but, by employing a broth culture of the bacillus found in the urine, following the technique of the Widal-Johnson reaction, agglutination was manifested in every case.

The Lancet, May 31, 1902.

A Case of Arthritis Accompanying Ophthalmia Neonatorum.—The case is reported by C. O. Hawthawne, who calls attention to the fact previously noted by Dukes, namely, that there are two varieties of arthritis associated with ophthalmia neonatorum: (1) A very acute form, with features suggesting a tendency to suppuration, and (2) a milder form, accompanied by a great deal of effusion and pain on movement, but with little or no surface redness. The patient was seen by the author at the sixth week of life. At the second week, the right shoulder joint had become swollen, and also the right wrist. These swellings had subsided in the course of a fortnight, without any very active treatment. At the sixth week, while the joints first attacked were quite normal, the left elbow-joint was much enlarged, and the swelling extended down the radial side of the forearm for a considerable distance, giving here a sensation of deep fluctuation, as though the sheaths of the muscles were involved. The skin was not reddened, and though the child objected to manipulation of the joint, he appeared otherwise to be free from pain, and his general nutrition was entirely satisfactory. It was decided to fix the limb and to continue the local treatment of the ophthalmia, and under these measures the patient made a rapid recovery, so that in from two to three weeks the elbow-joint and forearm had regained in every respect their normal characters.

Radical Cure of Inguinal Hernia.—J. O'Connor counsels the following procedure: A four-inch incision is made over the line of the inguinal canal, the sac is isolated from the cord, it is opened, and its interior is carefully inspected, and it is palpated well into the abdominal cavity. Next, an assistant draws the sac forcibly downward, and the operator, while retaining his left index finger within the sac near to the internal ring, in order to prevent intestine or omentum getting caught, transfixes and ligates with catgut, and cut away the distal portion. Before complete separation takes place a pressure forceps is applied to its proximal end, in order that a final inspection may be made before it is allowed to fly back into the abdomen, for a chase after a bleeding point in a retreating stump is not pleasant. The conjoined tendon and Gimbernat's ligament are next thoroughly differentiated from the surrounding parts, and with the left index finger introduced into the canal to act as a guide and protector of important relations four strong fishing-gut sutures are inserted by a curved hernia needle about half an inch apart, from within outward through Gimbernat's ligament and the external oblique, the ends being retained outside the aponeurosis. The free ends are threaded in rotation on a hernia needle with an opposite curve, and are carried from within outward well into and through the substance of the conjoined tendon, these ends being similarly retained outside the sheath of the tendon. A straight aneurysm needle is next made to enter the suture hole in the tendon, passed across, and made to emerge through the corresponding suture hole in the external oblique. The end of this portion of suture is attached and drawn across and out through the aperture of entry of the needle; thus, the two ends emerge from the same hole in the sheath of the tendon, and form a circular submuscular suture. When the four are thus applied—and this does not take a quarter of the time to insert that it does to describe—the assistant draws the cord downward, and the sutures are tied with sufficient force to draw the tendon backward in front of the vas to Gimbernat's ligament, care being taken in the adjustment of the lower sutures not unduly to compress the vessels of the cord. The ends of the stitches are then snipped off, when the knots retreat into the substance of the conjoined tendon, and are sealed over by a catgut suture through each aperture. The operation, which occupies usually from ten to fifteen minutes, is concluded by uniting the skin wound with a continuous blanket suture.

Society Reports.

AMERICAN MEDICAL ASSOCIATION,

Fifty-third Annual Session, Held at Saratoga Springs, N. Y., June 10, 11, 12, and 13, 1902.

GENERAL SESSION.

FIRST DAY—TUESDAY, JUNE 10.

THE meeting was called to order in Convention Hall, Saratoga Springs, at 11 A.M. by the president, Dr. John A. Wyeth of New York, and the session was opened with prayer by the Rev. T. F. Chambers.

Presentation of Flag.—Dr. H. L. E. JOHNSON of Washington, D. C., presented to the association a flag, and the board of trustees adopted it as the flag of the association. The letters "A. M. A." appear in white upon a dark blue ground.

Addresses of Welcome.—Hon. S. F. NIXON, Speaker of the New York State Assembly, delivered an address of welcome on behalf of New York State. In contrasting the position of the representatives with that of physicians, he humorously remarked that physicians never made any mistakes in diagnosis, but if the representatives of the people failed to correctly diagnose the will of their constituents they were retired to the "convalescent ward," and from this ward many of them never returned to the Legislature. Continuing, the speaker pointed out medical organization as the means by which medical education was at the present day maintained at a standard so much higher than formerly. New York State had been most persistent and earnest in its effort to maintain this high ideal. This was a just cause of pride, but it would seem that similarity of conditions throughout the various States would admit of a practically uniform standard for the whole country. This suggestion was received with hearty applause.

Senator EDGAR T. BRACKETT of Saratoga Springs welcomed the association to that place. He expressed wonder that the preceding speaker, "a successful wholesale dealer in granite and marble," should have been selected to welcome the association to the State, and he was inclined to think that the only reason he himself had been selected to welcome the association to Saratoga was that he might be buncoed by the osteopathic bill. Touching upon the advances made in medicine, the speaker said that it was a far cry from Hippocrates, the father of medicine to the time of Valentine Mott, and a comparatively short interval from that time to the year 1902, yet in the latter period more advance had been made in medicine than in the two thousand two hundred and fifty odd years embraced in the period first mentioned. It was joy, indeed, to live in the age that saw Lister and Koch and Pasteur and the later work of our own great Marion Sims. The future historian would put beside the name of Harvey "well done;" in recounting the doings of Jenner she would add "nobly done;" when noting the discovery of anæsthesia she would add the words *cum magna laude* so dear to every scholar's heart; but when she came to write of the physician of the last quarter of the nineteenth century she must say: "Many sons have done well, but thou excellest them all."

President's Address.—Dr. JOHN A. WYETH of New York delivered this address. (See page 921.)

Oration in Surgery.—The evening session was devoted to the delivery of this oration by Dr. H. M. SHERMAN. (See page 934.)

SECTION ON PRACTICE.

FIRST DAY—TUESDAY, JUNE 10.

Address of the Chairman.—Dr. FRANK A. JONES of Memphis, Tenn., considered the standard of education necessary for a student to begin the study of medicine. French, German, Greek, Latin, and mathematics he considered accomplishments, and it stood the student well in hand to know them, but he did not believe that without them he was incapacitated to study medicine. He pleaded for a better knowledge of English. It was a source of gratification and pride to the medical profession of this country that there were some well-endowed medical institutions, and he predicted that the time was at hand when public-spirited, rich men of affairs would recognize the importance of endowed medical institutions and donate funds.

If a student possesses a high school education, if he knows English grammer, if he knows rhetoric, he thought he should be qualified to study medicine in any English speaking school. If he had a fair knowledge of languages, so much the better for him, although it was not an absolute essential. It was his opinion that if the student had an English qualification, a four years' course of eight months each should be all that could be asked for.

National Board of Examiners.—He requested the advisability of forming such a board on account of the expense attached to going to and from the place of meeting. He believed that each State should have, as most now have, an examining board composed of representative men, and if a student was going to that State to practice, passes a satisfactory examination before that board, then he should be entitled to practice. He believed that we should encourage reciprocity between State boards.

Amœbic Dysentery in Michigan.—Dr. GEORGE DOCK of Ann Arbor, Mich., read this paper. From the facts detailed there could be no doubt the case reported was one of amœbic dysentery, the first he had ever seen or heard of in Michigan. It recalled to him many interesting facts in the history of dysentery and of the amœbæ found in the stools. Although dysentery was early looked upon as a disease of the tropics, largely owing to Kartulis's epoch-making observations and the striking relation of amœbæ to "tropical" liver abscesses, it could not be forgotten that the parasites were first recognized in St. Petersburg, and in chronic dysentery. He claimed that the amœba coli was probably a parasite having a world-wide distribution. The discovery of the amœba in different parts of the country and the results of the work of Councilman tended to fix its geographical and anatomic relations, as well as the clinical features of the disease. We must still learn the exact relation of the amœba coli to dysentery and intestinal ulceration, not to mention the remoter complications in the liver and thoracic organs. In view of the fact that Gasser produced colitis in cats by injections of garden earth, Sorgo, with non-amœbic dysenteric dejections, and also the fact that the previous observers have usually produced lesions not identical with those in human amœbic enteritis, we must await further observations. The occurrence of amœbæ in the stools of persons apparently well, or in those of patients with cholera or other diseases, or in the fæces of lower animals, cannot be considered proof that the amœbæ found in dysentery have no pathogenic relation. From certain observations he was of the opinion that it could be assumed that amœbæ are not present in about one-half of all normal intestines, in all parts of the world. In the literature upon this subject there were many contradictory observations, and the subject had been still further confused by premature efforts at nomenclature.

Dr. MCCRAE of Baltimore said that several years ago, he had seen one case with Dr. Osler occurring in a man who had never been out of Maryland, which contradicted the assertion made that all cases came from the South. The disease was not infrequent in the State of Maryland. A point of special interest was the increasing number of cases occurring in children. A majority of such cases followed the ingestion of gutter water from the streets.

Dr. JAMES J. WALSH of New York has seen two such cases occuring in New York; in one of these the patient had never been outside the State.

Dr. E. LIBMAN of New York referred to the occurrence of a large number of cases of liver abscess seen at Mt. Sinai Hospital.

Dr. George Dock, in closing, said that he forgot to state that he did not include in his paper the possibility of infection from soldiers returning from Cuba or the Philippines.

The Origin of the Vesicular Respiratory Sound.—Dr. C. F. Hoover of Cleveland read this paper. The origin of vesicular breathing was attributed by Lænnec to friction of the inspired air in the bronchioles and its entrance to the infundibula from the bronchioles. This explanation was sanctioned by Skoda and others, and remained unquestioned until Baas attempted to explain upon purely accoustic grounds the impossibility of any audible sound originating in tubes the size of the bronchioles from the passage of a current of air with the slow velocity which must attend the entrance of inspired air in the vesicles of the lungs. Penzoldt, later, offered experimental evidence to sustain the logic of Baas. His experiment consisted in inflating a calf's lung and placing it over the trachea of a man, who was instructed to breath in the ordinary manner; if a stethoscope be placed on the inflated lung the observer will perceive the tracheal breathing transformed to the vesicular type of respiration. This is accounted for by the refraction and partial reflection of sound waves, which must occur during their transmission through such heterogeneous media as are presented in the inflated lung. If a more homogeneous medium be used, such as a calf's liver, the tracheal breathing retains its so-called bronchial character. Sahli tried the experiment as described by Penzoldt, but found that the respiratory murmur transmitted through the inflated lung retained its bronchial character. The only modification, according to Sahli, is a diminution in the intensity of the respiratory sound. His own observation confirmed those made by Sahli. In repeating this experiment it seemed to him that only a vigorous use of the imagination could transform the audible sound into a vesicular murmur. Vesicular breathing and bronchial breathing have several differences which will not admit of the transition of the former into the latter on the accoustic grounds cited by Baas. The term sound and murmur are differentiating terms, which are descriptive of the two phenomena. Bronchial respiration gives a clearly definite and simple sound, which can be assigned to a certain pitch. Vesicular respiration gives a confused mingling of sounds, which suggest a multiplicity of points of origin. The pitch is much lower and the respiratory sound is of shorter duration than in bronchial breathing. However remote and faint bronchial breathing may be the long duration of the expiratory sound remains the same, whereas in vesicular breathing the expiratory sound is relatively short, whatever may be its intensity.

The Causal Relation of Blood Poverty to Gastric Ulcer, with Report of an Illustrative Case with Atypical Findings.—Dr. Robert N. Wilson of Philadelphia read this paper. With regard to the causation of peptic ulcer of the stomach, he concluded (1) That in many, perhaps in most cases, a high grade of anæmia precedes the appearance of the peptic ulcer, and that this anæmia usually assumes the chlorotic form; (2) That, with few exceptions, gastric ulcer is attended by the symptoms of marked anæmia. In certain cases in which the blood picture fails to show a reduction in the hæmoglobin percentage and in the number of red cells the fact seems to be due to concentration of the blood dependent upon anæmic causes; (3) That general anæmia means anæmia also of the pylorus, and consequent inanition of its mucous membrane; (4) That the venous outlet from the pylorus is one that in anæmic subjects would predispose still further to an unhealthy condition of the muscular and membranous coats of the pyloric wall; (5) That hyperacidity is usually present in chlorosis and often in other forms of anæmia, and that when present in any condition it is an influence predisposing to gastric ulcer, when associated with an anæmic gastric wall; (6) That hyperacidity is not essential to self-digestion of the stomach wall, provided that wall lack proper nourishment and stimulation from a healthy or sufficient blood supply; (7) That any form of hemorrhage, menstrual, operative, or anæmic may either predispose to, or accentuate, an already present anæmic condition of the gastric wall, and that such hemorrhages are *de facto* often followed by gastric ulcer; (8) That the foregoing facts, in association with the general one that gastric ulcers are seen almost invariably in anæmic subjects, warrant the conclusion that blood poverty is a leading and the usual predisposing cause of peptic ulcer.

Dr. Fenton B. Turck of Chicago called attention to observations made showing that one of the chief factors in the causation of gastric ulcer was lack of motility. He also referred to a report in which it was shown that ulcers appeared in the jejunum after a gastric enterostomy; here there was a lack of motility, together with some disturbance of the splanchnics and, especially, the liver circulation resulting in a peptic ulcer of the jejunum. In his own observations, carried out one year ago, confining guinea-pigs and rabbits in a cage of small dimensions, kept constantly darkened, of the few that lived some showed the chlorotic type of blood, and in some of these there appeared peptic ulcer. His own opinion, from a purely clinical standpoint, seemed to show the influence of two factors, the disturbance of the circulation and the lack of gastric tone, or motility, a condition sometimes called myasthenia.

Dr. James J. Walsh of New York said it was a well-recognized fact that an anæmic condition was the basis of gastric ulcer always. He referred to the traumatic causation occurring, as it does, in those using vibrating machines, such as knitting machines, typewriters, etc.

Dr. H. B. Favel of Chicago referred to the active determining factor in cases of gastric ulcer, the lack of hæmoglobin; he considered this the active determining cause, and wished to emphasize it on account of its importance in the subject of therapeutics.

Dr. Elmer Lee of New York said that such a condition could not take place in a strong, healthy being; to have a perforation of a human stomach there must be some lowering of the vitality, such as an under-nutrition.

On the Association of Graves's Disease and Glycosuria.—Dr. Heinrich Stern of New York said the association of glycosuria with Graves' disease may occur: (1) As alimentary glycosuria e saccharo; (2) As spontaneous transitory glycosuria; (3) As diabetic glycosuria. Under the ten cures of Graves's disease, which he had seen within two years, alimentary glycosuria could be induced in one instance. Transitory glycosuria, associated with morbus Gravesii, he had seen in one case, a negress, forty-one years of age, who soon died after this association had arrived. He had also seen a case of Graves' disease associated with true diabetes mellitus. He said there were altogether twenty-four cases reported in which the two affections have occurred at one and the same time. This case was the only one as yet described by an American observer. He said the association may occur in one of the following ways: (1) Diabetes antedates Graves's disease; (2) Both affections are produced contemporaneously; (3) Diabetes ensues after Graves's disease is fully established. When both affections are produced at the same time, or when Graves's disease is the original and diabetes the secondary affection, there must be an interdependence. This interdependence is shown by the comparative frequency of alimentary glycosuria e saccharo in hyperthyroidism; it is also demonstrated after thyroid medication, when it occurs occasionally. It is not due to hyperthyroidism as such, but to a ferment not occurring in the thyroid secretion.

Dr. E. F. Wells of Chicago said that when he considered the frequency with which Graves's disease is encountered, and the frequency with which diabetes is encountered, it was to him remarkable that only twenty-four cases should be found in the literature in which they were associated. It was also strange when we consider that the two affections, in many ways, were so nearly related. For a number of years, in exophthalmic goiter, he had derived much benefit from the use of cocaine in fairly large doses; the beneficial use of this drug, of course, was well known in diabetes. He used the drug in doses of from one-half to two grains in the twenty-four hours.

Dr. JONES of Buffalo said he had recently, in his private practice, an obese man, of middle age, who presented the ordinary symptoms of lithæmia, with urine of high specific gravity, with a sediment full of uric acid, pulse of low pressure, small and weak, a feeling of weariness, pain in the back, etc. His urine also contained a large amount of sugar, except when he was on an absolute diet. The slightest departure from an albuminous diet was followed by the presence of from thirty-six to forty-seven grams of sugar in twenty-four hours. The patient, when given ten grains of thyroid extract in a day, had an increase in the amount of sugar.

SECTION ON SURGERY.

FIRST DAY, JUNE 10.

Chairman's Address: Surgery of Tuberculous Cavities of the Lungs.—Dr. DEFOREST WILLARD of Philadelphia presented this paper. The great trouble, he said, with all such operations would be to obtain the patients' consent to the operation. Though he had operated numberless times on animals, he had never had a human case. The results had not been very satisfactory and the operation was a very difficult one to perform, as it stopped free respiration, the lungs collapsing in the maority of the cases. It was necessary to have the lung adherent to the parietal wall of the thorax in order to prevent collapse. Those cavities in the posterior portion of the middle lobe are usually streptococcic in origin, and have given best results after operation. Successful cases had been reported by many. Allison and Ferguson had reported thirty-seven cases. In regard to the various operations there were mentioned: (1) Compression of the lung by nitrogen or other harmless gases; (2) Resection of the rib; (3) Cauterization of the surface of the lung and lung substance; (4) Injection of various materials into the cavities; (5) Incision and drainage—pneumonmotoy; (6) Pneumonectomy. The last two had given a certain percentage of beneficial results, and cures in some cases. Cough was lessened and expectoration diminished. An important step was to locate the cavity with the *x*-ray. After the pus had been evacuated, the cavity should be mopped out and then zinc chloride applied in small amount. Chloroform should be used in small quantities, as there was little or no pain after the integument had been cut through. Two inches of the rib should be taken out, care being taken not to injure the pleura. Pneumonotomy gave Puffier one cure, which is now four years past to the time of operation. In conclusion, Dr. WILLARD said that pneumonotomy was both feasible and helpful in early cases of tuberculosis; but it was most difficult to get this sort of a patient to submit to an operation; also that no cures had been reported in those cases in which both streptococci and the bacillus tuberculosis were present. Incision and drainage, with pneumonotomy, gave beneficial results. Pneumothorax was a possible and serious complication, hence the operation should not be done unless one had at hand a Fell-O'Dwyer or Matas instrument ready to do artificial respiration. An efficient means to procure adhesions must always be employed in doing the operation.

The Surgical Treatment of Pulmonary Abscess following Lobar Pneumonia.—Dr. FLOYD W. MCRAE of Atlanta Ga., said that his paper had been burned in the fire which took place last night and begged that he might be permitted to present his subject extemporaneously. The diagnosis of these abscesses seemed to give a great deal of trouble both to the general practitioner and the surgeon. It would be found that a short while after the pneumonia had disappeared the patient started to cough, got up a temperature and other febrile symptoms, all of which would suddenly disappear after the patient had coughed up the pus in the cavity. The physical signs were large moist râles, with dulness, alternating with tympany. There are metallic sounds both on auscultation and percussion. Bacteriological examination of the sputum is most important. The pus does not often show the tubercle bacillus. The pneumococcus is the most important organism in the diagnosis. The first case reported showed complete cure after a period of forty days following the operation. The second case had existed six years, with periodical attacks of coughing up large quantities of pus. Pneumonotomy was done on the lower left lobe, concretions were found in the walls of the cavity and these were curetted away. The cavity was packed with gauze and drainage tubes put in. The operation had been performed five months ago and the drainage tubes were still in place, though the patient was almost entirely free from disagreeable symptoms. The mortality is due to the fact that most of the patients are in a low state of vitality, and hence cannot resist the shock of the operation. In performing the operation, the ribs at the lowermost point of the abscess should be removed as drainage was thus much better. The mortality in the cases on record was about 20-25 per cent., but this would be materially reduced by an earlier diagnosis of the condition.

A Contribution to the Surgery of the Lung as Based upon Original Observations.—Dr. HORACE J. WHITACRE of Cincinnati presented this paper, which was based upon 978 autopsies which had been performed on tuberculous cases. These showed that the pleural cavity can be opened without reference to adhesions, as in many instances the lungs showed tuberculous involvement without adhesion in the neighborhood of the lesion. Excision of tuberculous material in any part of the body must be thoroughly performed, if one hoped to cure the condition. The autopsies showed most conclusively that in the apices alone was the disease ever circumscribed, and only in these cases could one hope for a successful outcome by operations. When the circumscribed areas existed, it was often impossible to make out the condition, hence operation for this condition was impossible. If such a cavity should exist in the apex, drainage would not cause a contraction of the cavity, but from the anatomical relations the portions of the lung would be drawn toward the chest wall. In none of the essayist's cases was the cavity the seat of the infection. The majority of patients with cavities did not have a temperature or cough of any annoyance. It was not possible to say when a cavity was healed. Most of the patients with cavities had died with miliary tuberculous. Tubercle bacilli in the sputum should be considered a contraindication for operation. Nitrogen compression gave the most promise of all the methods suggested in these cases. Only 4 per cent. of the autopsies showed a condition which would be considered as typical for operation.

The discussion of these two papers followed.

Dr. O. C. SMITH of Hartford, had operated upon three cases of pulmonary abscess, one recovered. In this case the patient had had a buccal abscess which produced the lung abscess. This speaker thought the operation might prove a "life saver."

Dr. MAYO of Rochester said that the first requisite was sufficient room in which to operate, and the second was to secure adhesions by tying the lung down by suturing it to the skin with a wet piece of gauze laid between the two layers of the pleura. Often bands running across the cavity could be felt by the finger introduced into the cavity. These should not be cut unless one had a forceps on each end, for they were the remains of bronchi and contained, in the majority of instances, bloodvessels.

Dr. GIBBON of Scranton said that sudden death did not occur as frequently as reported, as in the coal mines enormous injuries to the chest wall occurred, with most favorable results.

Dr. ALLEN of Cleveland thought it best to turn the patient on the side on which the cavity was to be drained, as in this way the contents would be less liable to get into the pleural cavity.

Dr. OLIVER of Cincinnati advised surgical intervention in certain of the cases, as many patients might be materially helped.

Dr. McRAE, in closing the discussion, insisted upon the importance of adhesions being formed before the incision was made.

Dr. Whitacre said that the majority of the cases of empyema were the result of abscess of the pleura, which had ruptured into the pleural cavity. To operate hoping to find adhesions was not justifiable, as he had shown in the study of the cadaver.

Report of a Case of Encysted Dropsy of the Peritoneum, Tuberculous in Character, with Hernia of a Portion of the Cyst; Operation; Recovery; Light and Air as a Curative Agent in Tuberculous Peritonitis.—Dr. MILES F. PORTER of Fort Wayne, Ind., said that all forms of tuberculosis of the peritoneal cavity will heal and get well on simple medical treatment alone. Cœliotomy brought about cure by no single factor alone, but all the theoretical factors put forward by many writers and authorities played a part. Light and air, trauma, *x*-ray, and the actinic rays were all useful, but literature showed that light and air gave the best results. Ascitic forms are the most favorable for operation. The inoculation of the peritoneum with putrefactive bacteria is too dangerous an operation to be considered seriously. Drainage should not be used unless there be present a mixed infection.

The case reported was one with a large tumor above the symphysis pubis, which look at first like a hernia with the bladder included. After the skin and fasciæ were cut, a solution of potassium permanganate was introduced into the bladder, and then a hypodermic needle was introduced into the sac to draw off some of the fluid. It was found to be clear. The excision of the sac showed the tumor to be cystic and tuberculous in origin.

Dr. RANSOHOFF of Cincinnati, in opening the discussion, remarked that the time was not distant when the diagnosis by means of the *x*-ray would make many surgical operations unnecessary. The most successful operative cases were those in which tuberculosis of the peritoneum was suspected before the operation. The less these cases were interfered with the better would be the results.

Dr. HALSTEAD of Chicago has had eight of these cases and not one has resulted in recovery. Cure is produced by the trauma to the parts. The intestines must be wiped dry before the abdomen is closed. In chronic cases where there were several cavities, each one should be drained for a time. The old idea that the disease is secondary to tubal tuberculosis is wrong, as the latest statistics show but 1 per cent to be secondary to tubal disease.

Dr. ROBERT F. WEIR of New York said that it must be admitted that it was not known in many instances how the cavity is infected by the disease, but probably it is by the tubes or the intestinal tracts. The treatment must depend upon whether the fluid is general or is encysted. Probably the cure was induced by the reaction on the circulation in the parts due to the operation of opening the peritoneal cavity.

Dr. OCHSNER of Chicago concluded that 50 per cent. of the ascitic cases which are acute get well without surgical intervention, hence they are non-surgical. The acute cases which do not get well with medical treatment are not benefited by operation. Surgical treatment is absolutely indicated where acute cases have been left until there are formed adhesions and pockets. There are cases where the whole pelvic contents are matted together and simple drainage will produce cure.

Dr. ERNEST LA PLACE of Philadelphia held that tuberculous peritonitis was of two varieties: (1) When the tubercle bacillus alone was present, and (2) When there was a mixed infection. The first class requires but mild irritation to produce a cure.

Dr. TINKER of Baltimore said that the congestion resulting from the operation brought on the cure.

Dr. Porter, in closing, said that every means should be employed in each case, as what might fail to cure one case would possibly heal another. It was certain that no variety of tuberculosis could be cured by the formation of adhesions.

Low Lateral Pharyngotomy for Approach to the Lower Portion of the Pharynx, Upper Portion of the Œsophagus and Posterior Surface of the Larynx, with an Illustrative Case.—Dr. JOSEPH D. BRYANT of New York presented this paper, prefacing it with the minutiæ of the surgical anatomy of the region, and described the technique by which the lower portion of the pharynx was reached to remove a fibrosarcoma in the larynx. The tumor was five and a half inches from the teeth and fixed. It was just possible to touch it by introducing the finger into the mouth of the patient. Since the operation, the right vocal cord has been paralyzed, though the right recurrent laryngeal nerve was not injured during the operation. There had been five previous cases in which this operation had been performed, but in none had it been done for the removal of a tumor. This was the first recorded tumor excision by this route.

Dr. ALLEN of Cincinnati added another case to the list recorded by Dr. BRYANT, but the patient died ten days after the operation from pneumonia.

Dr. LUTZ of St. Louis advised the use of local anæsthesia in all such cases, as there was less liability of dysphagia and dyspnœa afterward.

Dr. R. H. M. DAWBARN of New York thought it inadvisable to sew up these cases after the operation, and that a great deal of the ultimate success depended upon the after-treatment. Hot oil, rubbed into the skin four times in twenty-four hours, with milk peptonized to bitterness given per rectum, would give an efficient means of supplying food until the wound was entirely healed.

Dr. Bryant remarked, in closing the discussion, that he did not consider the route taken very dangerous, as some of the gentlemen had remarked. The tumor, by this means, could be easily removed without opening the larynx, as it was very readily enucleated by the finger hooked about it. The greater cornua must be held away from the field of operation with a tenaculum, and, at the same time, drawn forward.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

FIRST DAY, TUESDAY, JUNE 10.

Chairman's Address.—Dr. J. H. CARSTENS of Detroit read a paper on the future of women, under the extraordinary conditions of modern life. He dilated on the strain which menstruation imposed on school girls, and expressed the belief that the duties of the obstetrician should include instruction of the mother in the care of her daughter. A period of rest should be imposed during the menses, and therefore he believed coeducation had its disadvantages, the male student being able to continue while his sister was forced to rest. He emphasized the many nervous ills arising from neglect of such rest and the consequent poor physical and mental stamina of the offspring. Attention was called to the large number of papers on what might be termed the mechanics of obstetrics and gynecology, and the exceedingly small number of physiological papers on obstetrics and the relations of the growing girl to her work in life. That they should be instructed as to the best line of work that would suit the individual case, *e.g.* music, typewriting, sewing, or mental work, such as the work of the school teacher, physician or lawyer. He deplored the suggestions to the growing girl as to her pelvic organs; the unnatural anxiety of her mother and friends kept up a constant train of thought that would in the end bear fruit and lead her to seek aid when none was needed. He desired to warn the members of dietetic derangements. The physician could, in these cases, do an immense amount of good by looking ahead and guiding the future race.

The Permanent and Harmless Results that Should Constitute the Normal Minimum Requirement of Surgical Treatment of Complicated but Aseptic Retroversion of the Uterus in Fruitful Women, and by What Methods They Are Best Obtained.—Dr. A. Goldspohn of Chicago read this paper. He condemned all other operations, such as ventrofixation, vaginofixation, and ventrosuspension as of no practical value in women who had a reasonable capacity for conception. He desired to note that retroversion does not cause death or interfere with the sexual pleasures. He objected to major operations, believing the simple operation best—one that will produce a permanent result, not interfering with conception and not followed by return after child-birth. He maintained that ideal results were obtained without redisplacement after pregnancy. He considered unjustifiable all median, ventral, and vaginal sections, as they strengthen the strongest portions and leave the distal weak ends to bear the strain. He believed the suspension methods the best of these, but no one could tell how soon the ligaments would stretch, as during pregnancy they do not grow, and do not retract or undergo involution afterward. The shortening of the round ligament was best done through the inguinal canal from without. The round ligament grows during pregnancy and undergoes subinvolution in connection with the uterus. The shortening is done at the weakest portion, leaving the stronger at its uterine attachment. The objection had been made that hernia would result, but this could not occur if the wound was properly closed. He also stated that the adhesions which may be present could be readily reached with the finger through the internal abdominal rings, liberated, and repairs made to the adnexæ. The uterus was brought nearer to the proper position; the operation did not disturb or interfere with the functions of other organs, it was without mortality, and had a lower rate of return after pregnancy, there being practically no return of retroversion.

Surgical Treatment of the Uterosacral Ligaments through the Vagina in Retroversion of the Uterus.—Dr. J. Wesley Bouvée of Washington, D. C., spoke of the useless treatment in vogue for retroversion, the pessary, tampon, curette and position treatment. While many were benefited, the ultimate results were not satisfactory. He did not desire to condemn this treatment where the symptoms were minor, yet believed the conditions continued, and with the cessation of treatment the greater the necessity for radical treatment. The reader gave a description of the uses of the various ligaments in uterine support; how the uterosacral, uterovesical, broad and round ligaments each had a share in maintaining the uterus in proper position. No operation should be condemned, yet the shortenings by vaginal methods was in the weakest portion and was anatomically wrong. He suggested a more careful examination to determine the non-existence of some causes other than weak ligaments. The round ligaments hold the uterus forward and if the shortening has been too much there will occur during pregnancy a pressure upon the bladder. The operation which he desired to endorse, in relaxed condition of the posterior vaginal wall and a short anterior vaginal wall, was opening through the posterior wall on one side, bringing down the uterosacral ligaments and tying them; then the other side treated in the same way. All adhesions were liberated posterior to the uterus, and the wound was closed. The danger of opening into the peritoneal cavity was not great and could be avoided. He claimed no better results were secured from the other operations, especially the operation of shortening the round ligament. The number of recurrences, both with and without pregnancy, were small. All adhesions must be removed, but he did not consider this a dangerous operation.

Dr. Reese of Chicago, in opening the discussion, spoke of the Alexander method as the best known for retaining a retroflexed uterus in position. He maintained that, as a matter of fact, no one knew how the uterus was kept in place, yet this did not prevent the use of the ligaments that were known to bear a relation of support or suspension to the uterus, and these could be used in keeping the body in position. He said the results in shortening lateral ligaments were not as satisfactory, and care must be exercised to prevent openings into the peritoneum.

Dr. Goffe of New York believed the round ligaments to be the true support. The uterus was a suspended organ, and it was supported like other suspended organs in other parts of the body. The uterus maintained its position by the uterosacral and vesical, the broad and the round ligaments. He did not consider the ventral fixation of value, there the tissue is weak and stretches during pregnancy. The round ligaments grow and involute after parturition. He considered the round ligament the most useful of the many. They not only support, but they hold the uterus from the bladder and the abdominal wall during pregnancy. The uterosacral ligament has many points in its favor, to suspend the uterus and reduce version. To compare the ligaments, he believed both were important and were the physiological ones to hold the uterus in position.

Dr. A. Palmer Dudley of New York spoke of retroversion as being the direct cause of pelvic infection, of extra-uterine pregnancy, and of pus in the Fallopian tubes. He also believed ventrofixation to be unsurgical, but ventrosuspension was safe and practical, and had produced results which were as good as those following the Alexander method. He compared the diaphragm as a reduplication with the floor of the pelvis, there being a fibro-elastic band, each maintaining a definite supporting relation to the uterus. He believed there were more retroflexions than retroversions. He objected to the buried suture, there being great danger of penetrating the peritonium. He endorsed the open method and used the peritoneum as one item of support. He endorsed ventrosuspension, Alexander's method being of use only when there are no adhesions.

Dr. Goelet of New York desired to emphasize the importance of doing the operation properly. He endorsed the ventral suspension and also the shortening of the round ligament. He said the adhesion when broken up reforms and causes failure by stretching the round ligament.

Dr. Walther thought both methods are limited. He thought better results are obtained by opening the abdominal cavity and meeting the pathological conditions as presented, removes adhesion and then operate according to the best judgment.

Dr. Harrison of New York remarked when the uterus is fixed there is a pathological condition that should not be forgotten and conditions met.

Dr. Cohen of Buffalo desired to mention the neglect of after treatment of pregnancy as one of the factors causing retroversion.

Dr. Carstens of Detroit desired to point out the relaxing condition that takes place in all the organs and a pushing down into the pelvic cavity.

Dr. Goldspohn, in closing, claimed the operation was not Alexander's operation. He said it was easy to break up the adhesions with the finger. He claimed this operation was far ahead of any other operation in clinical results and he desires the proof in detail cases.

Dr. Bovée, in closing, said he opened the peritoneum if necessary, the intestinal loop need not be caught if care is taken. The ligaments are brought to view and can be felt before cutting. Labor following ventrosuspension operation gives as favorable results as after any other method. He believed if the cervix was in the hollow of the sacrum there would be no retroversion.

Electrothermic Hæmostasis.—Dr. A. J. Downes of Philadelphia in this paper referred to a previous one on this subject. He said this method holds special claims for uterine cancer, salpingitis, and extrauterine gestation operations. There were less danger of infection, an avoidance of adhesions, and no raw surfaces. In cancer of the uterus the operation has a curative effect, destroying the germs and preventing infection. He said it could be used successfully and safely in place of the ligature.

Rectovaginal Fistula.—Dr. A. Palmer Dudley of New York described in this paper an operation for rectovaginal fistula in which the mucous membrane of the rectum was loosened up above the fistulous opening, was then brought down and cut off, the fistulous openings in the vagina were repaired, and the mucous membrane of the rectum brought down and attached. The reader considered this method was the best for this trouble, as it was followed by better results than any other method.

Second Day, Wednesday, June 11.

GENERAL SESSION.

Orationon Medicine, by **Frank Billings** of Chicago (See page 941).

SECTION ON SURGERY.

Further Experiences with a Modified Method for the Cure of Relapsing Talipes Equinovarus.—Dr. A. F. Jonas, Omaha, Neb., read this paper. He said that it was easy to correct this deformity, but it was very difficult to keep it in good position after the operation. Relapse was so liable that the operator would often get discouraged. In chronic cases the plantar surface pointed in and backward. It was a great problem to bring about a permanent cure, for the disease occurred among the poorer classes most often, who could ill afford to buy the expensive apparatus necessary to keep up the results of operation. The main indications in doing the operation are to elongate the soft part on the inside of the foot and to replace the bones into a normal position. Over-correction of the deformity did not always produce a cure, as the resulting contraction of the scar tissue often was greater than could be anticipated. The Phelps operation was a good one, but the resulting open space was often hard to heal; so he advised the making of a triangular-shaped flap, similar to the one used in the Dupuytsen's contraction in the hand. He would not enter the astragalo-scaphoid joint, but cut off the neck of the bone without entering the joint. He also advised the cutting of the tendo achilis. It was his habit to employ the triangular flap even in acute cases. In conclusion it was advised that the open operation always be employed to reduce the talipes equinovarus; (2) To avoid cutting the astragalo-scaphoid ligament; (3) that the neck of the astragalus must be divided with the osteotome; (4) That the internal lateral ligament must be divided in the rotation outward; (5) To prevent relapse he divided the soft parts with the bone.

Prevention of Deformities.—Dr. W. R. Townsend of New York City said that the prevention of deformities should be the aim of every medical man, since more than 50 per cent. of the deformities resulting from anterior poliomyelitis could be prevented if taken in time. The original lesion was not a deformity but simply a weakness of the muscle. Too much time was spent playing with electricity and not enough preventing a resulting deformity, and gravity entered in as a factor in the deformity. Talipes equinovarus was classified by him as (1) Simple, acquired; (2) Paralytic; (3) Traumatic, such as followed a fracture. Of 7,100 cases seen by the writer over one-half were congenital manipulation. Massage and proper sorts of splints prevented deformities in the majority of instances. In chronic joint disease the treatment should always be to prevent a future deformity as well as to cure the disease. After operation on muscles and bones, splints must be worn for a long time. In synovitis and rheumatic joints the possibility of a resulting deformity must always be borne in mind by the general practitioner. Toe-drop after fractures and neuritis can be prevented if the foot be kept at right angles to the leg. Plaster of paris splinting was the best method of preventing deformities; contractures after typhod fever were avoided if the doctor or nurse made daily tractions on the patient's legs.

Dr. H. L. Taylor of New York City thought it wrong to postpone treatment in the hope that the patient would outgrow deformities. The deformities following Pott's fractures and those above the elbow were prevented by treatment.

Dr. H. A. Sherman of San Francisco abandoned Phelp's method years ago and since has used brisement and subcutaneous cutting of the soft parts and the bones. Relapses were due to faults in the deeper structures and not in the integument.

Dr. Steele of St. Louis thought that very few cases of club foot require interference with the bone; they can be cured by subcutaneous division of the muscles and ligaments.

Dr. Ruth of Iowa had long since given up the V-shaped flap; he thought that sectioning of the bones was not necessary before the fourth year. The removal of the astragalus had cured some of his marked cases.

Gunshot Wounds of Cavities.—Dr. W. L. Rodman of Philadelphia divided wounds of the thorax into penetrating and non-penetrating. Penetrating wounds usually involved the lungs. Hence he did not consider those of the heart which were too rare to be taken into account. The diagnosis was made on severe shock, local and general emphysema and hæmoptosis. Hemorrhage usually was due to the severing of the intercostal artery. The diagnosis should never be made with the probe, which almost always produced empyema. If these wounds did not kill within twelve hours the patients got well unless infection happened. He treated the cases by strapping and the administration of opium internally. Lodged balls should be let alone as they did no harm. Abdominal wounds were divided into (1) Penetrating and (2) Perforating. These latter entered either the solid organs or a hollow viscus; 3 per cent. of the penetrating wounds did no harm to the organs, according to statistics. The speaker thought this too low; wounds of the upper portion of the abdomen are less liable to penetrate the organs, hence the prognosis in such accidents is better than that of wounds below the umbilicus. Antero-posterior wounds were less serious than lateral wounds, which, in turn, were not so serious as those from flank to flank. The prognosis of gunshot wounds of the abdomen was always grave, and they should always be operated upon. Cases operated upon in the first four hours gave a mortality of 15 per cent. Hence, the advantage of early operation, as there was little liability tofecal extravasation. The first thing that took place after the bullet entered the gut was a contraction of the circular muscle fibers, then paralysis followed by an ectropion of the mucous membrane of the gut, preventing an escape of the fæces. Even though best results were obtained in early cases, delayed operations should be done. In treating these cases the wounds were first covered over with gauze, to prevent the escape of fæces from the gut. Intravenous injection was also done. In civil practice, because of the large bullets and slow velocity, septic material was always taken in, hence drainage must be employed.

In the lesser peritoneal cavity posterior drainage was absolutely necessary. It was not necessary to take out the ball, as a ball which has ceased to move is harmless.

Dr. McGraw of Detroit thought that a ball never ran around the abdominal wall, but contraction of the abdominal muscles were taking place at the time of the injury, and these shoved the intestines to one side and the bullet passed straight through the abdomen without touching the hollow organs. The empty intestine gave a good prognosis. It was sometimes best not to wait for perfect asepsis in operations, for too much valuable time was lost.

Dr. Grant of Denver said that Army Surgeons were averse to an early operation on the field of battle. They advised absolute rest and withheld all fluid.

Dr. J. C. Oliver of Cincinnati affirmed that if thoracic cases do not die in twelve hours their chances were excellent. The principal of rest was necessary in these cases.

In abdominal cases a certain percentage were primarily fatal, regardless of the time of operation or treatment; 5 per cent. of the cases showed gross fecal extravasation. More cases of gunshot wounds of the stomach got well without operation than with it. Vomiting of blood did not always indicate wound of the stomach wall. Shock was not ordinarily a marked feature. Drainage was always along the track of the bullet.

Dr. J. B. Roberts of Philadelphia said that venesection should be done on the outset of pneumonia following gunshot wounds of the lungs.

Dr. R. H. Gibbons of Scranton, Pa., insisted upon the importance of the catheter in the diagnosis of injury to the bladder and its appendages in abdominal wounds.

Dr. Porter of Ft. Wayne, Ind., considered shock an indication for immediate operation, as it was usually the result of hemorrhage.

Dr. Rodman, in closing, said that military surgeons were right from their standpoint in not operating immediately on the field, as they had an incised wound to deal with, but in civil life we had a large leaden ball which made a lacerated wound, which was followed by fecal extravasation.

A Case of Unique Foreign Body in the Stomach.—Dr. J. C. Olner of Cincinnati, Ohio, reported a case of a young girl who had swallowed persimmons and complained of cramps afterward. Emetics and other medication was employed to get rid of the substance, which was easily palpable through the abdominal wall. As this method failed, the case was operated upon, and seven ounces of persimmon pits, shells, and twigs were removed. The patient made an uneventful recovery.

Dr. Jacobson of Maine had had a similar case, in which the patient had a large hair tumor, weighing one ounce less than a pound, removed from the stomach.

Intestinal Anastomosis.—Dr. F. C. Connell of Leadville, Col., reported a series of experiments, which were about the same as those done by Murphy and Senn of Chicago to show that air pumped into the intestines where there were intestinal perforations, became contaminated by sulphureted hydrogen in passing to the abdominal cavity. If this gas was taken out through the abdominal walls, the sulphureted hydrogen could be detected with the aid of lead acetate solutions, or solutions of iodide of starch or Nestle's reagent.

Gallstones in the Common Duct.—Dr. Martin B. Tinker of Baltimore read a paper with this title. He said that in one-third of these cases the symptoms had existed for at least ten years; when the stone was lodged permanently operation was indicated. In one-quarter of the cases the symptoms were of three years' standing. The methods of operation that had been advised were: (1) Cholecystenterostomy. None of these had been done at the Johns Hopkins Hospital. It was simply a makeshift, and was only to be used when the patient was in a bad shape; (2) The pressure of stones into the duodenum or the gall-bladder. This operation was not as simple as it looked. Mayo Robson said that success was an accident; (3) Crushing the stone is condemned by Fenger, as the débris may be left and form a nidus for new formations. Further it was only advisable where the stone was single. In only six out of twenty-seven cases was this the fact at Johns Hopkins Hospital; (4) Rapid cholecystotomy may be done for jaundice. It had been employed in two cases in Baltimore, where it was found that the gall-bladder had been ruptured; (5) Incision through the duodenum was more easy than cholecystotomy, but was more dangerous from its liability to infection; (6) Incision of the gall-bladder, with suturing afterward and drainage through the gall ducts. This operation was the one of choice. It prevented in many instances the dreaded cholecystitis and secondary operation. Twenty-one such cases with complete recovery had been done at the Johns Hopkins. T. M. T. Finney has removed the gall-bladder after stuffing back the serosa and leaving the peritoneal flaps in cases of cholecystitis with stones. Twenty-three cases of choleductotomy gave a mortality of 13.6 per cent. Points to be emphasized in gallstones were: (1) Early operation, and (2) and that the operation of choleductotomy was not more serious than appendectumy, but more difficult.

Surgery of the Gall Bladder and Bileducts.—Dr. A. H. Fergusson of Chicago, said that the anatomy varied, most in the blood supply to the parts. There might be a blood vessel running directly across the common duct. The length of the ducts was not important, but their calibre was. The cystic was the smallest and the common duct the largest. The mucous membrane of the cystic duct was spiral in its arrangement, which might give a false conception of stricture. The displacement of the gall bladder was due to (1) The peritoneum about it; (2) The gall bladder was often absent entirely; (3) Pathological conditions, such as adhesions which may either drag it down or bring the surrounding organs toward it. Thus we may get residual bile with the formation of stones by the precipitation of cholesterin in the presence of some microorganisms. The most trustworthy symptoms were: (1) Every case gave some intestinal disturbance; (2) There was always localized pain in the gall bladder region on pressure, with an exaggeration of the referred pain wherever that might happen to exist; (3) The pyrexia was present in about 50 per cent. of the cases, even without the presence of germs. It might be due to the absorption of bile pigments or other bile elements. Putting two fingers into the foramen of Winslow made it possible to palpate for stones or other conditions in this region. The author had employed a modified Politzer bag to blow air through the gall duct to ascertain its patency; the duodenum was ballooned by this procedure. The gall bladder must always be fixed to the upper portion of the incision to prevent fistula. Hepatotomy was an effectual method to get drainage in cases of big liver and of suppression of bile.

Surgical Aspects of Pancreatitis.—Dr. W. J. Mayo of Rochester, Minnesota, said that the anatomical relationship existing between the biliary and pancreatic ducts caused gall-stone disease to be the most important etiological factor in the production of pancreatitis. The form which the disease took, depended upon the chemical or bacteriological invasion of the ducts. The acute form was usually attended by hemorrhage into or about the pancreas, and fat necrosis, involving the omentum, retroperitoneal and mesenteric tissues by preference; and might result in abscess, if death did not supervene. The symptoms were those of a most serious lesion, involving the upper abdominal zone with repeated attacks of collapse, nausea, vomiting, etc. The chronic form was usually in the nature of an interstitial pancreatitis with enlargement of the organ; jaundice was a most prominent feature. The treatment of the acute form was to sustain life and later drain such accumulations as take place. The treatment of the chronic form was by means of cholecystostomy, in this way draining the ducts. The knowledge of the various form of the disease has been so largely gained from the dead house that it is probable that many of the milder cases may have recovered spontaneously unrecognized.

Dr. Davis of Birmingham, Ala., said that in the majority of gallstone cases the stitching of the duct was unnecessary and very difficult. The cystic duct should always be drained if the gall bladder were removed. Hepatotomy was first done by the speaker in a case of abscess of the liver, and he had found that there was such a free flow of bile that its employment was suggested for other lesions.

Dr. J. E. Moore of Minneapolis said that more stress should be laid upon Mayo Robson's point, as a good job in this region always elicited pain where bileduct or bladder trouble existed.

Dr. Ransohoff of Cincinnati wondered if we could promise the patient that there would be no recurrence of the disease. Every time a patient was operated upon in the gall bladder region some lesion was sure to be found, though it might not be the one for which the operation was undertaken. The transduodenal route was not the one of choice, as it might result in cholangitis.

Dr. Robert Abbe of New York City said that time was of too much moment to permit of the suturing of the gall ducts.

Dr. Robert F. Weir of New York City believed that the Dawbarn method of drainage was the most efficient one to be used in these cases. He advocated placing of a five-grain pellet of methylene blue into the gall bladder before fixing the drain, so that one might recognize that the ducts were draining by the presence of the drug in the stools after the operation.

Dr. H. O. Marcy of Boston remarked that he was the first to suture after the removal of a stone, but he now doubted the success of the operation. Exploratory laparotomy was justifiable to secure a diagnosis.

Dr. Tucker closed by saying that inasmuch as the bile is almost always infected, suturing is the best method of protecting the peritoneum from infection. In the majority of cases the gallstone operation was not an emergency one, and such being the case, as much time as was wanted could be employed in doing the operation.

Dr. Fergusson did not find that recurrence ever happened. All cases should be drained and fulminating cases should have immediate operation.

Appendicitis; a Critical Review of 416 Cases Operated on at the German Hospital During 1901.—Dr. John B. Deaver of Philadelphia read this paper. Of the 416 cases, 279 were acute with a mortality of 15.3 per cent., 137 were chronic, 7 per cent. mortality. Early operation was necessary and indicated. The ice bag give a false sense of security and masks all the symptoms until perforation and death results. No case should be permitted to go on to pus formation, as formation of stricture has resulted and the mortality in these cases when operated upon is about 60 per cent. Hernia was usually the result of extensive drainage. The use of the white blood count to make the diagnosis was unreliable. It was only of importance in cases where the diagnosis was doubtful, but the diagnosis was always easy.

Appendicitis; a Brief Report of the Author's Nine Fatal Cases, with Comments.—Dr. Parker Syms of New York City read this paper and showed that death had been unavoidable in all of the nine cases; showed that five had had a gangrenous appendix with rupture of the bowel, three had free pus in the peritoneal cavity from suppuration of the appendix, and one was a case of circumscribed abscess, which had occurred after the patient had been turned over to the family doctor. Nearly all had had previous attacks and would have recovered had they been operated upon early or at the first attack. He said appendicitis was a purely surgical disease. Care should always be taken to protect the peritoneum from infection in operating upon these cases. Opium should never be used except for abdominal shock. If the treatment was to be ideal, then the mortality should be nil. Early operation must be insisted upon.

Some Anomalies in Appendicitis.—Dr. E. Le Place of Philadelphia remarked that appendicitis is an anomalous disease. It was not always easy to make the diagnosis. The appendix was not always present in the right illiac fossa; it might be up under the liver or elsewhere. Pain was an uncertain factor in the diagnosis. Infection was the true cause of the disease. Streptococcus was the cause of gangrene. B. coli communis was the starter of the enterolith, so often found in the appendix. These cases have had previous attacks which may have been only sufficient to gradually produce a stricture above the anterolith. This stricture becomes firmer and more pronounced with each attack. The B. coli communis was the cause of the obliterating form of the disease. At no time during an attack can one state the condition in the appendix. Early operation should be done in all cases at all hazard.

Dr. Robert F. Weir of New York said that he had found a new use for the useless appendix. In operating upon a case of dysentery the appendix bobbed up into the wound, and he made it fast to the skin and cut off its end. He then used it as a means of injecting medicine into the intestines to cure the dysentery. Early operation could not be too much insisted upon. When the diagnosis was made, one should operate. The disease caused more danger than the operation.

Dr. Abbe of New York, Dr. Ohlsner of Chicago, Dr. Murphy of Chicago, and many others joined in the discussion all urging early operations as the only means of lowering the mortality, and thanking Dr. Deaver for having solved the question of treatment of acute and chronic appendicitis.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

High Amputation of the Cervix versus Hysterectomy for Operable Carcinoma of the Cervix.—Dr. C. C. Frederick of Buffalo read a paper, in which he demonstrated that the results of hysterectomy for carcinoma of the cervix in operative cases were not what the writings of some enthusiasts would lead us to believe or expect. A very small percentage are cured, the danger arising from peritonitis is very great, and infection is more likely than in amputation of the cervix. He showed that relapse was very common in the scar, not due to any fault of the surgeon at the time of the operation, or because of any carelessness on his part, but, as a clinical fact, it is very common. The other points of infection, as the body of uterus and broad ligaments, were not so common. The amputation of the cervix at or above the internal os was much simpler and far less dangerous. The operation is feasible when there is no infection of the surrounding tissues, and in the early stages. The writer believed these were the operable cases. The disease in the wall of vagina can be removed with safety. The results show that relapse does not occur to any greater extent; the results are as favorable as from hysterectomy; the patient does not suffer any greater pain, and the period of relief is as long. The patient is not kept in bed for as long a period, the shock of the operation is much less, and the results in general are as good. He urged high amputation of the cervix in all operable cases of carcinoma of the cervix as a very valuable and safe substitute for hysterectomy.

Dr. Montgomery of Philadelphia acknowledged that high cervical operation was a method of great practical value, but he also felt that to do a thorough operation, the method adopted in amputation of the breast, with removal of axillary glands, was to be taken into consideration. He thought elimination of the surrounding lymphatic tissues was best accomplished by removal of the uterus in whole. These parts are rich in lymphatic vessels, the disease being carried by these and a small mass, too small to be felt by the touch, will escape observation, and be the source of reinfection. Sometimes the operation is the cause of spreading the disease, the germs being taken up by the open vessels and carried into the circulation, and a new focus formed. He believed it wiser to get beyond the disease. In no cases does the cautery act with better effect, the searing of the tissues prevents infection and ensures more thorough removal than can be obtained with knife or scissors. He believed the entire uterus should be removed. Statistics showed the mortality to be not greater than in the high cervical operation.

Dr. TAYLOR of Cincinnati believed that a larger number of these cases recover than is given by the writer. In the study of the subject he found that about 20 per cent are free from recurrence after five years. He acknowledged that this included all cases of cancer in the body and did not show the actual number of uterine cancer. Of the operable cases there were 10 per cent. improved, and the operation was justifiable when life can be extended to three months or a year. The more encouraging reports were from the early operations, the later cases, with more extensive disease, having a high mortality, even in those in which total extirpation of the uterus, with removal of appendages, is done. He favored a more radical operation in early cases, and found the use of the electro-cautery, in conjunction with the knife, very useful. Removal of the diseased portion and cutting through the uterus above the cervix do not always prevent a rapid return. He thought, however, that the rate of mortality is discouraging to the operator, and desired to endorse the high operation, with complete extirpation of the organ. When the case lasts six months there is an involvement of the appendages, and total extirpation of tubes and ovaries gives a better recovery, fewer recurrences, and more comfort to the patient.

Operation for Recurrence of Cancer after Hysterectomy.—Dr. E. W. CUSHING of Boston read a paper in which he acknowledged that there was a large number of recurrences after hysterectomy; nevertheless many were saved, and the lives of many prolonged. The most modern method should be observed. He believed it essential to have an early diagnosis and a radical operation, this gives better results than were formerly secured. It was essential that no infection of the wound take place, and all the involved lymphatics must be removed. When the diagnosis is not made early there is infection which cannot always be readily recognized by examination. After operation it is essential for the surgeon to see the cases and examine them at intervals to note the early return and immediate removal of a small infected point. These cases should be observed for years. When the reinfection has involved the surrounding tissues he advocated an abdominal opening and removal of the diseased tissue. The reader described a case of this kind in which dissection of the ureter was necessary, and the pelvis had to be entirely cleared out. In this case the recovery was good. It was now two years since the operation, without recurrence; the patient had had no pain and her physical condition had improved.

Dr. KOLISCHER of Chicago said the term cancer of the uterus is unscientific, and insisted that cancer of the upper section of uterus, with involvement of appendages is different from carcinoma of the lower section. He thought there should be described two forms of hysterectomy, one in which the uterus is removed without appendages, and the other in which all the appendages, including broad ligament and ovaries, are removed. The bladder is the last organ to become involved; in only about fifteen cases out of 150 was there involvement of the bladder. He said the mortality lists show a heavy percentage in hysterectomy, there being about 10 per cent. of immediate deaths. The largest number of recurrences show an involvment of the tubes and ovaries. He said there could be no return in vaginal scar unless there had been carelessness on the part of the operator, the later endeavoring to hurry through and leaving a trace behind. He did not favor the clamp, as it crushes through diseased tissue and all cannot be removed. There are only about 8 per cent. of definite cures.

Dr. W. H. WARTHEN of Louisville said there are cancers involving uterus and broad ligaments, and others involving only cervix, and possibly the wall of the vagina. He believed that 99 per cent. of the first class are fatal, whereas those of the second class are much more favorable. According to him, statistics show from 10 per cent. to 25 per cent. recoveries. He believed that where involvement of the body has occurred the results have been better than are shown. He did not favor the entire removal of all the appendages and dissection of the glands.

Dr. H. O. MARCY of Boston said the discussion as to the best operation for the removal of cancer of the uterus had been going on for the past ten years, and would, in all probability, continue for ten years more, and no more definite and satisfactory method would be devised at the end of that time than was known at the beginning. He favored the high open abdominal operation and removal of all diseased tissue; yet he recognized that each case must be judged and the involvement of tissue taken into consideration. He favored a more radical operation as the safest for the patient.

Dr. A. J. DOWNES of Philadelphia referred to his paper of yesterday in which all ligature operations were said to show a recurrence in 99 per cent. He favored the clamp with the use of electro-cautery, and claimed a greater freedom from danger of infection. A broad ribbon of seared tissue results, with a non-exuding, non-absorbing surface. There are more recoveries than with the ligature and less loss of blood.

Dr. J. H. CARSTENS of Detroit said the more cancer cases he saw the less he favored the operation of hysterectomy, as the results are very poor.

Dr. C. C. FREDERICKS, in closing, stated that he had considered only operable cases in his paper. He had seen return of the disease in the cicatrix, and many of the best operators of the country know this to be true. The operation of hysterectomy results in death or recurrence in all cases. He did not believe it advisable or good surgery to remove a healthy uterus, because we fear the disease will recur, and the danger of peritonitis and infection is far greater than is acknowledged by the advocates of hysterectomy.

Dr. E. W. CUSHING, in closing, said that removal of glands had immense advantages; there could be no greater infection than there was in cutting above the cervix. He had cases which had been operated on ten or twelve years ago and were alive to-day.

Hæmostasis of the Broad Ligament.—Dr. H. P. NEWMAN of Chicago read this paper. In it he advocated the use of a pressure clamp on the broad ligament, the clamp giving a pressure of one thousand pounds. A ligature can be put on the large vessels in the usual manner on the proximal side, and the clamp then removed. He claimed that there results less infection, that there can be no slippings of the ligature as when a mass is tied, and there is no retraction of the stump. The crushing causes multiple thrombi to form. There is no foreign body left in the wound to cause infection.

Dr. A. PALMER DUDLEY of New York desired to call the attention of the members to one point. The crushing of the broad ligament prevents hemorrhage, but with this there occurs injury to the nerves and lymphatics;

he believed secondary hemorrhage occurs with as much frequency; he believed tetanus has been caused by this method, also peritonitis and infection. In the many cases he has known the rate of mortality was as great as with the ligature. There are two important vessels, when those are tied the stump can be turned in and, with a running suture, incorporated with the peritoneum. This is done by all operators, and certainly the danger from the catgut can be no less when the crushing method is used to stop hemorrhage than when the ligature is applied.

Dr. A. Goldspohn of Chicago believed that one ligature for the larger vessel can be used with perfect safety. He favored a sterile and very strong ligature, as the peritoneum takes care of catgut ligatures better than any other tissue in the body.

Dr. J. R. Goffe of New York said that in his experience the instrument had been of great service. He has not had as many recurrent hemorrhages, and danger from infection, he considered, was reduced to the minimum.

Dr. Newman, in closing, said the old methods were not perfection, and that this instrument simplified the work, a smaller ligature being used, and thus there was less danger of infection. He believed tetanus arises from the infection, not from injury, to the nerves.

Deflected Presentation in Labor.—Dr. Gustav Kolischer of Chicago read a paper on the deflection necessary in face, brow, and vertex presentation. He endorsed the bimanual method for correcting faulty presentations, thereby producing occiput presentation. He adopted and endorsed the use of forceps in anterior vertex, and in brow and face presentations, and said the occiput being the lowest is the presenting part of the head.

Dr. Holmes of Chicago, in discussing this paper, said that the presenting part is the vertex just anterior to the small fontanelle, and that presentation by occiput was a rare condition. He believed posture should be used in correcting these abnormal presentations, and had seen many so corrected.

Dr. Kolischer in closing, strongly emphasized the point made in his paper that the occiput is the presenting part, that being the lowest. He also said that when the head is thrown backward it becomes an impossibility to bring out the child, the thorax and head producing a greater diameter than the pelvic opening.

Massage and Exercise in Management of the Puerperium.—Dr. C. S. Bacon of Chicago, the writer of this paper, endorsed the principal of keeping the parturient woman in bed for two or three weeks after labor. He thought she should not be compelled to maintain a dorsal posture during that period, without movement. He did not favor the early rising. He believed the rest in bed desirable to recuperate from the exhaustion of pregnancy and labor. He believed maintenance of the horizontal position is especially necessary in patients with poor muscular development on account of the danger of ptosis of one or more of the abdominal organs. There is a great relaxation of all the ligaments, a weakness of the abdominal muscles, a faulty circulation, and abnormal secretions. The horizontal position should be maintained until return of normal circulation, as it favors proper involution of these organs. There are many objections to the bed; the muscular system becomes weakened and the circulation poor, the secretions and excretions are impaired. To overcome these objections the writer has adopted a form of massage while the patient is in bed. These exercises can be classed as passive and active. By the passive measures it becomes necessary to have a nurse or some member of the family to use every day general friction; all parts of the body should be rubbed by the dry hand. This should be repeated twice a day. The rubbing of the breasts should be done to favor the return of the circulation in the bloodvessels and lymphatics. Following this, deep manipulation of the abdominal muscles favors peristaltic movements, strengthens uterine contractions, and improves the condition of the lochial discharge. The active exercise consists in first beginning with hands by the side and flexion and extension of hand and forearm, ten to fifteen times, three to four times a day. Second, swinging arm, extended at right angles to the chest. Third, extension and flexion of the feet. After the first week these motions can be made regularly every day, ten minutes at a time. After the second week more extensive movements of the thigh, leg and foot are allowable. At the end of the period of rest in bed the patient is instructed to raise the body to the upright position. These motions can be begun on the seventh day, they are useful in the interest developed in the mind of the patient. When the patient leaves the bed she is strong enough to walk about, and has not that weak feeling so often complained of.

Dr. A. E. Gallant of New York said he had used the active treatment method for his patients, and found it to be of great service. He believed the patient improves much more rapidly and can be allowed to get out of bed earlier. Involution is more active, she has no syncope or weakness.

Dr. Holmes of Chicago said he believed a mistake had been made in endorsing the keeping of patients in bed three to four weeks. He found the majority are able to get out of bed on the sixth day. He considered examination of tension of abdominal wall, condition of the perineum, and lastly involution of the uterus. He thought twenty-four hours long enough to keep the patient on her back.

Dr. Kolischer of Chicago thought massage a good thing if intelligently done.

Dr. Bacon, in closing, said that no patient should be permitted to leave her bed until the danger of prolapse of the visceral organs had passed, and that cannot be while a lax condition of the abdominal muscles remains.

Contribution to Ureteral Surgery, with Report of Four Cases, Including a New Operation for Double Uretero-Vaginal Fistula.—Dr. X. O. Werder of Pittsburg, Pa., the writer, had had, in an experience of over 1500 abdominal sections, injuries to the ureters occur four times. In three of these cases there was immediate implantation into the bladder, two were successful; in the third, however, in which both ureters had become involved, there was a urinary discharge from the vagina on the fifth day, and on the sixth all the urine passed away per vaginam, the bladder remained perfectly empty. The upper portion of the vagina was subsequently made a diverticulum of the bladder, completely curing the patient.

Some Cases of Ureteral Stricture.—Dr. H. A. Kelly of Baltimore read a paper in which he spoke of stricture being congenital, inflammatory, or neoplastic. For practical purposes the strictures amenable to treatment are inflammatory in nature. Ureteral strictures are due to tuberculous, gonorrhœal, and other bacterial infections of the urinary tract and tissues surrounding the ureters. The forms of stricture met are thus varieties of ureteritis and periureteritis. He located the stricture by means of the catheter, by which he could also demonstrate the extent of stricture. Palliative treatment consists in getting rid of the infection and providing sufficient ureteral dilatation to prevent complete or almost complete obstruction. Radical treatment consists in excision and implantation of the ureter into the bladder as well as in nephrectomy and nephro-ureterectomy.

SECTION ON MEDICINE.

Etiology of Chronic Nephritis.—Dr. Arthur R. Elliott of Chicago read this paper. He said that under the name chronic nephritis are described slow inflammatory processes affecting both kidneys, due to a pathological condition of the blood and leading to destruction of the parenchyma, with eventual shrinking of the organs. The most characteristic phenomenon of this affection is not its termination in atrophy, but its casual relationship with hematic dyscrasia. As the cleansing of the blood devolves mainly upon the kidneys, it seems evident that an abnormal condition of that fluid must be the source of renal affections. It seems plain that the morbid agent, or combination of agents, is not the same in all cases. In those comparatively rare instances where chronic nephritis develops as a result of acute nephritis, the chronic lesion must be due to the same common cause as its acute precursor. This is the case in chronic nephritis subsequent to scarlatinal and puerperal nephritis. It is possible that the remaining amount of healthy renal parenchyma is not sufficient for the purification of the blood, and the products of disintegration may be in such excess as to exert a deleterious effect upon the remaining structure. The issue of acute nephritis of infectious origin in chronic nephritis is comparatively rare. The form thus originated is usually chronic tubal nephritis. Interstitial nephritis, unlike tubal nephritis, is essentially a chronic malady from the start. The majority of cases of interstitial nephritis present no signs of dropsy or other grave disturbance of health until the development of retention symptoms or evidence of cardiovascular embarrassment. It is possible that if acute nephritis lasted long enough, it might lead secondarily to a form of interstitial nephritis, but whether the disease known as chronic interstitial nephritis could result is another question. Even if acute nephritis can be established as an event in the early clinical history of a case it does not necessarily follow that prior to the attack the kidneys were sound. Simple acute nephritis in adults is so rare that it may almost be regarded as presumptive evidence that the kidney has been diseased beforehand. In cases of renal cirrhosis, apparently related with scarlatina or pregnancy, it is possible that these factors determine the renal lesion only in conjunction with accessory causes of toxic character. Renal sclerosis subsequent to arteriosclerosis is exceptional in comparison with the cases in which the vascular changes are secondary with genuine chronic nephritis as their origin. It is probable that only in rare cases of chronic indurative nephritis associated with advanced senile arteriosclerosis are we warranted in attributing a purely etiological influence to the arterial changes, the association of arterial fibrosis with renal atrophy in other cases being incidental. In any true nephritis it is the gland that is primarily affected. The common cause of all nephritis is toxic irritation of the kidney; but in chronic forms it acts more slowly, or by successive attacks. Examined in the light of our present knowledge of the actions of organic poisons, the mode of action of various determining causes of nephritis seems to be satisfactorily defined. Among these causes may be enumerated the disturbances of nutrition, such as gout, chlorosis, diabetes, syphilis, the various cachexiæ, overwork, and diseases involving certain excretory organs as chronic skin diseases, hepatic and intestinal affections. The uniformity of the action of these factors may be recognized at a glance. The urinary abnormalities under such circumstances are but symptoms of an underlying toxæmia produced by an antecedent malady. Primary interstitial nephritis is of extremely insidious development, as well as granular atrophy of the kidney; they seem to depend upon the operation of some cause very gradual and persistent in character. Certain alterations in the vascular system are an almost constant feature of the syndrome of this disease, and seem to be produced by the action of the same irritant. The speaker thought no cause so frequent and important as autotoxæmia of digestive origin. This idea is by no means a new one. While many authors have referred to autotoxæmia as a possible source of renal damage, the full extent of the relationship has, perhaps, never been stated. The success of dietetic treatment of nephritis, the importance of Dickinson's "morning purge," the effect of colonic irrigation upon renal elimination, the influence of gastrointestinal accidents in aggravating renal symptoms, etc., speak for the importance of a clean digestive tract. In chronic gastrointestinal affections an increased amount of work is imposed upon the liver with the result that the liver cells become gradually and progressively affected and eventually yield to irritation and prolonged hyperfunction, allowing the poisons which reach it from the bowel, together with the products of disturbed hepatic function, to pass on into the general circulation. Disturbances of vascular tension follow the presence of these bodies in the blood stream, and a high degree of renal irritation results from their elimination in the urine. He called special attention to the insidious action of gastrointestinal conditions resulting from chronic constipation, and the effect of the toxins thus produced upon the kidneys, the disease being often far advanced before it is even suspected. The main purpose of the speaker was to emphasize the overwhelming importance of the toxic element in the causation of all forms of nephritis and the uniformity of action of the toxic factors, whatever special form they may assume.

Malarial Nephritis, with Report of a Case.—Dr. W. Britt Burns of Memphis, Tenn., discussed some of the findings of uranalyses, with special reference to nephritis occurring in malarial cases in which the urinary symptoms cleared up under large doses of quinine. He reported a necropsy where the gross pathology showed a large and small white kidney, a beginning hypertrophic cirrhosis of the liver, splenitis, and fatty heart. The minute pathology showed pigmentation of cells and the blocking of vessels by pigment in the liver and spleen. He quoted the conclusions of Dr. Moore of Galveston, Tex., in which it was stated that nephritis was not likely to occur in a single tertian infection for a short interval, say of five days; that a doubtful tertian infection will produce a nephritis in a large proportion of cases if it runs only for a short time. The more chronic the case becomes of any infection the more likely is it to produce nephritis. Malaria of long duration, or often repeated attacks, will produce chronic renal disease, as shown by the continuous presence of albumin and casts. Æstivo-autumnal malaria probably gives the greatest percentage of cases of nephritis, 68.7 per cent. The age of the patient, height of the temperature, or specific gravity of the urine showed no relation to the presence of albumin and casts in the cases reported by Dr. Moore.

The Classification of Chronic Nephritis.—Dr. James B. Herrick of Chicago read this paper. He said that no successful attempt had been made to classify cases of chronic nephritis from the standpoint of etiology. He found no harmony in the descriptions of the various types of this disease by anatomists and pathologists, and physicians are not always able to make a clinical diagnosis that is satisfactory. Still it is important that we have some working classification, even though it be somewhat faulty and artificial. After a search through medical literature, which at first seemed very confusing on this subject, the writer found some facts which permit of arrangement into an approach to orderly grouping. First, he stated that the kidney of congestion is, by common consent, ruled out of the category of the nephritides and of Bright's disease. Virchow and others likewise exclude amyloid kidney, which is now rarely classed as a form of Bright's disease, or as an inflammation of the kidney, though it sometimes occurs as a complication of a true nephritis. There remain two distinct groups, which present such striking contrasts that one feels warranted in making of the groups separate classes. While the names used to designate these two diseases of the kidneys should be as accurate as possible in describing actual pathological conditions, it is of greater importance that the fact of the existence of these two types should be clearly recognized. To the one form, characterized by œdema and abundant albuminuria and cylindruria, the name chronic paranchymatous nephritis has been most often applied; to the other with marked cardiovascular changes, relatively slight albuminuria and cylindruria, and an abundant flow of urine of low specific gravity, the term chronic interstitial nephritis is given. As synonym for the former may be mentioned, large white kidney, large yellow kidney, chronic desquamative and chronic tubal nephritis; for the latter, contracted kidney, granular atrophy, gouty kidney, etc. The former is the large, rather soft kidney, pale or darker, depending on the amount of fatty degeneration, with easily stripping capsule, wide cortex, and with changes chiefly in the parenchyma, the tubular and granular cells. The kidney of the second class is the small, rough, firm kidney, with adherent capsule, granular cut surface, thinned cortex, retention cysts, and with great increase in the connective tissue, the interstitium. While these are types frequently met with both at the bedside and on the autopsy table, great variations are not uncommonly seen. This has led to the naming of subvarieties, tending more to complication than to simplification. Parenchymatous and interstitial are in reality misnomers, for with every parenchymatous nephritis, the interstitial tissue is also involved, and parenchymatous changes are seen in every case of chronic interstitial nephritis. The process is in reality a chronic diffuse nephritis. In one case the parenchyma is chiefly involved and there is no induration, in the other the interstitial structure shows the primary change and there is contraction. Hence we have: (1) Chronic diffuse nephritis without induration; (2) Chronic diffuse nephritis with induration. Clinically, we find many hybrid forms, and must be content with the diagnosis of chronic or chronic diffuse nephritis. It is well to have both student and practitioner realize that it is frequently impossible to make disease conform to the classical type. Different forms are combined with each other in a variety of ways. As a subhead under chronic interstitial nephritis should be placed the arteriosclerotic kidney with its striking local vascular changes. The classification that seems best is practically that of Senator. It appeals to both the clinician and the morbid anatomist. The term parenchymatous can be used in place of "diffuse without induration," though not literally expressive of the true condition, it recognizes that parenchymal changes predominate. The classification would be: (1) Chronic parenchymatous nephritis (chronic diffuse nephritis without induration; (2) Chronic interstitial nephritis (chronic diffuse nephritis with induration); (*a*) Primary chronic interstitial nephritis; (*b*) Secondary chronic interstitial nephritis; (*c*) Arteriosclerotic kidney (arteriosclerotic interstitial nephritis); (3) Mixed type, *i. e.* combination of 1 and 2.

The Diagnosis of Chronic Nephritis.—Dr. Aloysius O. J. Kelly read this paper. He called attention to certain pathological and clinical features of the disease, though he had nothing new to add, as we really know but little more on the subject than was known by Bright. For the differential diagnosis of albuminuria, he distinguished the following forms: (1) Extrarenal, spurious, accidental, or factitious albuminuria; (2) So-called functional, physiological, or cyclic albuminuria; (3) Albuminuria without noteworthy alterations in the kidney; and (4) Albuminuria with noteworthy alterations in the kidneys. To the first class belong those cases in which the albumin in the urine is but a subsidiary factor, usually not exceeding more than 1-10 by bulk, and it is proportionate to the amount of blood and pus. A disproportionate amount of albumin should always excite a suspicion of nephritis. The presence of casts is of the greatest importance, their persistence being clear evidence of nephritis; (2) So-called functional albuminuria occurs usually in young subjects, and is usually detected accidentally. Great circumspection must be exercised in diagnosing this variety of albuminuria. The albumin should never exceed more than 0.1 per cent; the urine should contain no other abnormal constituent; every bodily organ should be examined and found to be in perfect health. A diagnosis should not be made until the patient has been long under observation and many examinations of the urine voided both morning and evening have been made. Albumin may be temporarily absent, even for long periods, in certain cases and at certain stages of chronic interstitial nephritis; (3) Albuminuria without noteworthy alteration in the kidney. To this class belong cases of active and passive congestion of the kidneys, cases of toxic degeneration of the kidneys, the kidney of pregnancy, amyloid degeneration of the kidney, acute and chronic suppurative and nonsuppurative inflammations of the kidneys, and tumors of the kidneys. In these cases the albuminuria acquires its importance from the attendant phenomena. Hence we must make a diagnosis on this basis and not upon the amount of albumin.

The cardiovascular changes in chronic nephritis are of extreme interest and importance; they dominate the clinical picture of the disease and they assume the commanding position in the prognosis and in the treatment. The lesions are widespread, involving the heart, the large and small arteries, the capillaries and sometimes even the veins. In the majority of cases the left ventricle alone is affected; in the remainder of cases both ventricles are affected. Predominating dilatation of either or both ventricles is an unusual event until toward the termination of life. This hypertrophy of the heart occurs in all forms of nephritis, but not in all cases. It dominates the picture in interstitial nephritis. The changes in the arteries are more complex than those in the heart. In many cases the larger arteries show a loss of elasticity, in other cases more or less arteriosclerosis and atheroma; but neither is a constant feature. The medium-sized and smaller arteries almost invariably have thickened walls. In some cases both muscular hypertrophy and fibroid alteration may be observed side by side. The changes in the arteries are not distributed uniformly throughout the body. It seems that the cardiovascular alterations result from obstruction to the flow of blood in the arterioles and capillaries, and that this obstruction is provoked by the presence of some irritative metabolic products in the blood, which in health should be eliminated by the kidneys. As chronic interstitial nephritis reveals itself in different ways the diagnosis depends upon the results of examination of the urine, and of the cardiovascular apparatus. The urine is increased in amount and specific gravity. The amount of albumin is usually slight; at times none may be found. The changes in the pulse are of great diagnostic value. In the early stages, the arteries being contracted, the pulse is small; the internal pressure being increased the pulse is hard and resisting, the pulse waves are small, the artery remains persistently full between beats. Later there is added the evidence of arteriosclerosis, and later still the changes of atheroma. A diagnosis based upon increased arterial tension, accentuated second aortic sound, and the physical signs of hypertrophy of the left ventricle will rarely be wrong. They may be detected even in the absence of positive signs of kidney disease in the urine.

The Early Circulatory Indications of Chronic Bright's Disease.—Dr. Louis Faugères Bishop of New York read this paper, in which he stated that chronic Bright's disease still remains a good clinical term for a condition involving many organs. It is no longer to be regarded as a disease essentially pertaining to the kidneys. In fact, the fatal factor is often found in the brain or the general nutrition. The kidneys and the brain act as end organs with relation to the circulation, and manifest the earliest symptoms of disorder in the small blood vessels. The earliest circulatory disturbances find their indication in the brain, which is highly sensitive to every irregularity in its blood supply.

The most characteristic early circulatory symptom of chronic Bright's disease is the development of arterial tension, and this affords first indication of the development of arterial irregularities in the circulation. Temporary unconsciousness, slight paralysis, or even evanescent aphasia may indicate the development of disease of bloodvessels, that in its full development will be typical Bright's disease.

The early recognition of these signs is important, because a proper hygiene and a proper therapy will longer delay the development of the disease.

Uræmic Aphasia.—Dr. David Riesman of Philadelphia read this paper. He offered the following conclusions: (1) Thataphasia may occur in uræmia, and is at times the sole expression of that state; (2) It is frequently associated with right-sided motor paralysis, hemiplegic or monoplegic in character: (3) It may be the precursor of uræmic convulsions or coma; (4) The aphasia is usually of the motor type, but may be sensory. There may be word-blindness and word-deafness; (5) It may be associated with agraphia, even when there is no paralysis of the limbs; (6) It is comparatively frequent in children, particularly in cases of post-scarlatinal nephritis. In adults it may occur in any form of Bright's disease; (7) It is generally transient, disappearing completely. In time it is intermittent and has a marked tendency to recur; (8) When paralysis is present, the two may disappear simultaneously, usually the aphasia first; (9) The features of uræmic aphasia are, *per se*, not characteristic of the causal condition; (10) The most important diagnostic features are the transitoriness of the aphasia and the presence of other uræmic symptoms and of signs of nephritis; (11) In every case of sudden aphasia, the possibility of its being renal in origin should be considered, and careful studies of the urine and of the system at large should be made with this thought in mind.

Endocarditis as a Complication of Pneumonia.—Dr. E. F. Wells of Chicago read this paper and offered the following conclusions: (1) Endocarditis is an infrequent occurrence in pneumonia and ulcerative endocarditis is a rare event; (2) When endocarditis occurs it does so comparatively early in the pneumonic attack, and ulceration may occur at any time within the period of probably several weeks, the time being possibly coincident with some valvular strain; (3) The symptoms and signs previous to ulceration, or in the cases in which this does not occur, are equivocal; (4) Any of the valves may be affected, but the preference is for the aortic. The vegetations are quickly formed and massive, and they have a marked tendency to ulcerate. Pneumococci are present early, and should ulceration occur the blood becomes infected. Later the pneumococci die and embolic showerings are sterile; (5) In simple endocarditis the diagnosis is always difficult and often impossible. The murmurs and embolic showerings of ulcerative endocarditis render the diagnosis of this condition easy; (6) The prognosis of simple endocarditis is not well established, but that of the ulcerative form is extremely grave, although not absolutely hopeless; (7) The treatment of pneumococcal endocarditis, both simple and ulcerative, should embrace, as a cardinal and the most important principle, absolute rest in the recumbent posture, this throwing the least possible strain upon the heart; (8) There is but little tendency toward cicatricial contraction, and when recovery ensues, even in cases with ulceration, the integrity of the valve may be unimpaired and health completely restored.

Venesection.—Dr. H. B. Favill of Chicago read this paper. He said that during the last few years there was a tendency to place a greater value upon bleeding. The indications for its use, as now defined in literature, are vague and indefinite. It is important that this procedure of recognized value be not indiscriminately employed. When the heart, for various reasons, seems incapable of disposing of the blood, which it is called upon to circulate, venesection may be of value in certain well-chosen cases. The point of importance is what conditions are in any degree amenable to correction by the withdrawal of blood? It seems, from the mechanical side, the condition of the heart muscle rather than the intensity of the provoking cause will determine the issue. He postulated that whenever we find great pulmonary embarrassment due to vascular engorgement, bleeding is indicated.

There is a symptomatic relief in a variety of conditions, a radical relief in a very limited group. It has a distinctly life-saving power in a small per cent. of appropriate cases. It may be indicated in plethora. There is small danger even in abstracting considerable blood.

The Employment of Digitalis and Aconite in the Treatment of Cardiac Diseases.—Dr. H. A. Hare of Philadelphia read this paper. He considered the importance of studying the state of the cardiac muscle in the various conditions in which evidences of circulatory failure were manifest. He emphasized the fact that, while physicans very frequently regarded the valvular lesion as the important factor in the case, the condition of the heart muscle, after all, was the most important matter to be studied by physicians, since valvular lesions in themselves were of little importance if compensatory hypertrophy existed. He also emphasized the fact that after many acute diseases the physician was wont to neglect the consideration of the heart as the important factor in the recovery of the patient. An examination of this organ might fail to reveal any signs of valvular difficulty, yet it might be so feeble in its action as to be incapable of supplying all portions of the body. It also might be enfeebled by an impoverished condition of the blood, for the heart could not be strong when poor blood was circulating through its coronary arteries. Dr. Hare also advocated the administration of small, rather than large, doses of digitalis in the treatment of most cases in which this drug was indicated, and thought that the best results were usually obtained by the continued administration of these small doses, rather than by the use of the large ones which were commonly employed. He also spoke of conditions in which aconite could be employed, alone or in conjunction with digitalis, with very excellent results. He was quite sure that in a certain number of cases of valvular heart disease the patient did not require digitalis or any other cardiac stimulant; but, on the other hand, in addition to rest, they will often be greatly benefited by the administration of aconite, which has the same steadying effect upon the heart through its influence upon the vagi as has digitalis, while by its sedative influence upon the heart muscle in cases of excessive compensaiton, and by its relaxing effect upon the blood vessels, it diminishes the over-action of hypertrophy which is sometimes confused with the tumultuous over-action of ruptured compensation.

Tuberculous Myocarditis.—Dr. J. M. Anders of Philadelphia read this paper and made the following conclusions: (1) Tuberculosis of the myocardiun is more common than has been supposed; (2) At present writing not more than three pathological varieties are justifiable; (3) It is practically always secondary to a lesion in some other situation, most commonly in the bronchial or mediastinal glands; (4) Transmission through the heart occurs most frequently by the lymph stream, less often by the blood current, and more rarely still as the result of extension by continuity; (5) Myocardial tuberculosis, in a considerable proportion of cases, is secondary to pericardial tuberculosis and the latter to disease of the bronchial glands; (6) The symptomatology is extremely variable and indefinite; (7) Diagnosis is excessively difficult, but is probably possible with great care and under favorable circumstances. In addition to the suspicious features that may be present the existence of generalized tuberculosis and pericardial tuberculosis, one or both, are essential to a diagnosis.

The Autogenous Diseases, etc.—Dr. V. C. Vaughan of Ann Arbor, Mich., read this paper, and said that we had not as yet had sufficient data to enable us to attempt even a provisional classification of the autogenous discases. He pointed out certain facts connected with this subject: (1) The digestive organs may but imperfectly perform their function, and the products of their incomplete action may be absorbed and may lead to more or less disturbance in certain organs of the body. Moreover, every part of the body will suffer more or less from insufficient nutrition due to the fact that properly prepared pabulum is not brought within the reach of the cellular element. When peptones and albumoses are injected directly into the blood they act as powerful poisons; (2) That certain secretions and excretions of the human body are poisonous when brought in contact with tissues with which normally they have no relation, is well known; (3) It is the function of certain organs of the body to prevent the passage of certain substances into the general circulation; (4) That the undue retention of excrementitious substances frequently lead to disturbances of health is well known; (5) That certain cells in the body fail to adjust themselves to general alterations taking place in other organs at certain periods of life, is quite evident; (6) Under conditions but little understood at present certain cells of the body fail to utilize certain foodstuffs. This is true in certain forms of diabetes. The cells which are accustomed to absorb and utilize the sugars find themselves unable to accomplish this duty, and the unused sugar acts as a poison to other tissues; (7) Active poisons are sometimes formed by certain cells in the body. In this way we account for the presence of certain of the more highly toxic leucomains and some of the more poisonous acids, such as oxybutric, and some of the poisonous gases, and some of the alkaloidal bodies.

Appendicitis from a Physician's Standpoint.—Dr. JAMES TYSON of Philadelphia read this paper. He believed that the physician was too conservative in the treatment of this disease. After a thoroughly established diagnosis, operation should be recommended, even though deferred, if it can be done without danger to the patient, until acute symptoms have subsided, if they show a disposition to subside. If, however, they should not subside, operate promptly. The diagnosis is most important because operations, which have brought reproach upon the procedure, have been made upon insufficient foundation for the diagnosis.

A Case of Scurvy with Unusual Poverty of the Blood.—Dr. JAMES E. TALLEY of Philadelphia read this paper and offered the following conclusions: (1) There is no condition of the blood characteristic of scurvy; (2) Gingivitis is not a constant symptom of scurvy; (3) In certain scurvy cases there is a condition of the blood similar to that existing in pernicious anæmia, though any definite connection between the two diseases is not demonstrable; (4) The most important element in the causation of scurvy appears to be a diet lacking in vegetables or the ingredients. Tainted food may produce it, and an exclusive diet of perfectly fresh meat and blood may prevent it; (5) The infectious theory is gaining a strong foothold among the authorities, although no definite microorganisms have yet been discovered which can be regarded as pathogenic for the disease.

THIRD DAY—THURSDAY, JUNE 11.

Nomination of Officers.—The following are the names of officers proposed for election at the closing general session on Friday: *President*, Frank Billings of Chicago; *Vice-Presidents*, W. A. Witherspoon of Tennessee, G. F. Comstock of New York, C. R. Holmes of Ohio, James H. Dunn of Minnesota; *Secretary*, G. H. Simmons of Illinois; *Treasurer*, H. P. Newman of Illinois; *Orators:* Medicine, J. M. Anders of Philadelphia; Surgery, A. F. Jones of Omaha;; State Medicine, W. H. Welch of Baltimore. Little Rock, Ark., was recommended for the next place of meeting.

Surgical Suggestions.

Coley's Fluid was tried in eight cases of inoperable cancer All the patients were kept under observation until death. The results do not justify its trial in any operable case. —ROBT. B. WILD.

Modified Finsen Method.—The lupus patient sits with his back to a window for an hour daily. The sun's rays are reflected by a mirror and concentrated by a biconvex lens. The rays pass through a solution of ammoni-sulphate of copper, which absorbs those having burning qualities.

Compound Fracture.—(1) Never apply a plaster splint to a compound fracture; (2) Treat the lacerations and contusions antiseptically; (3) The writer uses the Levis' metallic splint in these cases with marked success when laceration is anterior; (4) The bandage is so applied that, while holding the bones, it does not cover the laceration; (5) It is a good rule to unbandage a fractured limb every two to five days, particularly a compound fracture; then wash and rub the limb thoroughly; (6) Ununited fracture comes more frequently from circulatory stasis than from movements of the fractured ends; then do not be so dreadfully afraid of possibly breaking adhesions when the splint is carefully removed; (7) A little massage will quickly compensate for a trifle of disturbance of the fractured ends; (8) If pus should form, use calcium sulphid and echinacea, or ichthyol; keep bowels free and apply H_2O_2, ichthyol, etc., locally; (9) Every traumatism has its medical as well as surgical aspect; that's what's the matter with the man of one idea: the surgeon; (10) Above all, call frequently upon your fracture cases; and if they want the dressings or splints altered, try to oblige them, for that is what they pay you for.—C. E. BOYNTON, *Medical World*, January, 1902.

Cocaine, when applied to the larynx or pharynx, may have its bitter taste covered with saccharine.—MORITZ.

To Remove Adherent Dressings, moisten them well with oxygenized water whose action frees the gauze.—MIKULICZ.

Trendelenburg's Operation is advocated for varicose veins of the leg. A portion of the vein is excised in the thigh to relieve the varices of the tension caused by the weight of the column of blood above them.

In fifty-seven cases, 75 per cent. were cured.—RAMSAY. *Intercolonial Journ. of Australasia*, April 20.

Indications for Operation in Gastric Ulcer.—1. Acute hemorrhage should rarely be treated by operation. The results of interference have not been good, while the results of medical treatment have been satisfactory. When, however, a hemorrhage frequently repeats itself, even though not severe in amount, it will demand operative treatment as soon as its recurrent character is plain.

2. Small frequent hemorrhages, threatening anæmia, give a clear indication for operation.

3. Perforation of the stomach, either acute with general peritonitis or chronic with surrounding adhesions and perigastritis, demands instant operation.

4. When an ulcer runs a chronic course with a strong tendency to recurrence, and gradually diminishes the patient's capacity for work and the enjoyment of life, an operation is indicated, especially when the patient is so situated as to be dependent on his daily work for support, and unable closely to regulate his diet..—A. T. CABOT, Trans. Mass. Med. Soc.

Stab Wounds of the Heart.— G. T. Vaughan (*Virginia Medical Semi-Monthly*, March 7, 1902), states that: The time has arrived when wounds of the heart should be operated on with as little hesitation as wounds of the brain, with the expectation, under corresponding conditions, of getting equally as good results. The mortality must inevitably be high—not from the operation, but from the injury—especially if all cases, including desperate ones, be undertaken. Selection of cases who have survived five or more hours after receiving the wound would give a good percentage of recoveries, but such selection is not to be recommended, as it would be unjust discrimination against the severe cases.

In all cases of wounds in the region of the heart, with symptoms threatening life, an exploratory operation should be done by making an osteoplastic flap by dividing the fourth and fifth costal cartilages at their attachments to the sternum, the ribs about one inch external to their attachment to the cartilage, and the muscles of the fifth intercostal space, somewhat according to the method of Roberts. This flap turned up as a door on a hinge, gives a good view of the pericardium, and can easily be enlarged upward, if more room is required.

While early and speedy operation is often essential to success, yet the importance of asepsis cannot be too strongly emphasized on account of the great danger and disastrous results of pericarditis and empyema. If there has been much hemorrhage, a quantity of physiological salt solution, approximately equal in amount to the blood lost, should be injected into a vein while the surgeon is operating on the heart, if it has not been done sooner.

Strangulated Umbilical Hernia.—This is the kind of case the surgeon has learned to look on with disfavor. In the first place, such fat subjects stand no operation well where general anæsthesia is to be used. In the second place, a large, irreducible, strangulated umbilical hernia is always serious. Under no other circumstances than that of strangulation would I consider an operation in such a subject.—W. C. DUGAN, *American Practitioner and News, September*, 15.

Treatment of Foreign Bodies in the Œsophagus.—N. Stone Scott (*The Cleveland Medical Journal*, March, 1902), says: Treatment of foreign bodies in the œsophagus will vary materially with the kind of body and complication of the case. Thus, a hard substance should be immediately removed. Nothing is gained by delay, and if allowed to remain infection and inflammation supervene and add to the difficulties of the case. When the patient is anæsthetized the foreign body can frequently be grasped by forceps or coin-catchers, and withdrawn through the mouth. If lodged as far down as the diaphragm, it can usually be pushed on into the stomach, provided there be no pathologic thickening of the esophagus at this point. Subsequent treatment of such cases will depend upon the symptoms. The patient should be allowed to recover from the anæsthetic, and if no further symptoms warranting interference supervene, nothing further should be done. The foreign body will usually pass through the pylorus and the rest of the alimentary track without difficulty. Should it become lodged lower down, operative interference may be required for its removal.

When the cause of obstruction can neither be grasped by the forceps and withdrawn, nor pushed on into the stomach, the simplest and best method of relief is by an external esophagotomy, which should be done with every surgical precaution. Even should it be possible to remove the body through the mouth, this same procedure in order to provide for drainage is advisable in cases in which the foreign body has been allowed to remain until the patient has become septic. The incision is made upon the left side at the internal border of the sternocleidomastoid, the dissection carried down to the esophagus by means of the blunt instruments rather than by cutting, the various structures being pushed to one side, the esophagus is opened with a sharp instrument by a clean cut, and the foreign body extracted with as little laceration of the tissues as possible. The incision in the esophagus should be closed with a catgut, and a strand of gauze, horsehair, or other means of drainage inserted, the external skin incision being closed thoughout most of its extent. It is a technical error to entirely close the skin incision, because the structure of the esophagus renders its sterilization impossible, and infection is liable to occur from the wound in the esophagus. An esophageal fistula is apt to result from the operation, but as a rule is of slight moment and will spontaneously close in the course of a few weeks. The after-treatment of these cases is simple. Nothing should be given by mouth for a number of hours until the first efforts at repair have been accomplished, although as a rule the patient will be able to swallow with little or no difficulty.

Surgical Hints.—In amputating fingers recollect that the joints are always in advance of the knuckles, *i. e.*, nearer than they are to the ends of the fingers.

Always shave all hairy parts before applying adhesive plasters, or else the patient will be apt to think the remedy worse than the disease.

To get a broken leg in the proper position, see that the ligamentum patella, the tubercle of the tibia, and the middle of the ankle are in a straight line.

Warts and moles may be removed by touching them daily with glacial acetic acid, which must not be permitted to touch the healthy skin. If this is carefully done no scar will be left.

Since, in modern surgery, it has been recognized that the skin is the principal source of infection, it is well, in operating, to use one knife to cut the skin and to replace it by another for the deeper work.

In operating near the female bladder, it must be remembered that the latter is never perceptible to the touch unless distended, or, better still, unless an instrument such as a sound has been passed into it.

In making incisions in the wrist and forearm, always ascertain, if possible, whether the ulnar artery, instead of running under the superficial muscles, passes over them, as is frequently enough the case.

In all emergency cases of operations in which the patient shows any evidence of bronchitis, begin the treatment of this condition at once. A good-sized dose of digitalis with one of the salts of ammonia before operating is useful.

In the shoulder, in the normal relation of the bones, and in every position, the greater tuberosity of the humerus faces in the direction of the external condyle. The head of the bone faces nearly exactly in the direction of the internal condyle.

It is never likely that gonococci are present in the female genitalia when the mucous membranes appear to be perfectly healthy; on the other hand, they may be present in any case in which an unhealthy secretion appears, however mild the latter may be.

After amputations, never wait to apply an artificial limb beyond the time when the stump is well healed and the patient is strong again. Disuse of the stump for too long a time makes it less able to stand the artificial limb. The only exception to this rule is where the operation was done for malignant disease, where early pressure and concussion might favor a return.—*International Journal of Surgery*, April, 1902.

Smallest Microbe.—According to the New York *Herald*, Mr. O. Voges of Buenos Ayres has discovered the smallest bacillus which has yet been identified. It is much smaller than the bacillus of influenza, and is only just discernible when magnified about 1,500 times.

Mr. Voges discovered these very minute rods in abscesses which afflict cattle in South America, producing a disease known as manquea. The malady generally attacks cattle while they are quite young, and is easily recognized by the characteristic lameness of one leg, which it produces. Mice, rats and rabbits are not affected by this microbe, but guinea-pigs succumb to its action in from twenty-four to forty-eight hours. Another singular fact noted by Mr. Voges is that the animals which he inoculated succumbed only when the weather was hot.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending June 7, 1902:

	Cases.	Deaths.
Measles	532	21
Diphtheria and croup	369	43
Scarlet fever	346	22
Smallpox	63	19
Varicella	78	..
Tuberculosis	310	148
Typhoid fever	23	12
Cerebro-spinal meningitis	..	3

London's Latest Census.—The figures given by the "Detailed Abstract of the 1901 Census Returns for the County of London" apply exclusively to the Administrative County of London, and the persons actually within that sphere on the night of the census. London, as every one must be aware, is a name of peculiar elasticity. If we take it, for instance, to mean the municipal city of London—the "one square mile"—we find that its stationary population is only 26,923 souls. And if, on the other hand, we take it to imply so-called greater London, which embraces over 400,000 acres and includes such distant suburbs as Epsom, Farnborough, Barnet and Waltham Abbey. Londoners may then boast the mighty population of over six and a half millions. Actually, however, we are concerned with London County proper, created in 1888 from parts of Middlesex, Surrey and Kent, and having an area of nearly 75,000 acres. The total population of London in this meaning is 4,536,541. In 1801 the population was just under one million; it has, therefore, increased during the century nearly five-fold, but since 1851 a decline in the rate has been in steady progress. One of the most potent causes influencing this decrease in the rate of growth of population within the county area is the migration of Londoners to the suburban districts. During the past ten years the loss by migration is calculated as exceeding 180,000. This centrifugal dispersion of town population is, however, shared by all great, old and prosperous cities.

The females in London exceed the males by a quarter of a million.

The Londoners proper, native in the county, were returned as just over three millions strong. Others living in the metropolis included 60,211 Irishmen, 56,605 Scotchmen, 35,421 Welshmen, and 161,222 persons of foreign birth. Of the 135,377 foreigners not naturalized British subjects, natives of Russia are now the most numerous in London; Germany stands second; Russian Poland follows; France is fourth and Italy fifth. The Russians in London have increased since the last census from 12,034 to 38,117—fully threefold—while Italy has doubled her contribution toward the population, now accounting for a round 10,000.

Restricted Vision in Cities.—The *New York Evening Post* quotes from the *New Orleans Times-Democrat* as follows:

"Speaking of the practice of wearing glasses," said a well-known optician in Canal street, "there is a curious thing about the human eye that the average person is constantly overlooking. We talk a great deal about the influence of color, about glare and all that sort of thing. Unquestionably, color has a great deal to to with the weakness of the human eye at this time. Glare figures as an important factor in the impairment of the human sight. In the matter of color there is so much noting in these latter days that the eye is kept in an almost constant strain. Red is violently red, green violently green, and so on, until the eye is simply strained beyond the normal in an effort to visualize the hue, and hence the optic nerves are, in a measure, strained and injured. But this is not the greatest danger when we come to think of the modern tendencies so far as the human eye is concerned. There are other conditions which are infinitely more injurious than the matter of color. The glare is bad enough too. The electric and incandescent lights are simply fearful on one's eyesight. But the thing I guard with more than any other influence is the condition which limits the scope of one's vision. The eye should have a broad range. One should have the opportunity of seeing a long distance. We are denied this opportunity. We are hemmed and hedged in until the distance we are capable of seeing is very short indeed. This is why I am a strong advocate of parks of promenades. Green is naturally a restful color, and if the city could be provided with long avenues and splendid parks, where one's eyes could stretch out in a long vista, it would be a great thing."

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended June 7, 1902:

SMALLPOX—UNITED STATES		Cases.	Deaths
Colorado, Denver	May 17–24	7	
Florida, Jacksonville	May 24–31	1	
Illinois, Chicago	May 24–31	12	
Freeport	May 17–24	4	
Indiana, Indianapolis	May 17–24	14	
Terre Haute	May 17–24	1	
Kansas, Wichita	May 17–24	5	
Kentucky, Covington	May 24–31	8	
Louisiana, New Orleans	May 24–31	2 (traced to outside infection).	
Maine, Biddeford	Jan. 1–May 29	2	
Massachusetts, Boston	May 24–31	23	3
Brockton	May 17–24	1	
Cambridge	May 10–31	12	
Everett	May 24–31	1	
Lawrence	May 17–24	2	
Malden	May 24–31	3	
Melrose	May 24–31	2	
Newbern	May 24–31	2	
Missouri, St. Louis	May 18–25	25	
Montana, Butte	May 18–25	4	
Nebraska, Omaha	May 17–31	47	
New Hampshire, Nashua	May 24–31	2	
New Jersey, Hudson County, including Jersey City	May 18–25	36	1
New York, Elmira	May 17–31	1	1
New York	May 24–31	63	2
Ohio, Cincinnati	May 23–30	11	
Cleveland	May 17–31	68	9
Hamilton	May 24–31	2	
Toledo	May 17–24	6	
Pennsylvania, Erie	May 17–24	2	
Johnstown	May 24–31	2	
Philadelphia	May 24–31	9	5
Tennessee, Memphis	May 24–31	12	
Utah, Salt Lake City	May 17–24	6	
Vermont, Rutland	Apr. 26–May 31	13	1
Washington, Tacoma	May 18–25	1	
Wisconsin, Green Bay	May 18–June 1	5	
Janesville	May 17–24	2	
Milwaukee	May 17–31	12	
SMALLPOX—FOREIGN			
Austria, Prague	May 3–17	8	
Belgium, Antwerp	May 3–17	14	4
Brussels	May 10–17	..	1
Canada, Halifax	May 17–31	2	1
Quebec	May 3–24	34	
Winnipeg	May 17–24	2	
France, Paris	May 10–17	..	2
Great Britain, Birmingham	May 10–17	4	1
Glasgow	May 16–23	4	
Liverpool	May 10–17	1	
London	May 10–17	233	37
India, Bombay	April 22–29	..	7
Italy, Naples	May 10–17	5	
Mexico, City of Mexico	May 11–25	..	1
Vera Cruz	May 18–24	1	3
Russia, Moscow	May 3–10	16	1
Odessa	May 3–17	15	3
YELLOW FEVER.			
Colombia, Panama	May 10	8	6
Mexico, City of Mexico	May 11–18	..	1
Vera Cruz	May 18–24	36	15
CHOLERA—INSULAR.			
Philippines, Manila	Mar. 20–Apr 18	278	208
Bataan Province	Mar. 30–Apr. 18	241	166
Bulacan Province	Mar. 30–Apr 18	123	89
Camarines Province	Mar. 30–Apr. 18	204	113
Cavite Province	Mar. 30–Apr 18	5	5
Ilocos Norte Province	Mar. 30–Apr. 18	1	1
Laguna Province	Mar. 30–Apr 18	1	1
Pampanga Province	Mar. 30–Apr 18	29	30
Rizal Province	Mar. 30–Apr 18	47	34
CHOLERA—FOREIGN			
India, Bombay	Apr. 22–29	..	2
PLAGUE.			
India, Bombay	Apr. 22–29	..	520
Karachi	Apr. 26–May 4	127	105

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POST-GRADUATE INSTRUCTION IN GREAT BRITAIN.

LONDON.

ALL of those facilities for post-graduate instruction in London which are open to British medical men are equally available to American graduates. The institutions which offer facilities may conveniently be divided into three groups:

I. Those which wholly or in part devote themselves to giving instruction specially designed for graduates.

II. Those general or special hospitals which have no schools, but which offer instruction and opportunities for study to graduates and senior students.

III. Those general hospitals which, having medical schools attached to them, allow qualified strangers to share the instruction and opportunities for study primarily intended for the students of their respective schools.

At many of the institutions mentioned below, it will be observed that clinical clerkships or assistantships are open to graduates and senior students.

For practice it will be found that the holders of those posts are mostly graduates, and no better means of studying the various specialties can be found than the tenure of such a post for two or three months, which includes what may be called individual tuition from members of the staff. As a rule, a clerk or assistant is attached to one physician or surgeon only, and does not follow the practice of the others, but as the medical officers attend on different days, there is nothing to prevent a graduate holding two clerkships at once if vacancies occur.

It is hardly necessary to state that at all hospitals American medical graduates will be welcomed as visitors.

I. In the first group are the following:

1. The Medical Graduates' College and Polyclinic with which nine special and general hospitals are associated.
2. The West London Hospital and Post-Graduate College.
3. The Westminster Hospital (special course).
4. The London School of Tropical Medicine.

II. In the second division are the following:

5. The Hospital for Sick Children.
6. The East London Hospital for Children.
7. The London Throat Hospital.
8. The Hospital for Diseases of the Throat.
9. The Central London Throat, Nose and Ear Hospital.
10. The Moorfields' Eye Hospital.
11. The Royal Westminster Ophthalmic Hospital.
12. Central London Ophthalmic Hospital.
13. The Chelsea Hospital for Women.
14. The Hospital for Women, Soho Square.
15. The Queen Charlotte's Lying-in Hospital.
16. The National Hospital for Epilepsy and Paralysis.
17. The Hospital for Consumption.
18. The Bethlem Royal Hospital (for the insane).
19. The Great Northern Central Hospital (general).
20. The Lock Hospital (venereal).
21. The Fever Hospitals of the Metropolitan Asylums' Board.
22. National Orthopædic Hospital.
23. The Asylum for Idiots, Earlswood.

III. In the third division are the following:

24. The Associated (nine) Metropolitan Schools of Medicine.
25. St. Bartholomew's Hospital.
26. The London Hospital.
27. The London School of Medicine for Women (Royal Free Hospital).

I. The Medical Graduates' College and Polyclinic is by far the most important institution for post-graduate teaching in the United Kingdom. Its headquarters, at 22 Chenies street, W. C., are in a specially constructed building, which contains a museum in which are Mr. Jonathan Hutchinson's great collection of drawings of disease, and a library containing his collection of original articles by many authors, ingeniously arranged to facilitate references, and most valuable to workers who desire to get at the bibliography of any subject. There are also lecture rooms, laboratories, ophthalmoscopic dark rooms, *x*-ray installation, and smoking and reading rooms. The college is centrally situated, on the western border of Bloomsbury, about midway between the Tottenham Court Road Station of the Central London Electric Railway ("The Tube") and the Gower Street Station of the Metropolitan Railway. There are good hotels and lodgings at a moderate price in the neighborhood. The membership fee is one guinea (£1 1s—$5.)

American medical men are always welcome, and are given a complimentary ticket free, which is available for three days. This enables them to see for themselves, before becoming members, the advantages offered by the college. The following are the advantages offered by the Medical Graduates' College and Polyclinic to its members: (1) They can at any time send up or bring patients for consultation (on the understanding that the case is one suitable for gratuitous advice). (2) They can attend all consultations and clinical lectures. The consultations take place from 4 to 5 o'clock every afternoon, except Saturday, and the clinical lectures usually at 5 o'clock. (3) They have access at all suitable hours to the library, the reading room and the clinical museum. (4) They receive the Journal. It is published monthly and contains, with much other clinical matter, a record of the lectures and of the more important consultation cases, and a "Companion-Catalogue to the Museum." (5) They have access under certain conditions to the pathological laboratory, and can also obtain analyses and examinations of specimens.

Cliniques are held daily at 4 o'clock, on cases of interest, as follows.

Mondays, Skin; Tuesdays, Medical; Wednesdays, Surgical; Thursdays, Mr. Jonathan Hutchinson's Surgical; Fridays, Eye, Throat, and Nose.

Clinical lectures are given on alternate Wednesdays, at 5.15 P.M.

Short courses of didactic lectures on special subjects are delivered every month. The laboratory is open for private research to members upon terms which can be ascertained on inquiry, and analyses are undertaken and reports furnished upon pathological specimens submitted for examination.

These cliniques and clinical lectures go on throughout the whole year, with the exception of the month of August, during which the college is closed.

Four sessions of practical classes of six weeks' duration, and a vacation term of three weeks are held during the year. The following are the subjects:

The Anatomy and Physical Diagnosis of the Chest and Abdomen, Tuesdays and Thursdays at 6 P.M.; begins April 14. Dr. J. E. Squire and Mr. A. Carless.

Clinical Examination of the Nervous System, Fridays, from 2 to 3.30 P.M.; begins April 18. Dr. Harry Campbell.

Practical Application of the Röntgen Rays, Thursdays at 3 P.M., begins April 17. Dr. Harrison Low.

Practical Ophthalmology, the use of the Ophthalmoscope and Refraction, Fridays, from 5 to 7 P.M.; begins April 18. Mr. L. Vernon Cargill.

Practical Rhinology and Laryngology, Wednesdays, from 5 to 7 P.M.; begins April 16. Dr. W. Jobson Horne.

Practical Otology, Mondays, from 5 to 7 P.M.; begins April 14. Mr. R. Lake.

Clinical Microscopy, Mondays and Wednesdays, from 2 to 3.30 P.M.; begins April 14. Mr. Hayward Pinch.

Fee for each class, £1 1s.; composition fee for all seven classes, £5 5s.

Extra mural classes in association with the college are held on the following subjects: Practical Bacteriology, daily from 10 A.M. to 4 P.M., Professor Tanner Hewlett. Fee, £5 5s. for one month; £8 8s. for two months. Hygiene and Public Health, Dr. Wynter Blyth. Fee, £2 2s. Mental Diseases, Dr. Maurice Craig. Fee, £1 1s. Operative Surgery, Mr. W. Johnson Smith. Fee, £4 4s.

Extra classes in any subject will be formed to suit the convenience of practitioners unable to attend those already provided.

Mr. Jonathan Hutchinson conducts a clinique every Thursday, and among the lecturers are the following well-known names: Dr. Molt (Pathology of the Insane); Sir John Batty Tuke, Mr. Bland Sutton, Dr. Theodore Williams, Sir Anderson Critchett, Mr. Howard Marsh, Dr. Hale White, Dr. William Hunter, Dr. Dundas Grant, etc. Consultations on cases sent up by members are held from 4 to 5 P.M. on five days a week.

In addition to the instruction given at the college and in the extra mural classes, arrangements have been made under which members, on payment of small additional fees, receive clinical instruction at the following nine institutions: Blackfriars Hospital for Diseases of the Skin; *Seamen's Hospital, Greenwich; *East London Hospital for Children; *Evelina Hospital for Sick Children; *North London Hospital for Consumption (out-patient department only, 41 Fitzroy Square, W.); Throat Hospital, Golden Square; *Seamen's Hospital, Victoria and Albert Docks Branch, Greenwich; Westminster Ophthalmic Hospital; and *North West London Hospital. The fee is one guinea per month per hospital, or a composition fee of £5 5s. will admit for two months to the practice of all of the six hospitals above marked with an asterisk.†

Lectures are also given at Bethlem Royal Hospital for Lunatics. Schedules of cliniques and lectures and of hours of instruction in the associated hospitals may be obtained from the medical superintendent, Captain A. E. Hayward Pinch F.R.C.S. at the college, 22 Chenies street, London, W. C.

2. **The West London Post-Graduate College** is attached to the hospital of that name in the western borough of Hammersmith, four miles from Charing Cross and six miles from the Bank (*i. e.* the center of the "City").

The following extracts from its prospectus fairly set forth the advantages it offers:

The West London Hospital was founded in the year 1856, and incorporated by royal charter in March, 1894. It contains accommodation for 175 beds, of which 150 are in daily occupation. 2,500 in-patients were treated in the hospital during 1900, and in the out-patient department over 30,000 new patients are seen annually. Post-graduate instruction has been given at the hospital since the year 1893, and 275 medical men from all parts of the world have attended the classes. The West London Hospital is the only hospital where the practice is reserved for qualified men, and the college is the only institution of the kind in London which is attached to a general hospital. The hospital is in the main road about three miles from Hyde Park Corner; it is within two minutes' walk of the Hammersmith Stations of the Metropolitan, the District, and the South-western Railways; it is within ten minutes' walk of Kensington (Addison Road) Station, and within twelve minutes' walk of the Shepherd's Bush Station of the Central London Railway, and omnibuses pass the door from Liverpool Street, King's Cross, Charing Cross, Piccadilly, Barnes, Chiswick, etc. The physicians and surgeons attend daily, except Saturdays, at 2.30 P.M. Post-graduates accompany the staff on their visits to the wards. Instruction is given in the out-patient department daily at 2.15 P.M. by the assistant physicians and assistant surgeons. The out-patient department has recently been enlarged and there is now ample accommodation for post-graduates to see and examine the patients. There are special departments for diseases of the eye; the ear, throat, and nose; the skin; for diseases of women; and for orthopedic surgery and for *x*-ray work. Clinical assistants are appointed from among the post-graduates on application to the medical officer in charge. Operations are performed on Mondays, Tuesdays, Wednesdays, Fridays, and Saturdays, at 2.30 P.M., and on Thursdays at 3.30 P.M. Post-graduates are allowed to stand close to the table and can see the operations perfectly. The surgeons often avail themselves of the assistance of post-graduates at operations. Gentlemen willing to assist should signify their wish to the operating surgeon. No junior students are admitted to the practice of the hospital, and it is practically reserved for graduates, but occasionally senior students are admitted as clinical clerks and dressers.

The fee for hospital practice, including all the ordinary demonstrations, lectures, and attendance in the special departments, is £2 2s. for fourteen days; £3 3s. for six weeks; £5 5s. for three months; £8 8s. for six months; £10 10s. for one year; and £21 for a life ticket. If it is wished to pay the fee by instalments, the price of the six months' ticket will be £9 9s., payable by three instalments of £3 3s., the first to be paid on joining, the second six weeks later, and the third at the end of three months. The fee for a yearly ticket will be £12 12s., payable by four instalments of £3 3s., the first to be paid on joining, the second at the end of six weeks, and the others at intervals of three months. The fee for a life ticket will be £23 2s., payable by six instalments of three guineas, and two of £2 2s., the first instalment to be paid on joining and the remainder at intervals of three months. A course of attendance in medicine or surgery alone, or in any one special department, may be taken out for the fee of £2 2s. for six weeks, or £3 3s. for three months.

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† Very recently the scheme of this institution has been greatly extended. Other teaching institutions have been invited to join, and it is believed that by the autumn the clinical resources of the following special hospitals will also be available: The Great Ormond Street Hospital for Sick Children, the Brompton Hospital for Diseases of the Chest, the Queen Square National Hospital for the Paralyzed and Epileptic, and the Royal London Ophthalmic Hospital, City Road (late Moorfields).

Details as to hours of attendance or any further information may be obtained on application to Mr. L. A. Bidwell, F.K.C.S., the Dean of the College. Telephone, No. 82, Hammersmith.

3. **The Westminster Hospital** (see also Associate Metropolitan Schools of Medicine).—At this general hospital a course of ten post-graduate clinical demonstrations has been arranged for the summer of 1902, beginning on May 13, and to be held on every Tuesday at 4.30 P.M. The subjects will be as follows: Medical and Surgical Cases, Tuberculides of the Skin (May 27), and Gynæcological and Aural Cases. Drs. Allchin, Colcott Fox, Wills, Rivers, Pollock, Murrell, and Hebb, and Messrs. W. Turner, Spencer, Paton, and de Santi will give the demonstrations. The fee for the course is £1 1s., but holders of the ticket of the Associated Metropolitan Schools of Medicine (*vide infra*) are admitted without further payment.

This hospital is in Broad Sanctuary, S. W., opposite the Western Towers of the Abbey, and easily accessible. Applications should be made to Dr. Purves Stewart, 7 Harley Street, W., or to W. Wm. Turner, 53 Queen Anne Street, W.

4. **The London School of Tropical Medicine** owes its origin to the Right Hon. Joseph Chamberlain, Colonial Secretary, who, with the object of affording instruction in tropical medicine to officers in the colonial service, invited the committee of management of the Seamen's Hospital Society to establish a school in connection with their hospital.

The school was opened in October, 1899, and its advantages were offered to all medical graduates who wished to acquire special knowledge of tropical diseases. During the first two years of its existence some 170 graduates have passed through it, including several Americans.

It is located in a special building in connection with the Branch Hospital of the Seamen's Hospital Society at the Victoria and Albert Docks. This situation offers great advantages to such a school, as the hospital contains fifty beds, and to it all cases of disease occurring among the crews of the many vessels frequenting the great docks of London naturally find their way; for practically no other hospital or dispensary is available, except those of the Seamen's Hospital Society at Greenwich, Gravesend and East India Docks, which are feeders as regard tropical diseases of this branch. The nearest independent general hospital is the London Hospital, Whitechapel, which is distant over four miles. The hospital is also associated with the London Polyclinic. The school is about five and a half miles eastward from The Bank, City, E. C., and close to the Connaught Road Station, which is reached in twenty minutes by frequent trains from Fenchurch Street. A more central position would have been convenient for students, but as the committee points out it would have been difficult to secure clinical material, as Negroes, Lascars, Chinese, and Malays object to go far from their ships.

The appliances in the school are of the most modern character, the laboratories being fitted with every requisite, and the constant attendance of the medical tutor (Dr. C. W. Daniels of the British Guiana Medical Service), ensuring that all special diseases are demonstrated and investigated as opportunity arises. Bacteriology and animal parasitology are systematically taught. Pathological anatomy is demonstrated in the museum and in the post-mortem room, as opportunity may offer; the most approved methods of mounting microscopical preparations and of collecting, preserving and transmitting important vegetable or animal specimens are dealt with practically.

The following is a list of the cases of the more important tropical diseases admitted to the hospital during the two years ending October, 1901: acute malaria, 84; chronic malaria, 7; dysentery, 62; beriberi, 43; liver abscess, 11; leprosy, 4; guinea worm, 10; filariasis, 6; blackwater fever, 2; plague, 6; Malta fever, 5; hepatitis, 6; bilharzia, 1. Total, 247.

Students must be qualified medical practitioners, or be in the fifth year of their medical studies. (As a rule all are graduates). They can be provided with board and residence or partial board at the school, at moderate prices.

The hours of work are as follows: 10 to 11 A.M., ward work with note-taking; 11 A.M. to 1 P.M., systematic instruction by the medical superintendent; 2 to 4 P.M., pathological work, clinical instruction in the wards and out-patient department; 4 to 5 P.M., lectures on pathological work.

The lecturers are: Drs. Patrick Manson, Tanner, Hewlett, Andrew Duncan, Oswald Baker, W. J. Simpson, Sambon, and Galloway, and Messrs. Cantlie and Treacher Collins.

There are three sessions yearly of three months each, viz., from October 1 to December 31; from January 15 to April 14; and from May 1 to July 31.

The fees payable are: for a session of three months, £16 16s.; for a course of eight weeks, £11 11s.; for shorter periods special rates are charged, particulars of which may be obtained on application.

Students who have completed the curriculum and passed a satisfactory examination will receive certificates to that effect. Students have the privilege of attending the medical and surgical practice at the Dreadnought Hospital (for seamen) at Greenwich (also associated with the London Polyclinic). This hospital contains 225 beds.

The following hospitals are in the second group:

5. **The Hospital for Sick Children,** Great Ormonde street, Bloomsbury, W. C.—This is the largest of the children's hospitals. It contains 244 beds. It is centrally located and easily reached by omnibus or rail. Nearest "Tube" station, British Museum; Metropolitan Railway, Gower street. Lectures by members of the staff are delivered every Thursday at 4 P.M. They are free to graduates. The fees for attendance on the practice of the hospital are: For three months, £2 2s.; for a perpetual ticket, £3 3s. Applications should be addressed to the secretary at the hospital.

6. **The East London Hospital for Children** (107 beds), Glamis Road, Shadwell, E.—The hospital is within five minutes' walk of the Shadwell Stations, and there are frequent trains from Fenchurch

street, Liverpool street, and all stations on the Metropolitan and Metropolitan District Railways. Four minutes' journey from Fenchurch street and twenty-three minutes from Charing Cross (District). A certain number of clinical clerks and dressers are appointed every three months, both in the in-patient and out-patient departments. As the number of out-patients is very large, there is plenty of material for study, and a clerkship offers an excellent opportunity of learning pediatrics. This hospital is associated with the polyclinic (*vide supra*). A clinical lecture is given every week by a member of the staff of the hospital. These lectures are open to all gentlemen who are attending the hospital practice. Fees: for three months, admitting to the whole practice of the hospital and including a clerkship or dressership, £2 2s.; attendance for one month, £1 1s.; attendance for six months, £3 3s.; perpetual composition fee, £4 4s. Applications should be made to the Dean, Mr. H. Betham Robinson, 1 Upper Wimpole street, W.

7. **The London Throat Hospital,** 204 Great Portland street, W.—Nearest station, Portland Road on the Metropolitan Railway, three minutes' walk. Oxford Circus on the "Tube," ten minutes. Several lines of omnibuses pass the door. Clinical demonstrations on diseases of the throat, nose and ear are given daily by members of the staff, at 2 P.M., and on Tuesday and Friday evenings at 6 P.M. Operations daily at 9.30 A.M. Clinical assistants are appointed for periods of three months. Fees, one month's attendance, £1 1s.; three months' attendance, £2 2s.; perpetual ticket, £5 5s. Special post-graduate courses of demonstrations are held during the summer and winter, and advertised in the medical journals. Applications should be made to Dr. E. Furmin Potter at the hospital, or at 49 Queen Anne street, Cavendish square, W.

8. **The Hospital for Diseases of the Throat,** Golden square W.—This hospital is close to Regent street and Piccadilly; nearest "Tube" Station, Oxford Circus, five minutes' walk. Metropolitan District Railway, Charing Cross Station, three-quarters mile. Omnibuses to Piccadilly Circus. Forty beds. 50,000 out-patients yearly. This hospital is associated with the Polyclinic. Junior and senior clinical assistants are appointed. Considerable responsibility falls on the latter. Minor operations daily, except on Mondays, at 9 A.M. Clinical instruction is given daily in the out-patient department from 2.30 to 5 P.M., and on Tuesdays and Fridays from 7 to 10 P.M. Systematic courses of lectures with clinical and pathological demonstrations are given in the winter session. The fee is one guinea, but they are free to graduates who attend the practice of the hospital. Fees for the practice of the hospital: Three months, £3 3s.; six months, £5 5s.; perpetual ticket, £7 7s.

9. **Central London Throat, Nose, and Ear Hospital,** Grays Inn Road, W. C.—One and one-half miles from Charing Cross; nearest stations, Kings Cross (Metropolitan & G. N. R. Stations) and Chancery Lane on the "Tube." Omnibuses pass the door. Lectures are given in the winter session. Fees for regular attendance on the practice: Three months, £3 3s.; six months, £5 5s. Two clinical assistants to each surgeon are appointed from among gentlemen paying five guineas, but they must guarantee to hold office for six months at least.

A certificate is granted to clinical assistants on completion of their period of office, if they have diligently attended to their duties.

10. **Royal London Ophthalmic Hospital** (Moorfields Eye Hospital), City Road, E. C.—Located one mile to the north of the Bank. Nearest station, "Old Street," on the City & South London Railway ("Tube"). Omnibuses and tramcars pass the door. This is the chief eye hospital of the United Kingdom and as "Moorfields Hospital" has had a world-wide reputation. It has lately been moved to the present new building. It has 138 beds. Out-patients number about 33,000 yearly, or 100 a day. The year is divided into three sessions of about three months each, beginning in October, January, and May. A course of lectures and demonstrations is delivered each session by the staff on the following subjects:

I. The Use of the Ophthalmoscope. By the Staff. This class will be limited in number. Tuesdays and Thursdays at 7.30 P.M.; fee, £2 2s.

II. Errors of Refraction. By Mr. Lang. Mondays at 8 P.M.; fee, £1 1s.

III. External Diseases of the Eye. By Mr. Morton and Mr. Holmes Spicer. Wednesdays and Fridays at 1 P.M.; fee, £1 1s.

IV. Surgical Anatomy of the Eye. By Mr. Treacher Collins. Three lectures and lantern slide demonstrations at 8 P.M.; fee, £1 1s.

V. A Class of Operative Surgery. By Mr. Percy Flemming. Thursdays at 2.30 P.M.; fee, £3 3s.

VI. Tutorial Classes are held from time to time by the assistant surgeons, to give instructions in the various methods employed in the examination of cases; fee, £1 1s.

VII. Classes for *x*-ray work are held from time to time; fee, £2 2s. Occasional clinical lectures are given by members of the staff. Practical instruction in the pathology of the eye is given by the curator in the museum. The accommodation in the laboratory is limited. Fee for one month, £1 1s.

Perpetual students of the hospital are admitted to one course of lectures (except those on operative surgery) free. The fee for a perpetual student is £3 5s.; for six months' practice the fee is £3 3s.

American medical graduates are eligible for junior assistantships in the out-patient department and must serve for six months.

Clinical assistants must hold a diploma recognized by the College of Physicians of London or the College of Surgeons of England, and serve for one year, and after two years' service are eligible as chief clinical assistants. Applications should be made to the Dean, W. Holmes Spicer, who can be seen at the hospital on Wednesday mornings.

11. **The Royal Westminster Ophthalmic Hospital,** King William street, Strand, W. C.—Nearest station, Charing Cross, within five minutes' walk. Omnibuses in the Strand less than a furlong away. This hospital is associated with the Polyclinic. The teaching at this hospital is specially arranged to meet the requirements of advanced students and qualified men.

Patients are seen, and operations performed every afternoon, at 1 P.M.; two members of the staff being in attendance every day. The clinical material is abundant; besides the ordinary clinical teaching, during the regular work of the hospital, special clinical demonstrations are held on selected cases at a fixed hour. Once a month a clinical evening is held, at which a large number of ophthalmoscopic cases are shown.

A course of lectures is held on diseases of the fundus, illustrated by lantern slides. The remaining classes are more in the nature of practical demonstrations, and are confined to a limited number of men. They are as follows:

Instruction in the use of the ophthalmoscope, the principle of the instrument is explained, and the members of the class practice its use upon the artificial eye, and upon living eyes till they can use the instrument with ease.

Ophthalmoscope demonstrations on selected fundus cases, limited to a small number of gentlemen, who must be able to use the ophthalmoscope.

Practical Testing of Refraction.—This course consists in an exposition of the physics of refraction, and in practically estimating the refraction by the various tests in selected cases.

The following classes will be commenced at 4.30 P.M. on the dates given:

Mr. Hartridge—Mondays, Refraction, May 26. Mr. Adams Frost—Tuesdays, Lantern Lectures on the Fundus, May 27. Mr. Dodd—Wednesdays, Clinical Demonstrations, May 28. Mr. Roll—Fridays, Ophthalmoscope, May 30. Mr. Grimsdale—Operation Class (fee, £1 1s.), time by arrangement. Clinical Evening—The first Tuesday in each month. Patients are seen and clinical instruction is given daily from 1 P.M. Gentlemen wishing to join should send their names to the Hon. Sec., Mr. Adams Frost. Inclusive fee (except Operation Class) for six months, £3 3s. Perpetual, £5 5s., or the classes may be taken separately.

12. **Central London Ophthalmic Hospital,** Gray's Inn Road, W. C.—Nearest stations, see No. 9. This hospital has twenty-eight beds. Out-patient attendances, 30,000 yearly. Clinical assistants are appointed for three months at a fee of £2 2s.; for six months, £3 3s. A class of instruction in the use of the ophthalmoscope with demonstrations on cases are held weekly at 8 P.M., and also a weekly class on refraction with practical demonstrations at 5 P.M. The fee for each course is £1 1s., but they are free to clinical assistants.

13. **The Chelsea Hospital for Women** (fifty-two beds), Fulham Road, S. W., two and one-half miles S. W. of Charing Cross.—Nearest station, South Kensington (District Railway). Five minutes' walk; omnibuses pass the door. Clinical assistants are appointed for three months. They must attend at least twice weekly at 2.15 P.M. They must be graduates. They are eligible to receive a certificate at the end of their term of office, provided their attendances have been regular. Fee, £8 8s.

14. **The Hospital for Women,** Soho Square, W. C. —Nearest station, Tottenham Court Road "Tube," three minutes' walk. Omnibuses in Oxford street and Charing Cross Road close by. Clinical assistantships are open to graduates only. Each assistant attends twice a week in the out-patient department, the number attending each day being limited to three. The fees are, for one month, £3 3s., or for three months, £8 8s. Application should be made to the dean, Dr. Bedford Fenwick, at 20 Upper Wimpole street, W.

15. **Queen Charlotte's Lying-in Hospital,** Marybone Road, N. W., about two miles N. W. of Charing Cross—Nearest stations, Edgware Road (Metropolitan), two minutes' walk; Marble Arch "Tube," ten minutes' walk. Fifty-six beds. This hospital is the chief maternity hospital of London, and the only one at which male students and practitioners are received. The rules for students differ from those for graduates, but all are strict, in order to avoid risk of infection. Graduates must be prepared to devote their whole time to their work at the hospital and are, of course, not allowed to attend necropsies or any cases medical or surgical, outside the hospital. Fee for four weeks, £8 8s. There is a new residence for students opposite to the hospital. Terms, £1 15s. per week, including board and attendance. Applications should be made to the secretary.

16. **National Hospital for the Paralyzed and Epileptic,** Queen Square, Bloomsbury, W. C.—About one mile to the north of Charing Cross. Stations as for No. 5. Two hundred beds. This is a most important hospital with a very distinguished staff, including Drs. Bastian, Ormerod, Ferrier, and Gowers, Taylor, Risien, Russell, Beevor and Tooth, and Messrs. Victor Horsley and Ballance. Drs. Hughlings Jackson and Buzzard are consulting physicians and do not now teach at the hospital. The out-patient practice is open without fee from 2 P.M., on Mondays, Tuesdays, Wednesdays, and Fridays.

The in-patient practice is open to those who hold in-patient clerkships, and practitioners may on certain days accompany some of the physicians and be present at surgical operations.

Clinical clerks of physicians to out-patients are appointed for three months, and in-patient clerks are appointed to each physician for three months.

Three courses of lectures and clinical demonstrations are given in each year, *viz.*: winter course, October, November and December; spring course, January, February and March; summer course, May, June and July.

A clinical lecture or demonstration will be given weekly in the theatre on Tuesdays at 3.30 P.M. Surgical operations at 9 A.M., on Tuesdays, by Mr. Victor Horsley and Mr. Ballance.

The museum is available for the prosecution of special work under the pathologist, for which a separate fee is charged. The out-patient hospital practice and lectures are free, but for in-patient clerkships a fee of £2 2s., for three months, or £3 3s., for six months, is charged, or £5 5s., for life. Applications should be addressed to the dean of the medical school, at the hospital.

17. **Hospital for Consumption and Diseases of the Chest,** Fulham Road, Brompton, S. W. Stations, etc., as for No. 13 (321 beds).—This is the chief chest hospital in London. Three courses of lectures and demonstrations are given yearly at 4 P.M., on Wednesdays, as follows: spring course, January to March; summer course, May to July; winter course, October to December.

These lectures are open to graduates on presentation of their cards.

A clinical assistant in the out-patient department is appointed to each assistant physician. Attendance, twice a week at noon.

Clinical clerks are appointed to each physician to in-patients. Attendance in the wards is required twice a week from 10 A.M. to 12.30 P.M., and in the afternoon during the physician's visits. These appointments are tenable for three or six months, and are only open to graduates or students in their fifth year. Appointments are made in January, April, July, and October. The fee for the practice of the hospital is £1 1s. per month, or £2 2s. for each period of three months, or a perpetual fee of £5 5s. may be paid. Clinical assistants and clerks must enter for the practice of the hospital.

18. **Bethlem Royal Hospital for Lunatics,** St. George's Field, Lambeth, S. E. On the Surrey side of the Thames, about one mile from Charing Cross—nearest station, Elephant and Castle (South London "Tube"); omnibus from Charing Cross and tramcars from Westminster Bridge, 300 beds. This celebrated institution, notorious in the literature of the English tongue as "Bedlam," was founded in 1247 A.D., incorporated by Henry VIII. in 1547, and removed from London Wall to its present site in 1815. Lectures are given to classes from the Polyclinic from time to time. Clinical demonstrations are also given twice a week to gentlemen attending

the practice of the hospital. Fee for the practice, three months, £3 3s.

19. **Great Northern Central Hospital,** Holloway Road, N.—About four miles north of Charing Cross. Ten minutes' walk from Finsbury Park and Holloway Road Stations (G. N. Ry.), and from Upper Holloway Station (Midland). Omnibuses pass the doors. This is a general hospital of modern construction (1895) and has 159 beds. There are the usual special departments. The pathologist delivers a course of lectures yearly. Graduates may, on the recommendation of a member of the staff, be appointed clinical assistants to out-patients for six months without payment of fees. Only two assistants are allowed to each physician or surgeon.

Clinical clerks in the various departments are appointed for three months either in the in- or out-patient departments. Pathological clerks are appointed for a like period. Fees, £2 2s. for three months, and £1 1s. for each additional three months' teaching. Applications to P. T. B. Beale, Esq., F.R.C.S., honorable secretary to the medical committee, 61 Grosvenor street, W.

20. **The Lock Hospital,** Dean Street, Soho W.—For location, see No. 14. For venereal diseases. Pupils are appointed either graduates or senior students. Applications should be made to the secretary, London Lock Hospital, Harrow Road, W.

21. **The Metropolitan Asylums Board.**—The fever hospitals under this board, which are supported by the rates, *i. e.* municipal taxation, will be made available for instruction of senior students and practitioners on and after May 2, 1902. The board is pleased to afford facilities for post-graduate instruction to American medical graduates. The hospitals are located in the outer zone of the metropolis, and are ten in number, containing a total of 4,500 beds. The classes at four of the hospitals are already full. The next course will begin in October, 1902. Classes are held on two or three days a week. Fees, £3 3s. for a two months' course, or £4 4s. for a three months' course. There are stringent rules as to disinfection, and brown holland suits and caps are provided and must be worn in the hospitals. Applications for further particulars should be addressed to the clerk of the Metropolitan Asylums Board, Victoria Embankment, E. C.

22. **National Orthopædic Hospital,** 234 Great Portland street, W.—For situation, etc., see No. 7. Sixty beds. Clinical instruction is given by the surgeons, and occasional lectures are delivered. Fee for the hospital practice for one month, £1 1s.; for three months, £2 2s. Application shall be made to the secretary of the medical board.

23. **Asylum for Idiots,** Earlswood, near Red Hill, Surrey.—Trains fom Victoria and London Bridge stations, about forty-five minutes' journey; 600 beds. American graduates are invited to visit and inspect the institution. The medical superintendent will be happy to afford opportunities for clinical study on application to him at the asylum. Classes from some of the London medical schools visit the asylum. London office, 36 King William street, E. C.

In the third group are the great general hospitals to which complete medical schools are attached. These are thirteen in number, including the Royal Free Hospital and the attached Women's School. All of these hospitals have special departments for eye, throat, ear, skin, gynecology, and dentistry, and some have also electrical and orthopedic departments. The amount of clinical material is very great, especially in the out-patient departments, but in the special departments the teachers are not all specialists, and the value of the instruction is often less than of that to be obtained in special hospitals. The size of the classes also in many cases detracts from the advantages offered to graduates who have to mix with the regular students of the school.

24. **The Metropolitan Schools of Medicine.**—Of these hospitals nine are associated together for post-graduate instructions under the title of "The Metropolitan Schools of Medicine," having a central office. Address, "West Wing, Examination Hall, Victoria Embankment, W. C." This is in the building belonging to the conjoint board of the Royal College of Physicians and Royal College of Surgeons, used for examinations and lecture purposes. It is close to the Strand and Waterloo Bridge, and less than half a mile east of Charing Cross. Of the above nine hospitals the Westminster alone (see No. 3) has special post-graduate demonstration classes outside the association. Fees—For three months, £7 7s.; for six months, £10 10s., and any longer period at the further rate of £5 5s. for each additional six months. These cards admit the holders to any part of the clinical instruction of the hospitals concerned, which is open to their ordinary pupils. This association includes nine out of the twelve medical schools of London, viz., those attached to the following hospitals: Charing Cross, 180 beds, central district; Guys, 690 beds, southeastern district; Kings College, 221 beds, central district; Middlesex, 330 beds, central district; St. George's, 356 beds, western district; St. Mary's, 281 beds, northwestern district; St. Thomas's, 572 beds, southern district; University College, 185 beds, northern district; Westminster, 215 beds, southern district. The districts noted are not postal districts, but denote parts of Central London. A general time-table of the arrangements is furnished with each admission card. A list of operations to be performed at the hospitals can be seen daily at the secretary's office, which is close to the Strand. Applications to the honorable secretary as above.

25. **St. Bartholomew's Hospital,** Smithfield, E.C.—Nearest stations, Farringdon street (Metropolitan R.) and Post-office ("Tube"); omnibuses to Giltspur street, Holborn Viaduct; 674 beds. This is the oldest and wealthiest—indeed the only wealthy hospital in London. Like the associated schools, it offers no special teaching for graduates, but allows them the run of the clinical side of the hospital for £15 15s. a year, or £7 7s. for three months. There are electrical and orthopedic departments here. The school has the largest number of students of any in London, which is a drawback from a post-graduate standpoint. Applications to be made to the warden, St. Bartholomew's Hospital, E. C.

26. **The London Hospital,** Mile End, E.—Three miles east of Charing Cross, one and a quarter miles east of the Bank Stations, Whitechapel (Metropolitan District R.), opposite the hospital. Trams and omnibuses pass the door; 800 beds. This is the largest general hospital, and offers an unequalled wealth of clinical material. In 1901 it treated 12,746 in-patients and 161,762 out-patients. It contains special wards for Hebrews—who abound in the neighborhood—where "kosher" food, etc., only is given; also children's wards. Maternity wards are about to be opened. There is also a very complete installation for the Finsen light treatment of lupus, etc. American graduates are eligible for three months' clinical clerkship or dressership and twelve months surgical and medical practice for the fee of £10 10s. Attendance on lectures will be free unless certificates of attendance are required. An additional clinical clerkship or dressership for three months may be had on payment of five guineas.

Applications to the warden, London Hospital Medical College, Turner street, Mile End, E. The hospital will well repay a visit.

27. **London School of Medicine for Women.**—Royal Free Hospital, Gray's Inn Road, E. C. (For stations, etc., see No. 9); 170 beds. Ladies who are medical graduates can occasionally be admitted to attend hospital practice without holding a post, when the accommodation will permit, and must pay the registration and hospital fees. Fees, registration, £2 2s.; hospital, three months, £6 6s.; six months, £10; one year, £15 5s. Special classes by permission of Vice-Dean. Applications, "accompanied by a personal reference" to the Vice-Dean, Miss Cock, M.D., or to the honorable secretary, Miss Douie, M.B., M.A.

The Hotel Accommodation in London has been much improved and increased of late years. Besides the great hotels of the first class, such as the Cecil, Savoy, Victoria, Grand, Metropole, Carlton, etc., around Charing Cross, and less pretentious large hotels, such as The Langham, Great Central (Marylebone), Russell (Russell Square), Grosvenor (Buckingham Palace Road), First Avenue (Holborn), Midland (St. Pancras), there are a number of smaller hotels of modern construction and moderate charges in the neighborhood of the Strand and Bloomsbury. Some of these are Temple Howard, Arundel, and Londoun hotels, all on the Victoria Embankment; Horrex's (Norfolk street and Strand); and several good temperance hotels, viz., the Kingsley (Hart street), Thackeray (Great Russell street), Esmond (Montague street), West Central (Southampton Row), all four in Bloomsbury. Boarding houses and lodgings are abundant in all parts of London. The advertisement pages of the daily papers, and the secretaries of hospitals, will afford full information of these.

In addition to the facilities stated above, courses of lectures are delivered each spring at the Royal College of Physicians, Pall Mall (corner of Trafalgar Square), and at the Royal College of Surgeons, Lincoln's Inn Fields, W. C., where the Hunterian Museum is open to American graduates on presentation of visiting cards. Nearest station, Chancery Lane ("Tube"). Omnibuses to Great Turnstile, Holborn, or Law Courts, Strand.

EDINBURGH.

In Edinburgh, arrangements for post-graduate instruction are not very plentiful, and information is not at present forthcoming as to details, but application should be made to Dr. Logan Turner, 27 Walker street, Edinburgh, who will forward information when the arrangements are complete.

DUBLIN.

There is no organized post-graduate instruction in Dublin, except as regards midwifery, which is taught to graduates at the Rotunda Hospital, Britain street, whither a good many graduates from England go to study. It consists of two distinct hospitals, one into which, on an average, 1,800 cases of labor are admitted yearly, and an auxiliary hospital for uterine and ovarian disease, which treats about five hundred patients a year. Lectures and clinical instructions are regularly given. Accommodation is provided for a limited number of resident pupils, most of whom the Master (Dr. R. D. Purefoy) states are senior qualified men. Fees: Interne pupils, six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s. Each month after the first, if registered separately, £4 4s.; externe pupils, six months, £10 10s.; three months, £6 6s. Applications should be addressed to the Master at the hospital.

At Dr. Steevens's Hospital, Steevens' Lane, close to King's Bridge Station in the west of Dublin, four medical and eight surgical resident pupils are accommodated. These posts are often held by graduates. There are separate clinics for eye and ear, skin, throat, teeth, and diseases of women. Fees for hospital practice, nine months, £12 12s.; six months, £8 8s.; three months, £5 5s. Residence, each three months, £10 10s., which includes fee for hospital practice. The session begins on the first Monday in October. Applications to Dr. W. S. Haughton, at the hospital.

American graduates visiting the United Kingdom and intending to study, will do well to take with them their diplomas, or some other formal certicates that they are duly qualified practitioners, as at some institutions such documents may be asked for.

POST-GRADUATE INSTRUCTION IN GERMANY AND AUSTRIA.

The American post-graduate in medicine, arriving upon German soil, will find it no easy matter to take a comprehensive survey, and to select from that wide scope of opportunities the line of work he demands, or learn how to obtain it.

BERLIN.

In a general way, Berlin has to-day most to offer the student in Germany. The university itself is the largest and, with an abundance of clinical material and excellent teaching facilities, deserves to be the Mecca which foreign medical students have made it in past years.

Aside from the university lectures, which are framed to meet the requirements of the undergraduate, but which are also to be recommended to the physician seeking more advanced study, there are numerous private courses and clinics, conducted usually by associate professors or assistants. These latter courses are run from month to month at the various polyclinics or dispensaries, the ambulatory material being used for teaching purposes.

It may be well to state here in the outset that the term "university lecture," which occurs frequently in what follows, is used in contradistinction to private courses or clinics; the distinction is made on account of the custom of visitors and foreign students to attend these lectures without paying the university fee imposed upon the undergraduate.

The private courses, on the contrary, are made up of small classes; it is presupposed that the participants are physicians and are well grounded in the rudiments and desire more advanced work in these subjects. The prices for these private courses vary, the operative courses being the more expensive.

To enter more in detail demands an analysis of the subject at hand, and a special consideration of the various departments in medicine.

Surgery.—The surgeon to the Königliche Charité, Professor König, holds a university clinic daily from 9.30 to 11 o'clock A.M. The material presented is varied, and is so selected that in the course of the year the undergraduate student obtains a general survey of the various departments of surgery.

To the average hospital graduate, or the physician in active practice, this clinic will be found somewhat elementary, with the exception, perhaps, of surgery of bones and joints, in which field the clinic is particularly rich. Hardly a day passes in which one or more such cases are not presented and operated upon.

Von Bergmann also holds a university clinic,

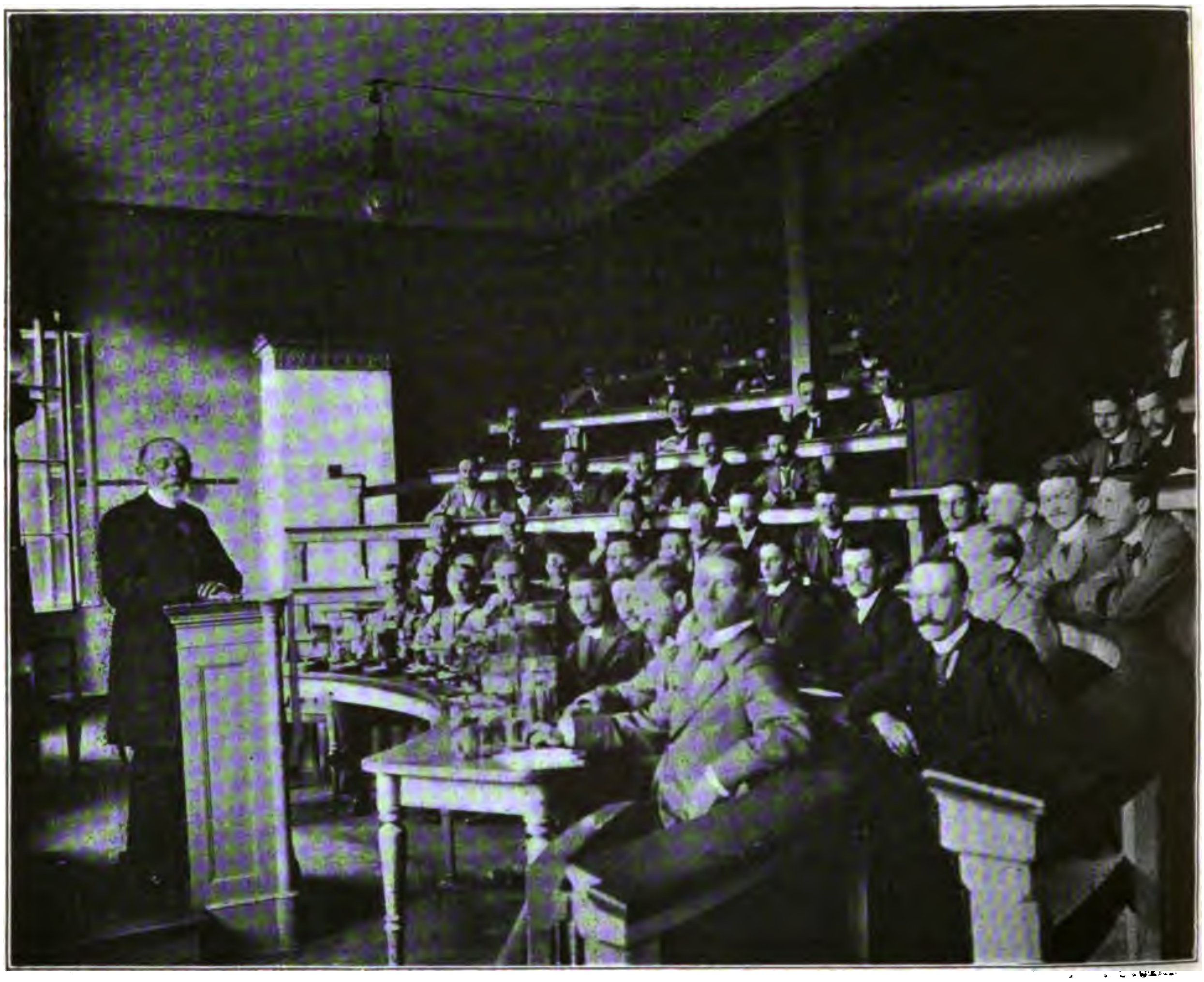

FIG. 1.—PROF. VIRCHOW'S LECTURE AT THE UNIVERSITY OF BERLIN.

the material being, perhaps, the most varied in Europe. The hospital is one of the city charity organizations, "Rettungs Gesellschaft" or Life-Saving Society (Ziegel Str. No. 5).

Von Bergmann's lectures are held every afternoon from 2 to 4 o'clock, and are, perhaps, the most scientific dissertations upon surgery that are to be heard in Germany. Even the American with a very fair understanding of the German language experiences much difficulty at first, as do also the German students, in understanding Bergmann, his articulation, owing to facial paralysis, being very indistinct.

This clinic is run in a most methodical manner: The case is presented, the history read, the clinical features are demonstrated, and then a short dissertation upon the pathology, after which the operation is performed.

In past years, during the month of April, von Bergmann gave an early morning course in operative surgery on the cadaver. Whether or not this is to be continued cannot now be determined.

Lexer, the docent to this clinic, holds a university lecture and clinic on minor surgery between the hours of 5 and 7 P.M., three times a week, in von Bergmann's amphitheatre, and, on alternate afternoons, an operative course on the cadaver during the same hours. These university courses are all attended by Americans free of charge.

Besides these courses the first assistants of the two divisions also give operative courses upon the cadaver. These later courses are very good, and as they are largely patronized by the post-graduate student, the hours at which the courses are given are arranged at the convenience of the students. The fee is fifty marks a course.

Perhaps, the greatest technician, if not also the foremost thinker, in surgery in Berlin is Professor Israel, chief of one of the life-saving societies (August Strasse No. 12).

Israel does not hold a university professorship nor clinic. His operating room is small and accommodates only six or eight spectators. He operates Mondays, Wednesdays, and Fridays from 12 to 2 o'clock. The service is general surgery. Nowhere in Europe will the visitor find exercised stricter attention to asepsis on the part of the surgeon and entire corps of assistants, nor more determined and careful execution of the operation.

The visitor who expects to find Israel doing kidney surgery daily will be disappointed. Israel's large statistics upon surgery of the kidney is the result of the accummulation of years of observation. If, however, he be fortunate enough to be present at such a time, he will hear, in a few words, a discourse upon Isreal's ideas and conclusions upon this subject. The visitor is welcome each operating day and, for the asking, will be mailed postal cards with list of operations for the succeeding day.

Körté, the surgeon to the Krankenhaus am Urban, operates daily from 12 to 2 o'clock. Urban can be reached by trolley car in about one-half hour from the center of Berlin.

It is customary here as elsewhere when the visitor is given entrée to the operating room, and where students are not required to be present, to hand in one's card and be presented to the surgeon in charge.

The service here is also general. Körté's technique in abdominal surgery is considered brilliant, and the American visitor will be pleased to note the similarity between the technique adopted by him and that practised by American surgeons.

The Krankenhaus Moabit is reached by trolley car in three-quarters of an hour. Here Sonnenberg operates afternoons, beginning at 2 o'clock. There is very little here specially to entice the visitor. The service is general and appendectomies are scarce. Now and then in the wards is to be seen a case of acute appendicitis which is treated expectantly; if abscess occurs, operation is still further delayed until adhesions are firm, and later the abscess is drained, all being done in the old way that was practised ten and fifteen years ago.

Hahn, at the Friederichshain Krankenhaus, is one of the younger men, who encourages visitors and treats them cordially.

Gynecology.—The gynecologists giving university courses are Gusserow and Ohlshausen; Gusserow at the Charité and Ohlshausen at the Frauenclinic.

Both these clinics are visited by the foreigner. The general opinion of the American student is that these clinics are too elementary, and he finds, as a rule, that he can spend his time to better profit.

Ohlshausen holds an operative clinic from 8 to 10 A.M., and lectures from 10 to 11 A.M. Gusserow lectures at the Charité from 11 to 12 A.M., and operates later. A point in evidence that the above-mentioned clinics do not supply the demand of the American student is that they do not attend them as a rule, but enter a course given by two of the assistants of Gusserow. This is a practical course in diagnosis at the polyclinic, and meets three times weekly. The students examine about eight patients each day. The course is given by Blumreich and Wolf, and costs fifty marks a month. Therapy and the use of pessaries is also taught and, to a large extent, practised by the students.

Aside from these two university courses, and the private post-graduate course mentioned above, are numerous private hospitals where visitors are welcomed, such are the private institutions of Dührrsen, Makinroth, Orthmann, and others.

One of the best private post-graduate courses in gynecology is that of Orthmann. He gives two courses, the one in gynecological diagnosis, a practical course of examination of ambulatory patients, and, on alternate days, an operative course on the phantom, in which each member of the course performs all the operations. These courses cost seventy-five marks each and are to be highly recommended. These two courses are carried out by Orthmann himself, who has succeeded Martin, and gives the same couse that his predecessor established. The course is limited to six men, lasts one month, and is held at his private hospital on Elsasser street. The student has also the option of seeing all other operations performed.

Landau has a very fine institution, and gives a course similar to that of Orthmann with the exception of the operative course. The price for this course is also the same as that of Orthmann's,

FIG. 2.—TYPICAL WARD OF BERLIN CITY HOSPITAL; PROF. KOENIG

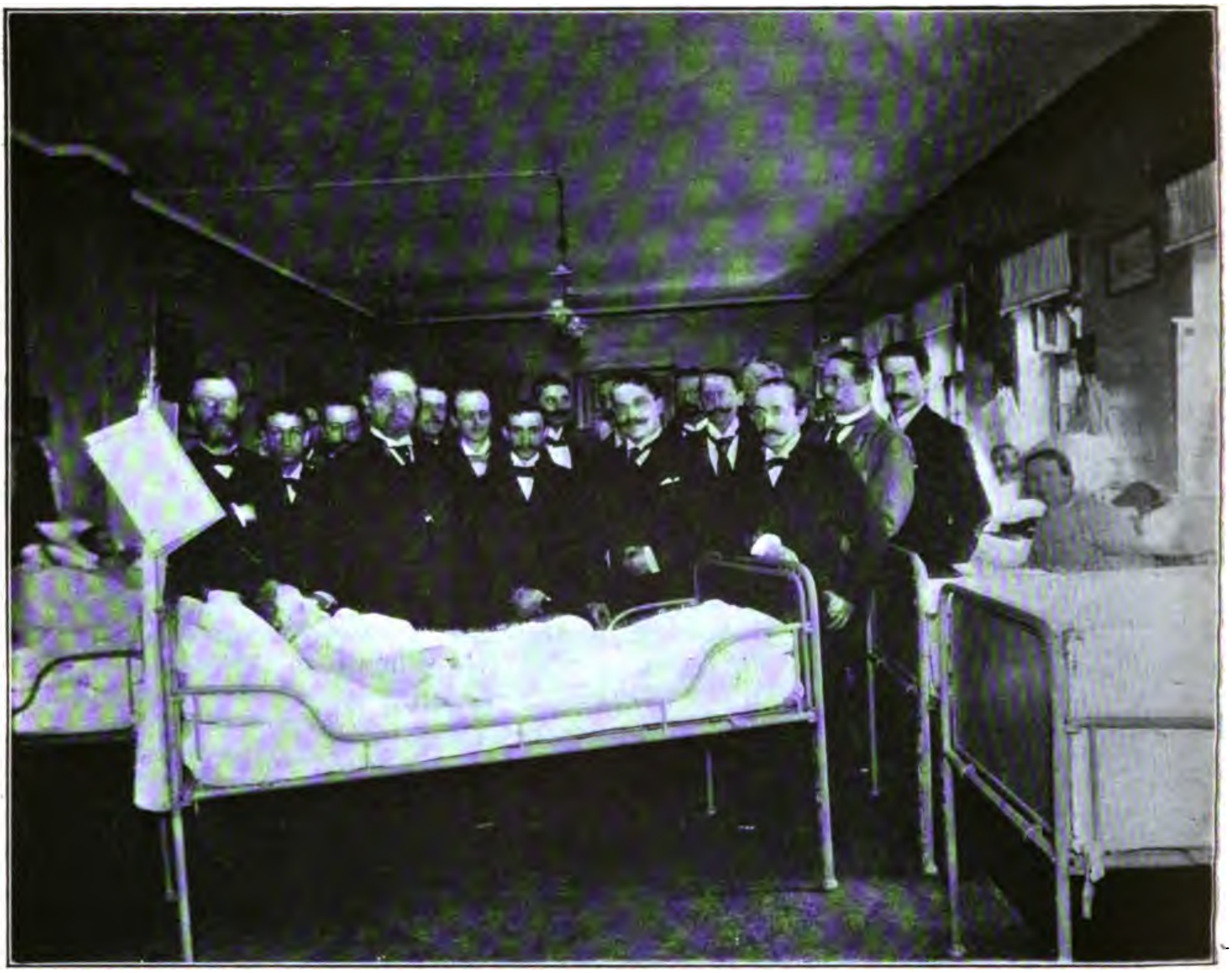

FIG. 3.—A WARD IN THE CHARITÉ HOSPITAL, BERLIN, PROF. V. LEYDEN.

An additional advantage to the student in associating himself with this institution is the well-equipped pathological laboratory. In conjunction with the course in gynecology, Pick gives a course in pathological anatomy and also a special course in gynecological pathology. Landau is very amiable to visitors, conducts them through his wards, and invites them to witness operations.

Internal medicine in Berlin is not made as accessible to the post-graduate student as it is in Vienna; a comparison here is, perhaps, out of place. In a general way it may be true that thought in internal medicine in Berlin is somewhat in advance of that in Vienna; that is, that the pure science of medicine is worked up more thoroughly.

The American physician in search of practical work in this field will be surprised to know with what ease he can become a voluntär (voluntary assistant) in some of these clinics. Leyden, more particularly, is rather free with this courtesy, and often has several Americans working in his wards and laboratories, who remain there for an unlimited length of time free of charge, and who, later on, in their service are entrusted with greater responsibilities.

Individual research is encouraged by the professor and his assistants, and much is done to facilitate the work of the student.

It might be well to state at this point that in most instances it is quite unnecessary to present a letter of introduction in order to be received by most of these men; the visiting card very often is all that is required.

Gerhardt, Senator, and Leyden all hold university clinical lectures at different hours during the day. These lectures, like other university lectures, are paid for by the undergraduate German student, who is matriculated in the university, but are frequented daily by foreigners graduated in medicine who do not pay and are cordially received.

Senator's clinics are the most popular in internal medicine among the Americans. Gerhardt's and Leyden's are more elementary and more within the scope of the undergraduate student.

Strauss, the assistant of Senator, gives a practical course in internal medicine in Senator's wards. This is one of the very few courses in internal medicine given in Berlin, conducted in the manner of internal courses in Vienna. The course is one of daily instruction, two hours at the bedside, including theoretical lecture, each course covering a period of one month, and costs seventy-five marks.

Dermatology.—The skin clinics of Professors Lassar and Lesser are also university clinics to which the foreigner is invited. If a comparison be also allowed here, it may be said that the American student in this particular line can get far more in Vienna than he can in Berlin. Both of these clinics are held in large rooms, where the student does not come in contact with the patient; sees him only at a distance or close by only for a moment; whereas, in Vienna his relation with the patient becomes more intimate. Joseph, who has a private skin clinic, gives a private course in diseases of the skin, in which the system is modeled after that of the Vienna school. This course, which is by all means the best, is of one month's duration, costs 100 marks, and is to be highly recommended. Laboratory work in the pathology of the skin is included.

Heubner, the professor of skin diseases at the "Charité," holds university clinics daily from 12 to 1 P.M. This clinic is also considered too elementary by the American post-graduate student.

Pediatrics.—Baginsky gives a course at the Kaiserin Friedrich Spital, which is, probably, one of the best to be had in Europe. This course also covers the period of one month, and costs one hundred marks. The abundance of material here, and the facilities for pathological work, make this clinic unparalleled. A number of Americans who have taken courses here for one or two months, and who have cared to continue the study of this specialty, have been shown the courtesy of being allowed to continue their work and follow lines of individual investigation for an unlimited length of time. Another course on diseases of children is given by Cassel from 12 to 2 P.M. at his polyclinic. The price of this course is 50 marks a month.

Diseases of the Nose and Throat.—A very excellent course is given by Fränkel (Ziegel Strasse No. 5) from 5 to 7 P.M., a large amount of material is put in the hands of the students and treatment is largely entrusted to them.

Jansen gives a university course in rhinology to the undergraduate students, consisting of lectures and practical work (Karlstrasse No. 35). The course is seldom frequented by Americans. The visitor to Berlin will find it to his interest to see some of Jansen's operations upon the accessory sinuses of the head. Not alone are these operations bold and followed by considerable deformity, but elsewhere in Germany, and particularly in Vienna, are entirely discarded, this work being one almost exclusively intranasally.

Diseases of the Stomach.—The university lecture is given by Ewald. This includes dietetics and a practical course in diagnosis at the Augusta Krankenhaus.

Boas also holds a university clinic similar to the preceding. American students are frequently permitted to enter this clinic as voluntary assistants.

A course that is planned more particularly for advanced students is given by Cohnheim at his polyclinic. The course lasts one month and costs 100 marks. Cases are clinically demonstrated and examined by the students; the chemical and microscopic examination of stomach contents and fæces are also made. This course is by far the most popular among post-graduate students. The course given by Kutner is, in the main, the same as that of Cohnheim.

Neurology.—A university course upon diseases of the nervous system is given twice a week by Oppenheim. This clinic consists of demonstration of cases, together with a theoretic lecture. In conjunction with this is given a laboratory course upon the anatomy and pathology of the nervous system. Students desiring to specialize in diseases of the nervous system are given every opportunity for study, also laboratory facilities free of charge.

FIG. 4.—PROF. GERHARDT OF THE UNIVERSITY OF BERLIN, CHIEF OF THE DEPARTMENT OF LARYNGOLOGY AT THE CHARITÉ HOSPITAL.

Another university course on diseases of the nervous system is given every afternoon between 5 and 6 by Professor Mendel (Dorotheen Strasse No. 8). Although this is a university course, it is rarely frequented by undergraduate students, but well attended by foreign visitors. It is customary for the American student to add this course to his daily curriculum. This course is also enjoyed free of charge, and is one of the best clinics on diseases of the nervous system to be heard in Europe.

The university course on mental diseases is held at the Charité by Professor Jolly, between the hours of 11 and 12 o'clock. The material is very abundant and facilities are given the foreigner to work in this department as voluntär. A private course in electrodiagnosis and nervous diseases is

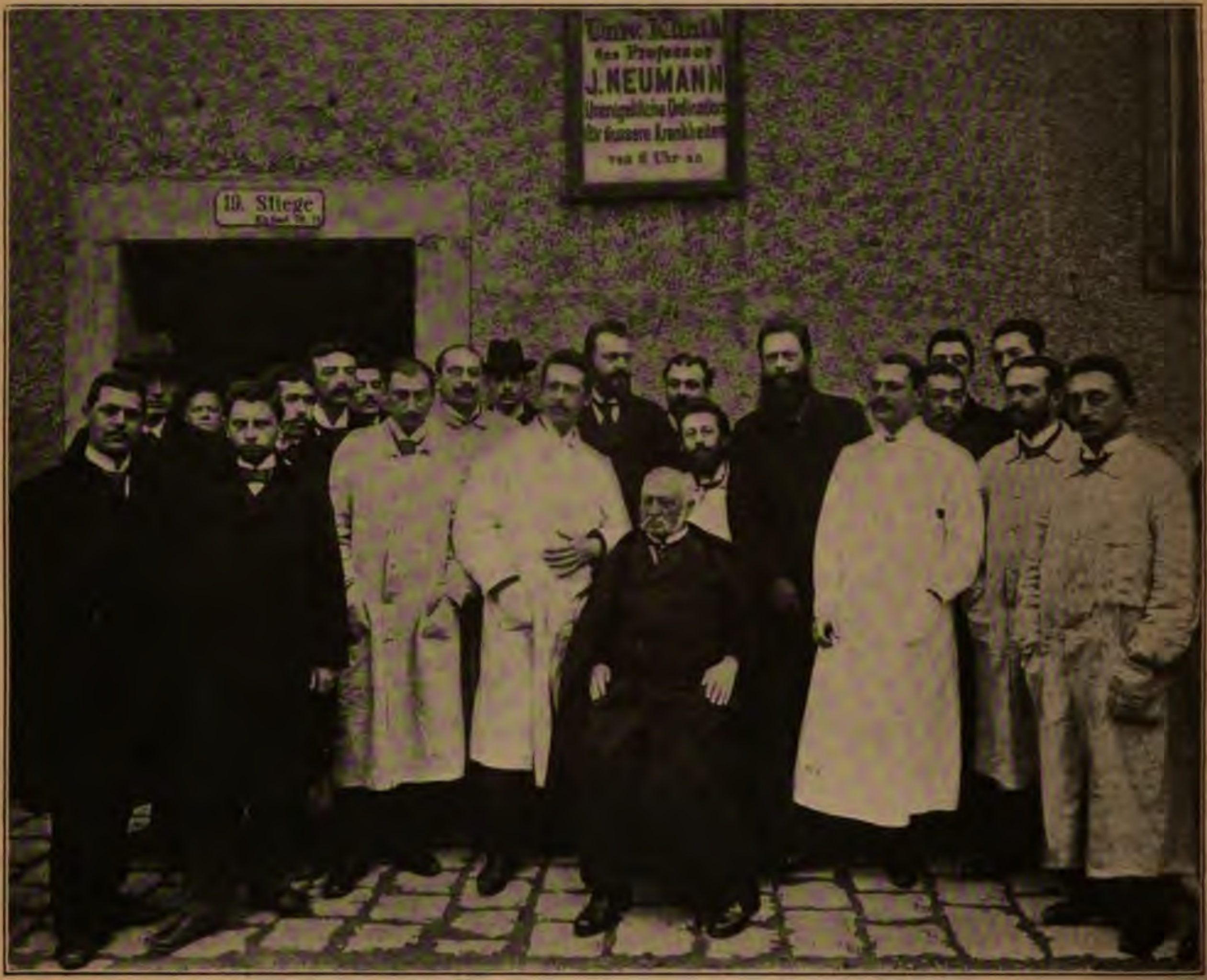

FIG. 5.—PROF. NEUMANN AND CLASS. SHOWING THE ARRANGEMENT OF STAIRWAYS LEADING TO THE CLINICS AT THE UNIVERSITY OF VIENNA.

given by Toby Cohn. The course costs 50 marks, and is to be recommended.

Cystoscopy.—In recent years the Americans in Berlin have created a demand for theoretical and practical work in cystoscopy. The German hospital assistant will often go far out of his way to make rash promises in order to earn an American dollar, and as a result there are a number of such courses given by men who have neither the material nor the requisite learning.

Both Uitze and Caspar, give courses upon the theory of cystoscopy, but what the American demands in this field is practical work. It might be well then to enumerate here only two courses, both of which include a fair amount of practical work, at least enough to enable the student to continue practical exercises upon material which will later come to him.

The one course most to be recommended is that given by Jacoby, first assistant to Uitze. This course is given upon the male with phantom exercises and a thorough survey of the theory. The course costs 100 marks and is given at Jacoby's residence, Kônig Str. No. 47.

The other course upon the female by Knorr (Grosse Frankfurter Str. No. 51) is also very good, but one is not taught the difficulties encountered in the male bladder. In the female bladder the Germans have not adopted direct cystoscopy as advanced by Kelly, but use a modified Uitze instrument.

Orthopedics.—Heretofore a very excellent course has been given in orthopedic surgery by Wolff and Joachimsthal (Karl Str.). Owing to the recent death of Wolff, post-graduate course work in this field will, probably, be rearranged. A limited number of Americans are permitted to work in this clinic without charge.

Professor Zabladowsky gives a course on massage, for which he charges 50 marks a month; the student is taught the various technicalities of this art, and is allowed to practice upon patients.

VIENNA.

Surgery.—A large number of Americans go to Vienna, hoping to find there good courses of study in surgery. Many of them are disappointed. The student who comes directly from the medical college, or who has had an inferior surgical training in a small hospital, or whose practical work in surgery has only been that which he has been enabled to do during the first years of his practice, will find the university lectures and clinics of Gussenbauer and Eiselsberg much to his liking. Both of these clinics are held at the Allgemeiner Krankenhaus every morning. These clinics are framed for the undergraduate student. There is scarcely a clinic anywhere in the world which deals so thoroughly and covers the ground so well as these. Föderl and Friedlander, the assistants respectively of Gussenbauer and Eiselsberg, give also courses in surgical diagnosis. The price for these courses varies according to the number of men in the course, the assistants demanding that their time be paid 20 gulden an hour. The time at which these courses are given is arranged to suit the convenience of the students. These two courses supply the demand of students who previously had not the advantage of seeing surgical conditions from a clinical and diagnostic standpoint They are invited to the operation, and cases during convalescence are again presented.

Both Föderl and Friedländer also give operative courses on the cadaver. The student performs the operation and learns practically the technique the choice of operation lies with the students.

These courses are not all arranged for the advanced student. The man who wishes to do more advanced or special surgery must make special arrangement with the assistant, telling him exactly what he wants, together with arrangement of price, inquiring also of an assistant who is best versed in that particular branch. Almost any operative work on the cadaver can be had. A student wishing to do operations on the cadaver upon the accessory sinuses of the head may associate himself with one or two other men desiring the same work, and arrange with one of the assistants of Chiari or Kochier in rhinology, and within a very few hours obtain that work. Or if he care to work up surgery of the rectum, he need only to present himself to Hochenegg, who gives such a course.

Aside from these courses there is much in surgery to be seen. Both Hochenegg and Gersuny receive Americans very cordially at their polyclinics. Frank has his own wards in the Krankenhaus, but gives no courses.

Internal Medicine.—The clinical lectures of Nothnagel and Neusser are both given at the Allgemeines Krankenhaus every morning. Both are university lectures. Again the distinction must be made that Nothnagel's clinic is well attended by undergraduate students, whereas Neusser's clinic is incomprehensible to the undergraduate, and the lecture room is entirely occupied by physicians.

Neusser's lectures are, probably, the finest series of clinical dissertations to be heard in Europe.

Special diagnostic courses in internal medicine are given by the assistants of the above clinics. Kovacs, a former assistant of the Clinic Neusser, now Primarius and in charge of his own wards, gives the best clinic in Vienna. This course is limited to ten men and costs 30 gulden ($12) a month. It is very difficult to enter this course, inasmush as the places are so in demand that one student holding a place reserves it or gives it up with the provision that upon a certain date the place falls to the candidate he names.

Other courses, certainly very excellent, are also given by Türk and Stejskl in Neusser's wards. These courses are also practical at the bedside and cost 30 gulden a month.

Türk also gives an excellent course upon the blood. The course is practical and limited as regards number of participants by the students themselves. Türk advises that not more than four men enter at one time. The course costs 8 gulden for one hour of the instructor's time, the course usually being completed in from eight to twelve hours.

Hammerschlag, an assistant of Nothnagel, gives, by request, a course, of about four to six weeks' duration, upon diseases of the stomach. This course is also practical, including bedside and laboratory work.

Pathological Anatomy.—Courses in this subject in Vienna are so arranged as to enable the student to cover as much ground in a comparatively short

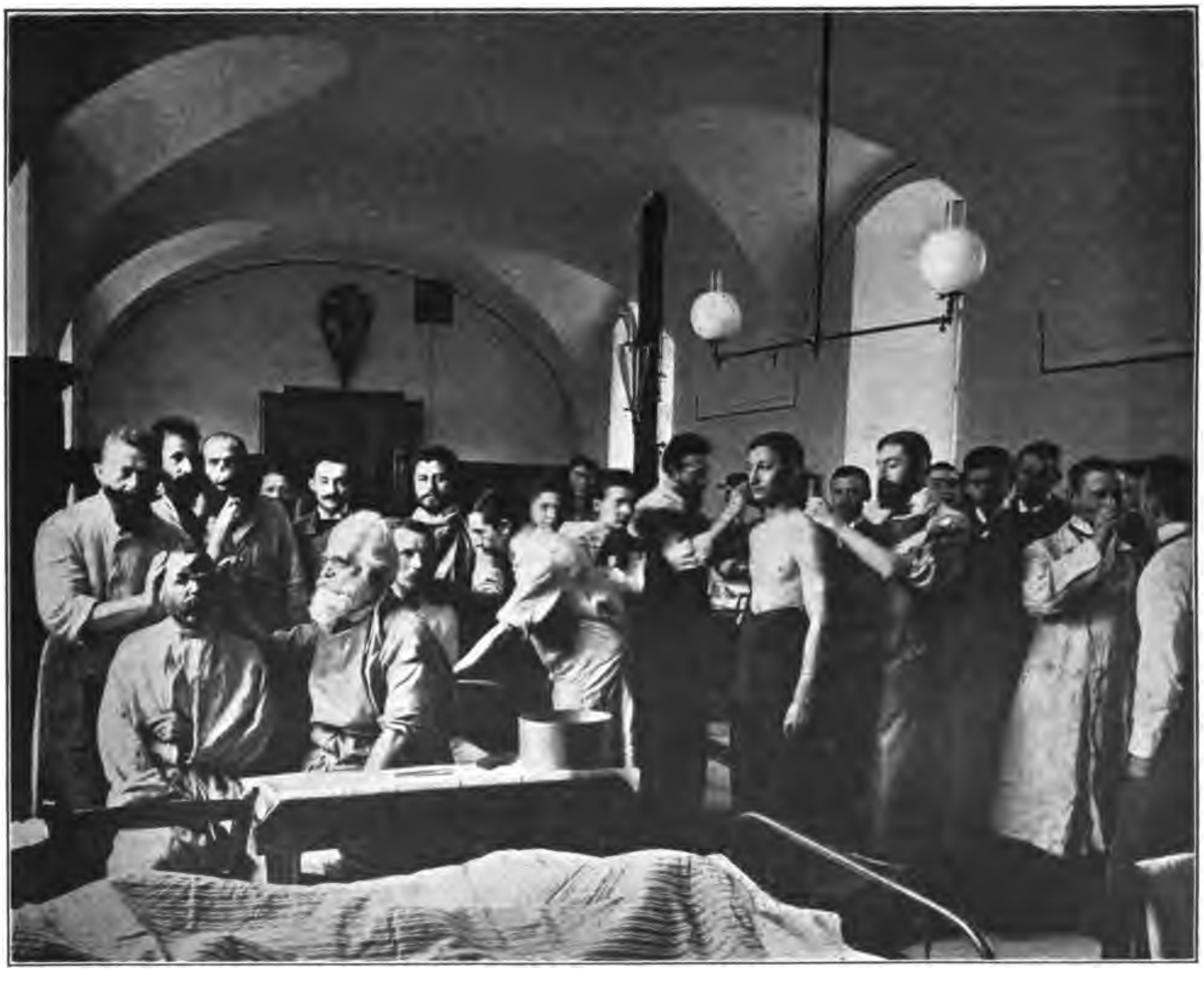

FIG 6.—CLINIC IN SYPHILIS AT THE UNIVERSITY OF VIENNA; PROF. LANG

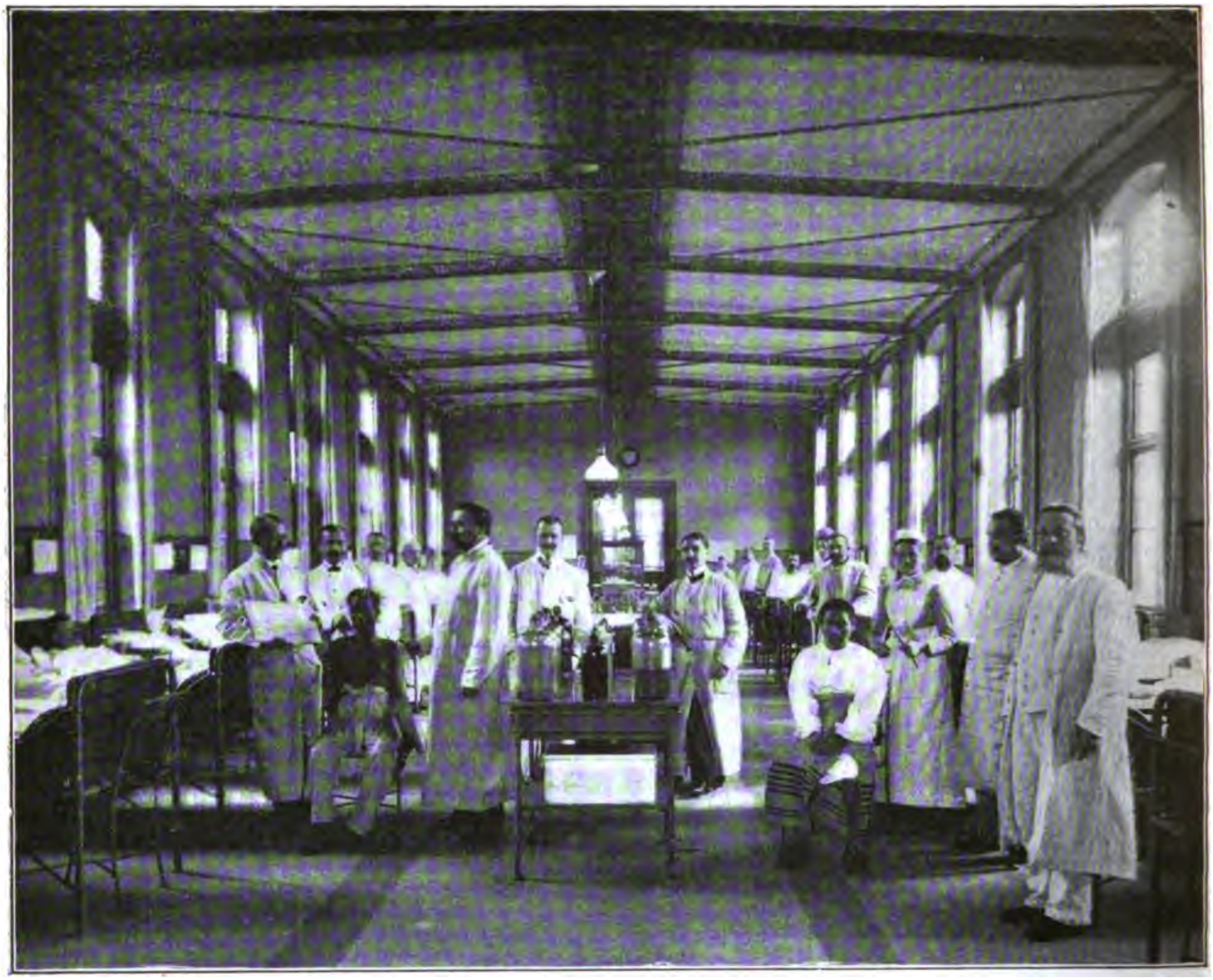

FIG 7.—MEDICAL WARD IN THE GENERAL HOSPITAL AT EPPENDORF-HAMBURG; PROF. RUMPF.

space of time as possible. The university lecture of Weichselbaum is usually not attended by the advanced student.

A very popular course—the only one in gross pathology—consists of demonstrations of the various cases that came to autopsy the previous morning. This course is given daily, from 5 t6 6 P.M., by Professor Albrecht, and costs 30 gulden per month. It is limited to twenty students. The course is an exceptionally good one, and is to be recommended to all students. A one-month course in bacteriology is given by Ghou, in which the entire field is surveyed, both theoretically and practically. This course is given from 11 to 1 o'clock, and costs 30 gulden. The student is permitted to spend the entire day, or as much time as he chooses, in this laboratory, and may follow original research.

Courses in histological pathology are given by two other assistants, Stoerk and Landsteiner. In these courses are taught methods of preparation, of sectioning, and of staining. Special fields of histological pathology are also taught, such as gynecological pathology, pathology of diseases of nose and throat, etc. The abundance of pathological material, which has accumulated for years, is placed at the disposal of the students. These courses also cost 30 gulden a month, all laboratory privileges also being extended the student.

Neurology.—The university lecture upon the subject of nervous diseases is held three times weekly by Kraft-Ebing. The student, as a usual thing, does not rely upon these lectures for his work in psychiatry or nervous diseases.

Chvostek also holds a university lectureship upon nervous diseases, this course being largely frequented by Americans and other foreigners. The course is adapted to the scope of the undergraduate.

The course, which in the past year has best of all supplied the demands of the American student in nervous diseases, is given by v. Frankl-Hochwart. This course, however, excludes psychiatry, and is given only upon request. The fee is 30 gulden a month.

A course in neuropathology, consisting chiefly of laboratory work, is given by Obersteiner. The student is required to spend a large portion of the day in the laboratory, and is assisted in any line of research work which he may care to undertake.

Heretofore, the foreign student has been unable to find good work in the department of children's diseases in Vienna. Now that Escherich has been appointed to the chair at Vienna, he will, probably, extend the same courtesies to American students as was his wont in Gratz.

During the past year Primarius Knopfenmacher, at the Carolinen Kinderspital, has also given a course upon the request of American students. The material at the clinic is very abundant, and the cases for demonstration are carefully selected and well presented. The infectious wards are also open to the students for study. This course is limited in number to twelve men and costs 25 gulden a month. At this hospital also the physician is given much latitude and may become a voluntary assistant, spending the greater part of the day at the institution free of charge.

Dermatology.—The opportunity for the study of diseases of the skin can be equalled nowhere else in Europe. The university lecture upon diseases of the skin since the death of Kaposi has been delivered by the assistant, Kreibich. The student seeking more advanced study in this field does not content himself with this lecture, but enters one or both of the private clinical courses given by Kreibich and Weidenfelds. Patients are brought for the direct inspection of the students; sufficient time is given them for careful study of the various lesions and a short review of the pathology. The charge for this course is 25 gulden a month. The time chosen is usually in the morning, but subject to the convenience of the participants of the course.

Members of these courses are invited to the ambulatorium at 10 o'clock in the morning, where an enormous quantity of material can be seen daily. A microscopical course is given upon the pathology of the skin, including laboratory work.

Nose and Throat.—Several very excellent courses are given in diseases of the nose and throat. One at the Krankenhaus, where there is a great abundance of material to be seen. This course is given by Chiari and his assistants, and is to be selected by the student who is familiar with the technique of rhinological and laryngological examination, but who wishes to see various pathological conditions.

Another course, conducted in a similar manner, is given by Kochier at the polyclinic on Marienstrasse. Here the student is given more detailed instruction in the technique of examination. The material at this dispensary is, perhaps, not so rich, but the student is given wider opportunities, treatment is largely left to him, and if he choose to continue this course for several months, many of the minor operations, such as the removal of turbinated bodies, adenoids, tonsils, polypi, etc., are entrusted to him. Both of these courses are given from 11 to 1 o'clock, and cost 25 gulden a month.

Undoubtedly, the best course is given by Hajek. This course is recommended to the student who wishes to perfect himself in this branch to the exclusion of others. The course covers a period of three months of lecture upon the anatomy and pathology of the nose and throat, together with clinical demonstrations. The more fortunate students are allowed to work in Hajek's private office at his clinic from 11 to 1 o'clock and are given opportunity to do pathologycal laboratory work. This course costs 100 gulden.

Otology.—The post-graduate student in diseases of the ear will find ample opportunity for study in Vienna. Professor Politzer encourages work in many ways in this specialty, and the student is given a table in the ambulatorium, where he sees daily a large number of patients. Advanced courses are given in diseases of the ear, together with operative exercises upon the cadaver, by two of the assistants, Frey and Alexander. The anatomy and pathology of the temporal bone is minutely studied. The various operations for mastoid disease are performed by each student, including the various approaches to the brain and lateral sinus for disease complicating mastoiditis. The student, after spending two or three months at this clinic, is allowed to

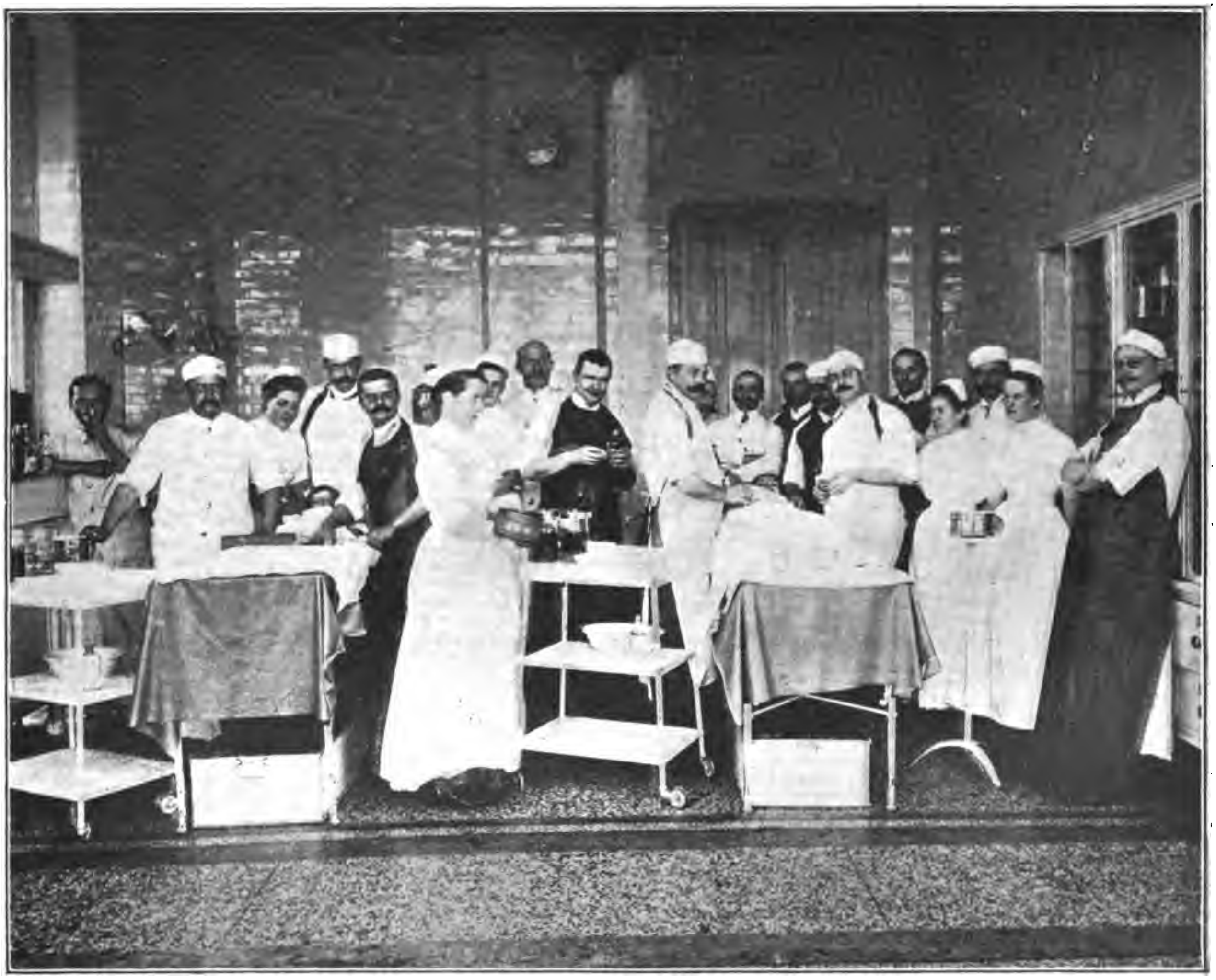

FIG. 8.—THE LARGE OPERATING ROOM IN THE GENERAL HOSPITAL AT EPPENDORF-HAMBURG. SECOND HALF, WOMEN'S SIDE. THE ROOM CONTAINS SIX OPERATING TABLES, ALL OF WHICH ARE OFTEN IN USE AT ONCE

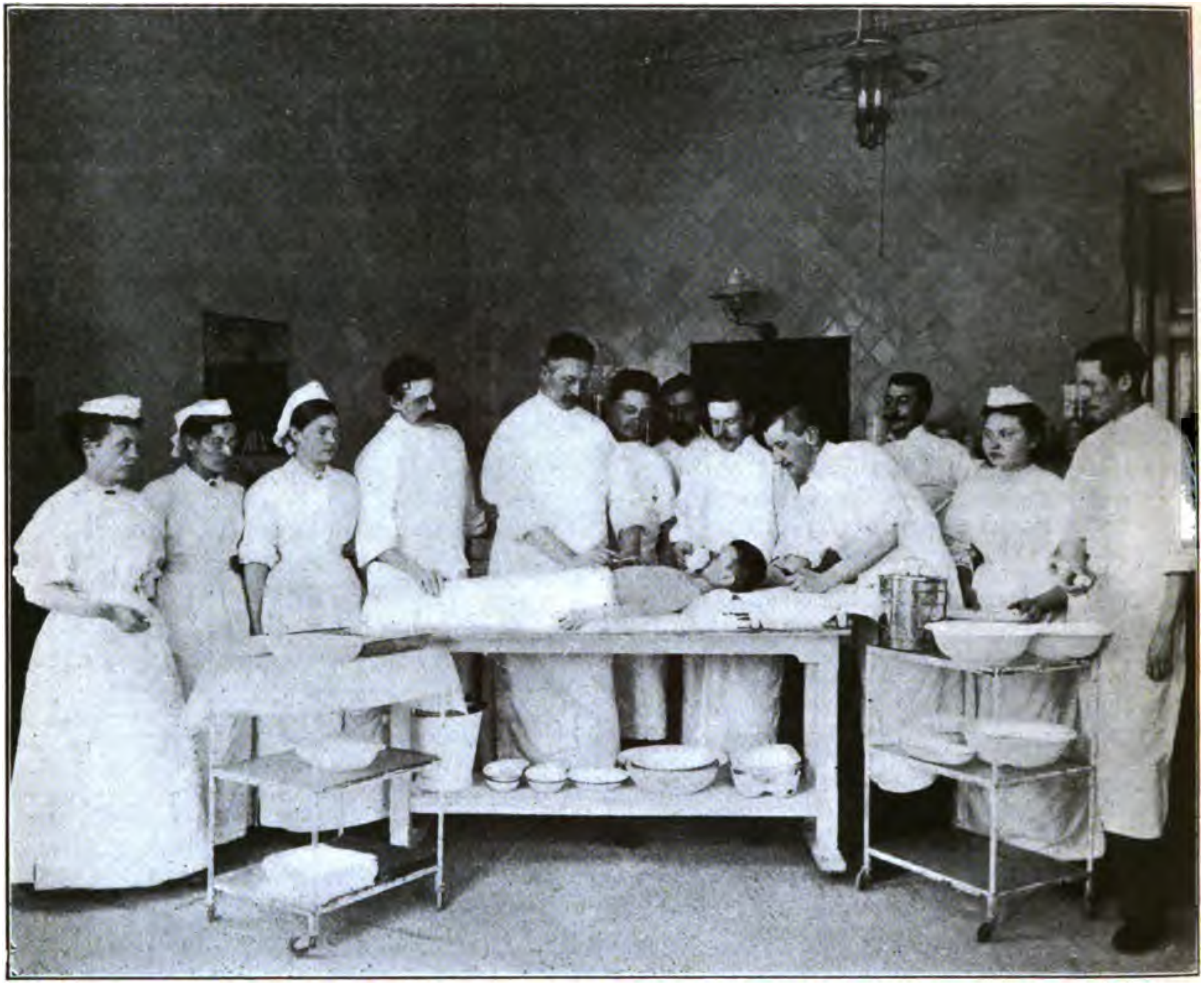

FIG. 9.—PROF. TILLMANNS' CLINIC IN THE SURGICAL DISEASES OF CHILDREN, UNIVERSITY OF LEIPSIC.

do mastoid operations upon the patients at the clinic.

Urbantschitsch holds his clinic at the polyclinic, where may be studied that branch of this specialty to which Urbautschitsch has devoted so many years of his life, namely, to the improvement of hearing in the deaf.

Ophthalmology.—In the advanced study of the diseases of the eye the student is also given many facilities. Here also the Professor encourages and invites foreigners to his clinic for study. At the clinic the student examines all patients at the ambulatorium and is invited to the university lectures of Professor Fuchs. The first assistant, Sachs, gives a course upon refraction and ophthalmoscopy.

For the beginner in ophthalmology, who has had no experience in diseases of the eye or the use of the ophthalmoscope, and who wishes to advance himself, there are two courses—the one given by Sachs, the other by Elschnig. The one given by Elsching is most to be recommended. In this course personal instruction is given beginning with the rudiments, whereas the course of Sachs is for the more advanced in the use of the ophthalmoscope, special attention being paid to fundus diagnosis.

Genitourinary Diseases.—Advanced work in genito-urinary disease is to be had at the clinics of Finger and Fritsch. Finger's course is a university course and covers the field of gonorrhœa and syphilis most thoroughly from a theoretical standpoint. Cases are also demonstrated, but more material may be seen at other clinics. Finger's course costs 15 gulden and lasts about one and one-half months.

The course given by Fritsch carries the student well through the subject of gonorrhœa, together with its complications and treatment. Much material is shown and the students are allowed to do much in the way of treatment. This course covers a period of three months, includes cystoscopy, and costs 100 gulden.

By far the greatest amount of syphilis is to be seen at the morning clinic of Professor Neumann. This is a university course, held also at the Krankenhaus. The course cannot be said to be a good one as for theory, but much material is seen.

The student who wishes to study syphilis is advised to take the course given by Matzenauer, the assistant of Neumann, at which course the same material is shown and instruction given. The course costs 25 gulden ($10) a month, and is given from 11 to 12 o'clock. The student is invited also to attend the ambulatorium, which is held from 10 to 11 o'clock. There is probably no clinic in Europe where so much syphilis can be seen.

Orthopedics.—The study of orthopedic surgery can be had, perhaps, best in Berlin, as mentioned above. In Vienna an eight-weeks' course is given by Lorenz to undergraduate students. The course is conducted much in the same manner as our courses in New York, consisting chiefly of demonstrations. The extreme conservatism which prevailed in German orthopedic surgery some ten or fifteen years ago has been to a degree relaxed and to a greater extent American methods have been adopted. Heretofore no good post-graduate course in this subject has been given in Vienna. It is reasonable to suppose, however, that if Professor Lorenz were properly approached upon this subject he would be glad to supply this deficiency.

Anatomy.—A course in topographical anatomy is given by Fandler, the assistant to Zuckerkandl, at the Anatomical Institute. The course is a good adjunct to surgical studies, inasmuch as it not only reviews anatomy, but also bings out in a new light the relation of surgery to the anatomy of the various organs.

This course costs 15 gulden ($6) and covers a period of two and a half months.

Hydrotherapy.—The numerous hydrotherapeutic institutions in Vienna are all open to inspection and much can be learned from a tour through them. Winternitz gives a short course of clinical lectures upon hydrotherapy twice a week at the polyclinic, and opportunity is given the student to work in the institution if he desires to study this field more especially.

THE SMALLER GERMAN CITIES.

In this review of post-graduate opportunities for study it has been deemed advisable to enter upon a more detailed report regarding facilities for study in the two cities, Berlin and Vienna. It is not, however, to be inferred that a visit, or even a prolonged stay, is not to be recommended at one of the smaller university towns. Inasmuch as all fields of study are to be had in Berlin and Vienna, and owing to the large attendance by Americans in these cities, courses of study are more conveniently arranged to meet the demands of the American student. It has, therefore, also been considered convenient in this report to deal with the smaller university towns in such manner as to specify in them only the several branches and the instructors in such departments who bring the town into prominence in the world of medicine.

Breslau has little to offer in the way of private courses in surgery. The university lecture given by Mikulicz may be attended daily. This lecture is intended for the undergraduate, but unquestionably the advanced student will benefit much by daily attendance. The clinic is held from 10 to 12 A.M.

The university lecture in gynecology and obstetrics is given by Professor Küstner. Visitors are invited to this clinic and are shown many courtesies by the assistants. Private courses are also given by the assistants in gynecological diagnosis, and also operative courses in obstetrics and gynecology.

Neisser lectures upon the diseases of the skin and gives a laboratory course on the pathology of the skin. Both of these courses are university courses. American post-graduate students have, upon occasions, been allowed to work as Voluntäre in this clinic, and abundant opportunity is given the assistants for pathological research.

The university at **Erlangen** is frequently visited in order to hear the lectures and clinics of Strümpell. The visitor is usually invited into the wards, and is shown through by one of the assistants. As a rule, the American finds nothing there to detain him.

Göttingen has not very much to attract the physician, except the surgical clinic of Professor Braun, held every morning at 10 o'clock, together with the pathological laboratory of Orth.

Greifswald, although one of the smaller university towns, has much to offer the advanced student in medicine.

In pathological anatomy the university lecture is given by Grawitz, together with laboratory work for advanced students. Grawitz encourages voluntary work in his laboratories. The student is given all laboratory facilities and pathological material free of charge.

Bier, the professor in surgery, besides his university lecture, gives an advanced course in theoretical and operative surgery. This course calls for a nominal fee for matriculation in the university. Another course in bone and joint and military surgery is given by the associate professor, Tilmann.

The university course in obstetrics and gynecology is given by Martin. This course includes phantom exercises.

The university at **Halle** is visited chiefly by the student in otology. Schwartze's clinic is richly supplied with material, and here also the student is given abundant opportunities for work. Schwartze also gives a special course in diseases of the ear for advanced workers. The course includes operations upon the cadaver and later upon patients. The course costs 100 marks ($25).

The university at **Heidelberg** no longer occupies the prominence in the field of medicine that it claimed some years ago. The university lecture in surgery is given by Czerny. Clinical work is given the undergraduate students in the wards and in the ambulatorium. The advanced student in surgery will find only Czerny's clinics of interest.

In internal medicine and nervous diseases, the advanced student will again find he has not the latitude given him for work that he has at other universities. His work will be almost limited to attendance at Erb's clinics.

Kraepelin holds the university clinic in psychiatry, gives an advanced course and encourages research work.

The university at **Kiel,** owing to the fact that von Esmarch has resigned his lectureship, has lost one of its attractions. The university lecture and clinic in surgery is now given by Helferich. The university lecture in internal medicine is given by Quincke.

The importance to which the university at **Leipsic** has risen is in a large measure due to Wendelenburg, Tillmanns, Curschmann, Zweifel, and Marchand. Trendelenburg gives the university lecture in Surgery; Curschmann in Internal Medicine; Zweifel in Gynecology and Obstetrics, and Marchand in Pathology. Marchand encourages advanced pathological studies, and holds this opportunity open for the American student.

Munich was visited usually with the intention of attending the clinics of Ziemssen and of Winkel. The post-graduate student usually finds nothing there to detain him long. Ziemssen gave a bedside course in internal diagnosis for advanced students, but whether this course will be continued by his successor the present writer does not know. Winkel holds the university lecture in gynecology, but there is not the opportunity for work found in other cities.

Strassburg also is not frequented by the majority of American students. The advantages which this university offers are pathological work under the direction of Recklinghausen and internal medicine under Naunyn. Recklinghausen gives an advanced course in histological pathology, together with laboratory opportunities. Naunyn gives only the university lecture in internal medicine and offers no attraction to the American student.

American students will find abundant opportunity for study in **Prag.** Chiari takes an active interest in students who go there for work in pathology. To them he throws open his laboratories, gives them a working table, allows them to make autopsies, etc. Assistance is also given in any special line the student cares to follow, and this all free of charge.

In surgery the university clinic is given by Wölfer, where also the American student is very welcome. The first assistant in this department gives a special operative course upon surgery of the stomach and intestines; large live dogs are used for subjects. This course costs 100 gulden ($40).

The advanced courses given by von Jaksch and his assistants in internal medicine are not particularly to be recommended, but post-graduate students are readily taken in the clinic as voluntary assistants.

Living Expenses.—The student intending to remain a considerable length of time in a University town, will find it to his advantage to take quarters in a pension or boarding-house; not only is this mode of living less expensive, but brings him also in contact with others whose advice may be of service to him.

It is customary among American students meeting on the continent to advise each other where to locate in other cities, this mutual interchange of advice often saving hours of search for lodgings.

In a general way, it may be said that if the visitor be entirely unaquainted in a town he had better go at once to a hotel, engage a room for twenty-four hours, and devote this first day, if so long be necessary, to finding lodgings.

Numerous pensions and boarding-houses will be found in the immediate vicinity of the University. The prices vary, of course, according to location and accommodations. In Berlin fair-sized rooms with service and within a very short distance of the University may be had for from 30 to 50 marks ($7.50 to $12.50) a month. The visitor will usually find it more agreeable to engage a room only—that is, without meals—and visit the various restaurants which form one of the attractions in Berlin.

Rooms with breakfast cost 10 to 12 marks ($2.50 to $3.00) extra. To engage board and lodging is less advisable, because the work of the students often carries him to distant parts of town. Board and lodging may be had for from 50 to 200 marks ($12.50 to $50) a month.

In regard to location, what has been said of Berlin applies also to Vienna—that is, that good and cheap lodgings are to be had more especially in the immediate neighborhood of the Krankenhaus. The prices in general are higher in Vienna than in Berlin, and, as a rule, the accommodations are poorer.

Rooms without meals may be had from 20 gulden ($8) upward per month, and breakfast 5 to 7 gulden ($2 to $2.50) extra. Board and lodging from 50 gulden ($20) upward. The restaurants, also, are more expensive than in Berlin.

In general, the student engaging himself in a fair number of courses must prepare to spend not less than $100 per month; he may live well on $150, and extravagantly upon $200 per month.

POST-GRADUATE INSTRUCTION IN THE UNITED STATES.

THE schools devoted solely to post-graduate teaching in the United States, with the exception of a polyclinic in Philadelphia and one in New Orleans, are situated in New York and Chicago, each of which centers of population contains four.

NEW YORK.

New York city, scarcely surpassed by London in its abundance of clinical material, is exceedingly well supplied with post-graduate institutions, and with other facilities for post-graduate instruction. Its polyclinic and post-graduate medical schools have gained a world-wide reputation, and are superior in many ways to any to be found in Europe.

Good board and lodging may be obtained in New York in houses near the schools at from $6 to $12 a week. Single rooms may be had at from $2 to $6 per week, meals being taken at restaurants.

The Post-Graduate Medical School and Hospital of New York.—This is the largest and one of the most important institutions of the kind in the United States. It is a part of the university of the State, and is under the general supervision and control of the Regents of the University, besides having been granted a special charter by the Legislature of the State. The number of physicians attending the school during the past year was 609.

The teaching of the school is entirely clinical or demonstrative. Hospital accommodations are exceptionally ample, and practitioners may witness several important operations each day, in addition to attendance upon clinics.

There is a good laboratory, and advanced instruction is given in pathology, histology and bacteriology. The anatomical rooms are extensive, and the arrangements generally are of a high class. The babies' wards contain fifty-four beds, and the orthopedic wards accommodate thirty patients. The entire hospital contains 184 beds, the average number occupied at one time being 162. The dispensary is one of the largest in the city, and there is also attached to the post-graduate hospital a training school for nurses.

The school is exclusively for members of the profession whose credentials are satisfactory to the directors, and who have a legal right to practise medicine in the United States, or in the countries from which they come.

The school year is divided into two distinct but continuous terms. The autumn and winter courses begin on October 1 and end on June 1. The school and hospital are open during the entire year. In the summer instruction is given by the adjunct professors and instructors.

The fee for the winter session for a general ticket for a term of twelve weeks, with the exception of some courses not included in the general ticket, and for which special rates are charged, is $150; for a term of six weeks $100 is charged. The fee for the general ticket of the summer session is $35 a month, $45 for six weeks, or $125 for the whole term.

The plan of instruction is as follows: Pathology, physical diagnosis, medical chemistry, general medicine and therapeutics, climatology and pharmacology. Professor Porter is the principal lecturer upon pathology and general medicine, Professor Burt upon physical diagnosis and medicine, Professor Wilcox upon medicine and therapeutics, Professor Weber upon medicine, Professor Stubbert upon pulmonary tuberculosis, while Professor Einhorn will give special courses in diseases of the stomach twice during the season.

Pathological histology and bacteriology are taught by Professor T. Brooks and Benjamin F. Cline; diseases of the mind and nervous system are under the charge of Professors Graeme M. Hammond and Joseph Collins, who each give two clinical lectures weekly, and Professor Morton deals with electrotherapeutics.

In surgery the professors are Seneca D. Powell, W. B. De Garmo, Daniel Lewis, Willy Meyer, Samuel Lloyd, and Robert T. Morris. Adjunct professors: Theodore Dunham, Carter S. Cole, Franz Torek, Forbes Hawkes, and Neil Macphatter, together with a large staff of instructors. The clinics and dispensary instruction in this department occupy from three to six hours daily.

Orthopedic surgery is taught by Professors A. M. Phelps, W. O. Plimpton, and instructors Drs. D. W. Marston and D. D. Ashley.

The course in diseases of the rectum and anus is given by Professor Samuel G. Garit and instructor Dr. Kenneth Keith MacAlpine.

The department of surgical anatomy and operative surgery on the cadaver is presided over by Professor John J. McGrath, with the assistance of Adjunct Professors William S. Bainbridge, Clarence A. McWilliams, and a corps of instructors. The professors of the diseases of women are Drs. Bache McE. Emmet, Jonas R. Nilsen, Hermann St. J. Boldt, George M. Edebohls, A. Palmer Dudley, Ralph Waldo, Adjunct Professors Abram Brothers, George G. Ward, Jr., Charles F. Adams, J. N. West, and several instructors.

Teaching in the department of pediatrics is by Professors Henry Dwight Chapin and Augustus Caillé; Adjunct Professors John Dorning, Andrew von Grimm, Charles O. Maisch, and instructors. Professors L. Brodhead and John O. Polak give two lectures each week on obstetrics, while practical courses in the subject are given by Professor Brodhead and Instructor Dr. Moore.

Clinics in diseases of the eye are held in the school by Professors Moore, Valk, Peck, Davis, Irwin, and Parker. Professor Roosa operates or gives a clinical lecture twice a month during the winter session. At the Manhattan Eye and Ear Hospital, instruction in diseases of the eye is given by Professors Emerson, Lewis, and Van Fleet, and by Drs. Deynard, Weisner, Carhart, and Thomson. A course in refraction and ophthalmoscopy is given at the same institution by Dr. Kinney on Tuesday and Thursday afternoons, and Drs. Kinney and Thompson give a laboratory course on the histology and pathology of the eye. Professors of diseases of the ear are D. B. St. John Roosa, W. O. Moore, J. B. Emerson, Wendell C. Phillips, and James F. McKernon.

Two lectures each week are given by Professors Phillips and McKernon at the school. Daily clinics for diseases of the ear are given by Drs. Crawford and Rae. Professor Phillips gives instruction in diseases of the ear at Manhattan Eye and Ear Hospital.

The professors of diseases of the nose and throat are Clarence C. Rice, H. Beaman Douglass, and Thomas J. Harris. Daily clinics are held at the school, and classes in which practical work may be done by the students are conducted two evenings each week at the school by Dr. James B. Ferguson.

Drs. Eugene Fuller, and Ramón Guitéras are the professors of venereal and genitourinary diseases, and together with the adjunct professors and instructors, give courses in this branch of surgery. Six hours each week are devoted to it.

Drs. W. Bedford Brown and Charles Warrenne Allen are the professors of diseases of the skin, and Dr. Thurston G. Lusk adjunct professor. Clinical lectures on dermatology are given twice a week by Drs. Brown and Allen. Instruction during dispensary hours is also given by Drs. Lusk and Mayer.

The New York Polyclinic Medical School and Hospital.—This school was organized during 1880-81, and opened in 1882, and was the first post-graduate medical school in America independent of an undergraduate institution.

The polyclinic hospital contains eighty beds, and the wards and private rooms directly adjoin the surgical and medical amphitheatres. A dispensary is supported in the main building, and from 150 to 200 patients are treated daily.

Practitioners who are graduates of medical colleges, or have a legal right to practise medicine, will be admitted to the course of instruction at the discretion of the faculty. A general ticket admitting the holder to all the clinics for six weeks (laboratory and operative courses excepted) costs $100; for three months, $150; for six months, $250; and for one year, $350. Tickets for single courses can be taken, the cost ranging from $50 for six weeks, $90 for three months, $160 for six months, and $280 for one year, to $15 for six weeks, $25 for three months, $40 for six months, and $60 for one year. There are, besides, single courses, as follows: Surgical operations on the cadaver, each course, $25; clinical microscopy and urinary analysis, each course, $20; practical histology and pathology, each course, $20; bacteriology, each course, $20; intubation, each course, $15.

Certificates of attendance on one or more of the branches of study will be given matriculants on completion of the course at the discretion of the faculty. No certificate will be given during the summer session for a course of study of less than four weeks' duration.

The plan of instruction is as follows: Gynecology—Professor W. Gill Wylie holds a clinic on Tuesdays at 9 A. M., and operates at Bellevue Hospital Wednesdays at 3 P.M. Professor J. Riddle Goffe holds clinics on Wednesdays and Saturdays at 9 A.M., and operates at the City Hospital Mondays and Thursdays at 2 P.M., from February 1 to June 1, and at the Skin and Cancer Hospital from August 1 to February 1. Professor Pryor holds clinics on Mondays at 9 A.M., and Fridays at 3 P.M. Adjunct Professor Ladinski holds a clinic on Wednesdays at 3 P.M. Adjunct Professor R. H. Wylie holds a clinic on Fridays at 9 A.M. Dr. Porter holds a clinic on Saturdays at 5 P.M. Dr. Burtenshaw lectures on operative gynecology on Wednesdays at 1 P.M.

The clinics on general surgery are held from 11 to 12 M. on Mondays and Thursdays, by Professor John A. Wyeth; on Tuesdays by Professor Robert H. M. Dawbarn, and on Wednesdays and Saturdays by Adjunct Professor J. A. Bodine. There is a large staff of lecturers, instructors, and clinical assistants attached to this branch. The course in operative surgery and surgical anatomy, of which the professor is Dr. Robert H. M. Dawbarn, consists of twelve lessons of two hours each, covering a period of three weeks, and given during the evenings. Work begins on or about September 15 and ends in June.

The professor of orthopedic surgery is Dr. W. R. Townsend; adjunct professor, Dr. Royal Whitman, and instructors, Drs. W. B. Thompson and J. H. Waterman. Beginning September 15, Professor Townsend gives four series of clinical lectures on Fridays from 11 to 12 M. Adjunct Professor Whitman holds a clinic on Wednesdays from 5 to 6 P.M.

Professor Charles H. Chetwood holds clinics in genitourinary surgery on Tuesdays and Fridays from 4 to 5 P.M. An ample staff is attached to this branch.

The course of rectal surgery consists of two clinics a week, from 1 to 2 P.M. on Thursdays, and 3 to 4 P.M. on Mondays. The professor is Dr. James P. Tuttle, assisted by a staff.

The professors of clinical medicine are Drs. I. Adler, W. H. Katzenbach, and Morris Manges, with a large staff. The clinics in this department are held by Professor Katzenbach on Wednesdays and Saturdays; by Professor Adler on Tuesdays and Fridays, and by Professor Manges on Mondays and Thursdays, from 2 to 3 P.M. Professor W. W. Van Valzah and Adjunct Professor J. D. Nisbet give a course on the diseases of the stomach and digestive system, on Mondays and Thursdays, from 4 to 5 P.M.

Four clinical lectures a week are delivered on diseases of the skin by Professor Edward B. Bronson from 1 to 2 P.M. on Mondays and Fridays and by Professor Andrew R. Robinson at the same hour on Tuesdays and Saturdays.

Four clinics a week, from 2 to 3 P.M., are held in the department of diseases of the eye on Tuesdays and Saturdays by Dr. R. O. Born, and on Wednesdays and Fridays by Dr. Cary. The professors besides Dr. Born are Drs. W. B. Marple and David Webster (Emeritus).

Dr. August Seibert is professor of diseases of children, assisted by a large staff. Clinics are held Mondays and Fridays by Dr. Seibert; Tuesdays and Saturdays by Dr. Kerley; Thursdays by Dr. Baron; and on Wednesdays instruction in intubation is given by Dr. Weber.

In the department of diseases of the throat and nose daily demonstrations are given of the latest methods of inspection, diagnosis, and treatment of the diseases of the nose, mouth, pharynx, and larynx by the four professors of the subjects; from 4 to 5 P.M. on Tuesdays and Fridays by Professor Delavan; on Wednesdays and Saturdays by Professor Gleitsmann; on Mondays and Thursdays by Professor Quinlan; and from 8 to 9 P.M. on Tuesdays and Fridays by Professor Myles. Professor Quinlan also holds a clinic at the City Hospital on Wednesdays at 2 P.M.

The instruction in diseases of the ear embraces clinical lectures on Mondays and Thursdays from 2 to 3 P.M. by Dr. Frederick Whiting; the other professor in this department is Dr. Oren D. Pomeroy (Emeritus).

In the department of diseases of the mind and nervous system clinics are held by Dr. Sachs on Tuesdays and Thursdays, from 3 to 4 P.M., and by Dr. W. B. Pritchard on Fridays from 3 to 4 P.M. A course on the normal and pathological anatomy of the nervous system is given by Dr. Wiener on Wednesdays from 3 to 4 P.M.

The professor of obstetrics, Dr. Edward A. Ayers, holds clinics in this department from 5 to 6 P.M. on Tuesdays, and on Friday clinics are held by Dr. Julian Rosenberg.

Histology, pathology, bacteriology, clinical microscopy and clinical chemistry are studied under the direction of Dr. F. M. Jeffries, lecturer and director of the laboratory.

The School of Ophthalmology, Otology, and Laryngology of the New York Eye and Ear Infirmary.—This institution is the oldest and largest in the city devoted to the special treatment of diseases of the eye, ear, nose, and throat. The building is almost new, and has all modern conveniences.

Clinical instruction is given in ophthalmology, otology, and laryngology by a large and capable staff of teachers. Instruction is given throughout the year, and in addition to the clinical instruction, certain special courses are given; twelve lessons in refraction, twelve lessons in ophthalmoscopy, and twelve lessons to six members in operative surgery of the eye. There is also given a course of twenty-one lessons in normal and pathological histology.

The fees are as follows: Tickets admitting to all clinical courses for three months, $50; to all clinical courses for two months, $40; to all clinical courses for one month, $30; to two branches for three months, $40; to two branches for two months, $30; to two branches for one month; $25; to one branch for three months, $30; to one branch for two months, $25; to one branch for one month, $20. Special courses in refraction, twelve lessons, $15; in opthalmoscopy, twelve lessons, $15; in operative surgery of the eye, twelve lessons, $50; in normal and pathological histology, twenty-one lessons, $25; in operative surgery of the ear, six lessons, $75.

The New York School of Clinical Medicine.—This school, established in 1895 is conducted exclusively for medical graduates in good standing. Classes are all limited, giving each student ample opportunity to work as if in his own office, making diagnosis, prescribing, and acquiring proficiency in the use of the various instruments in each department.

The list of teachers is a large one, and the scheme of instruction is eminently practical and aims at imparting information calculated to be of most service to the practitioner. Students are invited to operations by the teaching staff in the hospitals of the city or at the homes of patients. The plan of teaching is as follows:

Practice of Medicine, Physical Diagnosis, Applied Therapeutics—Professor, John J. Morrissey; instructors, Heinrich Stern and James F. Power. Daily clinics.

Surgery—Professors, Thomas H. Manley and Carl E. Pfister; associate professor, A. E. Isaacs and a corps of instructors and clinical assistants. Daily clinics.

Gynecology—Professor, Augustin H. Goelet; associate professor, A. Ernest Gallant, with instructor and clinical assistants. Two clinics daily.

Pediatrics—Professor, S. Henry Dessau; instructor, Salo Cohn; clinical assistant, A. Trenchard Wood. Daily clinics.

Ophthalmology and Otology—Professors, Marcus Kenyon and J. Albert Meek, and clinical assistants. Daily clinics.

Genito-urinary Diseases—Professor, Ferdinand C. Valentine and staff. Daily clinics.

Neurology and Mental Diseases—Professor, Thomas D. Crothers; associate professor, Louis Lichtschein; clinical assistant, I. L. Goodfried.

Professor T. D. Crothers will deliver a course of clinical lectures on drug diseases caused by alcohol, opium, cocaine, chloral, and other narcotics; their resulting psychoses and palsies, their diagnosis, prognosis, treatment and medico-legal bearings.

Rhinology and Laryngology—Associate Professor, Max. J. Schwerd and staff. Daily clinics.

Dermatology and Syphilography—Instructors, Robert J. Devlin and W. R. J. Dalton. Daily clinics.

Special courses are also given, charged for by arrangement. A general ticket for four weeks costs $100; for eight weeks, $150. Separate courses are charged at proportionate rates.

CHICAGO.

In Chicago the opportunities for pursuing postgraduate studies under the most favorable circumstances are particularly good. There are four schools, two of them large ones, with well-arranged and equipped buildings, and, as a matter of course, there is a great quantity of clinical material.

The Chicago Polyclinic.—This institution has been founded fourteen years, and has attained an excellent position. It is located in the heart of the city. Its own building contains a large hospital, and it is within easy reach of five others.

Only legally qualified physicians and graduates of reputable colleges are admitted.

The general ticket (not including matriculation), admitting to all courses and clinics, for four weeks, costs $60; for six weeks, $75; for two months, $90; and for three months, $110. The general ticket does not include the course of operative surgery on the cadaver, or the operative course in ophthalmology on the cadaver, both of which are extra. Special rates are made for courses of six months or a year.

The summer courses, from June 30 to September 15, are conducted by the associate professors and lecturers. The fees for all the courses are one-half the winter rates. Detailed plan of studies.

Surgery—There is a surgical clinic at the Polyclinic daily at 11 A.M., conducted by Professors Harris, Hoadley, Smith and Halstead. Professors Miller and Harris hold clinics at the Maurice Porter Hospital. Professor Senn holds two surgical clinics weekly throughout the year, on Tuesdays and Thursdays, at 2 P.M., at the Presbyterian Hospital. He also holds clinics for the students of the Polyclinic at St. Joseph's Hospital, Mondays and Wednesdays, at 9 A.M. Professor Henrotin gives clinics at the Alexian Brothers' Hospital from November 1 to May 1. Professor Van Hook holds a weekly surgical clinic at Cook County and Wesley hospitals.

Professors A. E. Hoadley and E. M. Smith give two clinics each week in orthopedic surgery.

Clinics are given in rectal surgery by Professor A. E. Halstead.

A daily clinic in diseases of women is held at the Polyclinic at 10 A.M. by Professors Henrotin, Newman, Bangs, Keyes, and Tyler, and by Professor fessors Lewis and Manierre at 3 P.M.

Daily clinical instruction in diseases of the eye is given by Professors Colburn, Wilder, Allport, and Mahoney, and Professors Fiske, Hall, and Shambaugh give a clinic each day on diseases of the ear.

A clinic in diseases of the nose and throat is held daily by Professors Brown, Dickerman, and Walther.

A clinic in general medicine is given daily at 2 P.M. at the Polyclinic, by Professors Patton, Favill, Fisher, and Preble; and other clinics are held during the week by Professor Fütterer and the other professors.

A clinic in skin and venereal diseases is held at 1 P.M. three times a week by Professors McArthur, Anthony, and Campbell.

Professor Belfield holds a clinic in genito-urinary diseases twice a week. Clinics in diseases of children are held daily at 8 A.M. by Professors Christopher, Churchill, and Houston.

Clinical instruction in diseases of the nervous system is given at the Polyclinic three times a week by Professors Patrick and Gill, and instruction in obstetrics is given twice a week at the Polyclinic.

The courses in pathology, bacteriology, clinical microscopy, and clinical chemistry are given under the personal supervision of professor Herzog, the director of the laboratory.

There is a training school for nurses in connection with the Polyclinic Hospital.

The Post-Graduate Medical School of Chicago.—This is situated in the medical center of the city, and is surrounded by a thickly populated district, from which is derived an almost unlimited supply of clinical material. Many of the large city hospitals are near at hand, and the Northwestern University Medical School is located just across the street. The school and hospital are contained in a large six-story building, furnished with all the latest appliances of science, as well as for the comfort and convenience of its students and patients.

The faculty is a large one, numbering among its members some of the prominent medical men of the city. A fee of $25 is charged for each clinical course of four weeks. Special rates are made to those who take longer courses than one term.

The daily clinical course continues throughout the year.

Clinics in diseases of the eye are held by Professor W. F. Coleman at 4 P.M. on Mondays, Wednesdays, and Fridays; by Professor Casey A. Wood, at 8.30 A.M. on Tuesdays and Saturdays; by Professor Woodruff at 8.30 A.M. on Mondays and Thursdays; by Dr. Huizinga on Wednesdays and Fridays at 8.30 A.M.

Clinics are held in diseases of the ear on Mondays, Wednesdays, and Fridays at 3 P.M., and on Tuesdays, Thursdays, and Saturdays by Professors Andrews and Pierce. Daily clinics are held in diseases of the nose and throat by Professors Hardie, Stein, Head, and Campbell.

Every Monday and Thursday a clinic in diseases of women is held by Professor Ries. Professor Martin gives clinics on Wednesdays and Saturdays; Professor Goldspohn on Tuesdays and Fridays; Professor Rumpf on Tuesdays and Fridays, and Professor McDiarmid on Mondays and Wednesdays.

At 10.30 every morning clinics in surgery are held at the school by Professors Ferguson, Beck, and Schaefer; at 4 P.M. on Tuesdays and Thursdays by Professor Eisendrath. On Mondays and Thursdays at 9 A.M. a clinic on orthopedic surgery is given by Professor Hardon.

Clinics in general medicine are held daily at 3 P.M. by Professors Elliott, Gentless, Mix, Monash, and Wells.

Professors Cook and Hardon give daily clinics in diseases of children.

Professors Brown and Kuh each hold two clinics a week at the school in nervous diseases.

Professors Baumand McMahon give daily clinics in venereal and skin diseases at the school from 2 to 3 P. M.

Professor Fenton B. Turck holds three clinics a week upon diseases of the stomach and intestines.

A course of urinary analysis is given three times a week by Professor A. R. Elliott and Dr. W. A. Jaquith. The fully-equipped *x*-ray laboratory is in charge of Dr. Gordon G. Burdick. Free clinics are given on Wednesday and Saturday mornings, between the hours of 10 and 12. The laboratory of pathology and bacteriology is under the direction of Dr. Robert Zeit, professor of clinical pathology and bacteriology at the Northwestern University Medical School of Chicago. The terms for the regular course are $25 a month. The department of anatomy and operative surgery is under the direction of Professor Raymond Custer Turck.

The Chicago Clinical School.—This purely postgraduate school is located in a large well-equipped building in the heart of the city, and consequently in a district where the facilities for pursuing clinical study at the best possible advantage are abundant. Fee for the general course, including matriculation fee and certificate of attendance, is $50 for four weeks; $65 for six weeks; $75 for eight weeks. These fees embrace everything in the following branches: internal medicine and physical diagnosis, major and minor surgery, orthopedic surgery, bacteriology and clinical microscopy, genitourinary surgery, gynecology, rectal diseases, electrotherapeutics, skin and venereal diseases, post-mortem technique, obstetrics, diseases of children, mental and nervous diseases, diseases of the eye, ear, nose, and throat, fluoroscopy and skiagraphy.

Also anatomical demonstrations on the cadaver and intestinal surgery on dogs; also intubation of the larynx and the mastoid operation on cadaver. Evening lectures are given by clinicians on special subjects desired by the students. The general course includes everything except the two special demonstrations above mentioned.

Chicago Eye, Ear, Nose, and Throat College.—A post-graduate school for practitioners of medicine, is located in its own building two blocks from the court-house. The building contains a large hospital for eye and ear cases only. The clinical material is abundant, and the courses are for one month. Students can enter at any time. The teaching is clinical and free beds are provided for charity cases.

PHILADELPHIA.

Philadelphia has always been known as a center of instruction in medicine and surgery, and its medical men quickly recognized the need and value of after-training for medical graduates. The Polyclinic of Philadelphia is one of the most complete and best arranged of such schools in the world.

The Philadelphia Polyclinic.—This was organized in 1882, and was opened for the purpose of teaching in 1883. It is equipped in the most modern manner throughout, and besides the large number of patients treated in its wards during the past year, there were upward of 23,000 new cases treated in its dispensaries. The faculty of the college represents the staffs of almost all the large hospitals of the city.

The regular winter session extends from October 1 to June 15, and the following is the schedule of prices for work during that period: Tickets are issued for courses of six weeks, of three months, of six months, or of one year. Tickets can be procured for a shorter time than six weeks by special arrangement. A general ticket for one week costs $20. The fee for the general ticket for six weeks is $90; for three months, $150, and for six months, $250. A general ticket for one year costs $350. The fees for separate clinical courses are relatively reasonable, and it is possible to take a combination of courses at a cheaper rate.

The faculty are as follows: I. Solis-Cohen, emeritus professor of diseases of the throat; Charles H. Burnett, emeritus professor of diseases of the ear; C. B. Vancrede, emeritus professor of general and orthopedic surgery; George C. Harlan, emeritus professor of diseases of the eye; J. Henry C. Simes, emeritus professor of genitourinary surgery; Arthur Van Harlingen, emeritus professor of diseases of the skin; H. Augustus Wilson, emeritus professor of orthopedic surgery; Edward Jacobson and Samuel D. Risley, emeritus professors of diseases of the eye; Henry Leffmann, emeritus professor of clinical chemistry and hygiene; Charles K. Mills, emeritus professor of diseases of the nervous system. There are also many other professors, including such well-known names as Drs. Solomon Solis-Cohen, Edward P. Davis, J. M. Baldy, and Augustus A. Esher.

The course consists of surgery, genitourinary surgery, diseases of the rectum, orthopedic surgery, diseases of the eye, diseases of the ear, diseases of the nose and throat, diseases of the nervous system, general medicine, applied therapeutics and physical diagnosis, diseases of the stomach and intestine, obstetrics and diseases of infancy, diseases of children, diseases of the skin, diseases of women, defects of speech, and practical instruction in massage. All of these branches are taught in a practical manner.

A distinctive feature of the Philadelphia Polyclinic is its laboratories under the direction of Dr. B. M. Randolph, who is also dean of the college. These laboratories are situated immediately in the rear of the hospital, and occupy a five-story brick building especially designed and constructed for the purpose. They are fitted up with all the modern scientific apparatus, and are designed for the completion of diagnosis of cases which occur in the hospital, and the careful and rapid examination of specimens sent by practising physicians for diagnosis. They are also intended for the pursuit of scientific research under favorable circumstances and for the instruction of students in the routine of laboratory work.

From June 15 to October 1 all clinical courses at the Polyclinic are given at a reduction of 25 per cent. from the regular schedule of prices. This reduction is made because some of the professors take their vacations during this time. The number of patients attending the dispensaries is greatest during the summer. The regular schedule of clinics is followed, and, in the absence of professors, clinics are in charge of capable and experienced instructors.

NEW ORLEANS.

New Orleans, the largest city in the southern part of the United States, is fittingly provided with an excellent post-graduate school. The supply of clinical material is large, and the school has, since its establishment, in every way justified its existence.

The New Orleans Polyclinic.—This school was opened in 1887, and in 1895 the school was housed in a new building. The Polyclinic is in proximity to and has free access to the wards of the Charity Hospital, an institution of 750 beds, while the Milliken Memorial Hospital for Children is located on the same grounds with the Charity Hospital and is equally accessible.

The Polyclinic itself, at the corner of Tulane avenue and Liberty street, is a well constructed building, equipped with all modern and scientific medical improvements. A general ticket, including seventeen branches in medicine and surgery, costs $100 for six weeks and $75 for four weeks, while single tickets may be had for $15 and $12, respectively; when two or more courses are taken the charge is $12 each course for six weeks and $10 for four weeks.

Plan of Instruction.—Clinics are held in general clinical and operative surgery, including orthopedics, applied anatomy, minor and clinical surgery, diseases of the nervous system, diseases of the eye, diseases of the ear, nose and throat, dental and oral surgery, genitourinary and rectal diseases, obstetrics and gynecology, clinical gynecology, diseases of children, general clinical medicine, diseases of the skin, clinical microscopy and bacteriology, diseases of the digestive apparatus, clinical therapeutics, and clinical diagnosis. The session opens the first week in November and closes at the end of May.

Dr. Charles Chaissagnac is the President of the Polyclinic, Dr. P. E. Archinard, Vice-President, and Dr. Isadore Dyer, Secretary and Treasurer. The faculty consists of Professor Rudolph Matas, emeritus professor of surgery; A. W. de Roaldes, emeritus professor of diseases of the ear, nose, and throat; F. W. Parham, general clinical and operative surgery; P. E. Archinard, diseases of the nervous system; Henry Dickson Bruns, diseases of the eye; A. G. Friedrichs, dental and oral surgery; Charles Chassaignac, genitourinary and rectal diseases; P. Michinard, obstetrics and gynecology; T. S. Kennedy, diseases of children; G. Farrar Patton, clinical medicine; Isadore Dyer, diseases of the skin; E. Denègre Martin, minor and clinical surgery; J. J. Archinard, clinical microscopy and bacteriology; J. A. Storck, diseases of the digestive apparatus; Felix A. Larue, operative surgery and applied anatomy; G. M. Dupaquier, clinical therapeutics; H. C. Cocram, clinical gynecology; Otto Lerch, clinical diagnosis; Gordon King, diseases of the ear, nose, and throat; E. A. Robin, diseases of the eye. There is, in addition, a large corps of lecturers and clinical assistants.

POST-GRADUATE INSTRUCTION IN UNDERGRADUATE SCHOOLS.

In addition to the regular post-graduate schools, many of the schools of medicine in the United States give post-graduate instruction.

Johns Hopkins University has, since the inception of the medical school proper, given courses for graduates in the months of May and June.

Medical Department of Harvard University.—Courses of instruction are offered for graduates of recognized medical schools, and during the present year these have been given in subjects embracing all the branches of practical and scientific medicine. The extensive laboratories of the school are in every way excellent, and the clinical advantages afforded by the hospitals of Boston are unsurpassed.

Jefferson Medical College and Hospital, Philadelphia.—Graduates in medicine desiring to take the senior course, without being candidates for the degree and therefore without examination, may do so and will receive a certificate of attendance.

The Michigan College of Medicine and Surgery, situated at Detroit, has established a practitioner's course. The work of the practitioner's course is so arranged that physicians may enter it at any time and leave it when they think best. The teaching is made thoroughly practical in the following branches: Surgery, practice of medicine, obstetrics, gynecology, diseases of children, diseases of the nervous system, venereal diseases, diseases of the skin, laryngology, ophthalmology, otology, and thoracic diseases. There is no examination in the practitioners' course. The instruction is largely practical, and consists more in training the student in methods than in precepts. The fees for the post-graduate course are, for all subjects, $50; single subject, $25.

Louisville Medical College.—Graduates of this college, or of other schools desiring to pursue a post-graduate course, will be charged a fee of $25, and given a certificate attesting time spent in such work.

At the Hospital College of Medicine, Louisville, the Medical Department of the Central University of Kentucky, special provisions are made in the arrangement of clinical and laboratory studies for practitioners of medicine. This course embraces the subjects usually taught in post-graduate courses.

The Kentucky School of Medicine and Hospital at Louisville also gives a post-graduate course, for which the fee is $25.

Several other schools of medicine in the United States also provide opportunities for the pursuit of post-graduate work.

Argon and Other Gases of the Air.—Ramsay and Travers have isolated five new gases in the air, namely, helium, neon, argon, krypton and xenon, and have determined their constants. The periodic law of Mendeleft is thus written by them:

Hydrogen, 1; helium, 4; lithium, 7; glucinium, 9; fluorine, 19; neon, 20; sodium, 23; magnesium, 24; chlorine 35.5; argon, 40; potassium, 39; calcium, 40; bromine, 80; krypton, 82; rubidinum, 85; strontium, 87; iodine, 127; xenon, 128; cæsium, 133; barium, 137.

Open Street Cars.—Summer has come with sudden onset, and the supply of open cars in the streets falls far short of the demand. In the rawest, chilliest, and most disagreeable days of spring there were too many of these cars. Now there are too few. The management of the lines is sometimes strangely capricious.—*New York Tribune.*

CERTAIN CLINICAL TYPES OF BRAIN SYPHILIS*

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I FEEL that an apology is due the president and members of this society for bringing to their attention so well-worn a text as syphilis of the brain. Since the appearance of Heubner's monograph in 1873 the subject has been on a solid basis, both clinical and pathological; and subsequent contributions, while they have widened our knowledge, have not materially changed its foundations. Light on this question, to be really new, can only be shed when bacteriology or chemical pathology answers the riddle of how this unforgiving disease transmits and perpetuates itself. Until that day comes, those of us who are practising physicians must be content with perfecting our clinical experience.

It may be that my own interest leads me to overestimate its importance, but I have long felt that an intimate and every-day familiarity with brain syphilis was, perhaps, the most essential qualification of a neurologist. My apology, therefore, for asking attention to so old a theme is the frequency, variability and urgent need of recognition of the disease. In its frequency alone there is justification. In and about centers of dense population direct syphilitic lesions form a long chapter in cerebral pathology. In my records of private cases brain syphilis has been three times more frequent than sciatica, and in about the same ratio to progressive muscular atrophy and paralysis agitans. It has been more frequent also, though in less proportion, than infantile spinal palsy. In fact, with the exception of general paresis and locomotor ataxia, brain syphilis is, perhaps, the commonest organic lesion seen by the practicing neurologist.

Great as is its variability in symptoms and in course, and diverse as it may be in its onset, there is often one set of more or less distinctive symptoms which dominate the picture at first, and which may or may not continue to do so. Thus in some cases a poplectic seizures, with paralysis, which come, which go, which come again, constitute the type of the disease. In others, recurring headaches; and in still others, Jacksonian or idiopathic epileptic attacks. As the disease progresses, if the lesions in the brain become more diffuse and more diversified, the symptoms are multiplied, and the above-mentioned clinical types lose their individuality. On the other hand, the recurrence, from time to time, of the initial symptoms may remain as the single clinical expression of the brain affection.

It would, of course, be futile, to attempt to separate too sharply these cases into symptomatic groups; or to insist on clinical restrictions for a disease whose possibilities are unrestricted. To modify an aphorism of Ricords: "*Une syphilis commencée Dien le sait où-élle finira.*" An apparently insignificant palsy of one ocular muscle may at any moment be overwhelmed by an apoplectic stroke; or symptoms indicating one type of lesion may quickly be changed to those of another type. Nevertheless, it is useful to group these cases in accordance with their initial symptoms for purposes of closer observation, and also because the initial symptoms sometimes remain the type of the disease throughout.

The most important clinical groups of brain syphilis are the apoplectic, the epileptic, the meningitic, those characterized by isolated oculomotor palsies, and those characterized by somnolence; also, those which correspond with the anatomical types of gummata and cerebrospinal affection. It is not my purpose to attempt to describe any of these types in detail. Such descriptions can be found in textbooks. But I wish to speak of some variations from the commoner ones; and also to discuss the effect of trauma as a cause of them, and of neuroses and psychoses as results of them. The types, characterized by gummata, and by isolated oculomotor palsies, are so well recognized, and well described generally, that they may be passed over without mention. The only thing, also, to be said here about acute specific meningitis is the possibility of its course being wholly changed by the addition of apoplexy. This was the case in an observation published some years ago in conjunction with Dr. G. E. Brewer. The patient had been suffering some time with intense headache, slight optic neuritis and the general symptoms of syphilitic meningitis. The prognosis seemed favorable. But the disease suddenly changed in type from meningitic to apoplectic and the patient died. The autopsy showed a basilar meningitis, to which had been added thrombosis of the basilar and cerebellar arteries.

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*Read before the Baltimore Neurological Society.

The commonest group of brain syphilis and the one in which the symptoms are most varied, is that from lesions in the blood vessels. I shall, therefore, begin here.

Vascular Cases.—The acute apoplectic seizures of cerebral syphilis are so frequent, and generally so well recognized, that they may be passed over with brief mention. My experience with them has been in most points in accord with the classic descriptions of the books. It has seemed to me, however, that cutaneous disturbances of sensibility have been rather more common than is usually described, and disturbances of the higher visual tracts distinctly more so. A large number of the cases of permanent homonymous hemianopsia that have come under my observation have been of luetic origin. This statement applies to cases in which the symptoms clearly indicate the lesion to be supra-basal, and of vascular origin; it does not include the defects in the visual fields caused by pressure, at the base, upon the peripheral optic tracts. In the following case of ingravescent apoplexy, the visual disturbances were the chief objective signs. A man, syphilitic for several years, after having felt nervous and upset for a few days, woke up in the middle of the night with a feeling of nausea and a terrific pain in the right occipital region. The next day he noticed that vision for objects on his left side was impaired. Examination showed a distinct left homonymous impairment of vision without paralysis or other focal symptoms. Promptly put under treatment this symptom disappeared almost entirely in three weeks.

In some vascular cases, focal signs are wholly absent. The following case illustrates such a state of things. It is reported with some hesitancy, as no history of syphilis was obtained, and as the symptoms were not unmistakably those of syphilis. The patient, however, had led a life of questionable circumspection, and was only forty years of age. For several days before the attack, she had been feeling rather tired and nervous. The attack heralded itself by a sudden severe pain in the occipital region. This pain was described as so excruciating, that the patient was practically out of her mind for the half hour it lasted. It was followed by nausea, vomiting and dizziness, and general severe headache. The patient was confused for several hours after the severe pain. The physical examination was negative except that the knee-jerks were rather active and the patient was tremulous and nervous. Under the iodide these symptoms gradually passed away, though it was several weeks before the patient recovered sufficiently from the nervous shock to leave the house.

In contrast to these cases of acute vascular disease are those in which the symptoms develop slowly, taking weeks or months, or even longer to become characteristic or even recognizable. At first they are chiefly mental. The friends of the patient notice a change in his disposition. He becomes irritable, inattentive and forgetful. Headache is usually not a prominent symptom. Disturbances of special brain functions are late in appearing. When they finally appear, they are often not pronounced, existing as a difference in the deep reflexes of the two sides, or as pupillary inequalities, or as slight hemiplegia, or, in fact, as almost any one of the localizing evidences of brain disease. In the early stages these cases have the appearance of some idiopathic mental disturbance; later they often resemble brain tumor (gumma), though the general symptoms of brain tumor are absent and there is no optic neuritis. These cases have, in my experience, responded very poorly to specific treatment. One reason may be that the diagnosis is not made early enough, so that when treatment is finally applied, the organic products have passed the stage when they can be reabsorbed. The two following cases, one with autopsy, are excellent examples of this condition.

A gentleman of fifty, with the history of syphilis fifteen years before, gave the first evidences of brain involvement three months before his death. These earliest signs were eccentricities in behavior and a change in character. A man of large business interests and great activity, he became inattentive and forgetful, lost interest in his affairs, managed them ill and neglected them. He became morose and irritable and complained somewhat of headache. These symptoms, which in some ways strongly resembled those of incipient general paresis, had existed for about two months, when he came to New York for treatment. None of the physical symptoms of general paresis were present. The pupils were equal and reacted normally; the knee-jerks were equal and active; there was no tremor of the face. The patient became continuously worse. The mental enfeeblement progressed, and there soon developed symptoms suggestive of sensory aphasia. When spoken to, the patient would give entirely irrelevant answers, as though he either had not understood, or had misunderstood what was said. The general mental hebetude prevented satisfactory inquiry into the speech disorder. A few days before death there appeared slight signs of right hemiplegia. The sensibility on the right side was diminished, the patient used the right arm and leg less than the left, and the right knee-jerk became more active than the left. There was never an optic neuritis. On autopsy the whole left temporo-sphenoidal lobe was somewhat increased in size and softened. There was no general atheroma of the cerebral vessels, and except for the condition mentioned the brain was macroscopically normal. Microscopical examination showed the lesion in the temporo-sphenoidal lobe to consist of endarteritis of the small arteries; innumerable foci of round cell exudation, some immediately around the arterioles, and some apparently free, all very small; and scattered areas of softening. These findings agre every well with the clinical symptoms if we can assume that the lesion was only adequate to cause the definite local symptoms observed in the last few days of life, when softening had been added to the endarteritis and miliary gummata.

The second case referred to is so similiar to the one just described that although not substantiated by autopsy, it can be placed in the same category. A gentleman, sixty years of age, having had syphilis twenty years previously, became troublesome in a hotel in August, 1901. Generally of a quiet disposition, fond of hunting, fishing, etc., his character changed completely in two or three days, and he became extremely obnoxious to the other guests in the hotel. He made obscene remarks in public, became boisterous and unruly, would catch hold of ladies ankles as they sat on the piazza, and altogether behaved so extravagantly that every one thought him insane. Within a week of the onset of these symptoms he was brought to New York, where, in less than a month, he died. When he arrived in New York, where I first saw him, he was completely demented. He did not answer the simplest questions, and made little or no effort to speak. The urine and oftentimes the feces were passed involuntarily. The physical signs of general paresis were absent. The pupils were equal and reacted normally, the knee-jerks were normal, there was no tremor about the face or lips. The only focal signs consisted in an increased rigidity in the right arm and right leg, and a diminution in sensibility on the right side of the body. These became quite pronounced a few days before death. He died in coma.

In both these cases energetic specific treatment was entirely ineffectual. In the latter, the symptoms and course of the disease seemed aggravated by it.

In another class of cases the development of the symptoms is much slower and the symptoms themselves are general, rather than focal. They indicate a diffuse involvement of the cerebral arteries. Most conspicuous among them are slight hebetude, inattention and failure of memory. Dizziness is fairly constant. The knee-jerks are active, and speech is often somewhat thick, and sometimes there is slight uncertainty in gait. These cases usually terminate by an apoplectic stroke, but often do not do so until the preceding symptoms have existed for years. The patients illustrative of this group whom I have seen have been between forty and fifty years, with the history of syphilis many years before. Specific treatment has been unavailing. It may well be that these cases are not true examples of syphilis, but that cerebral endarteritis was only hastened by the venereal disease.

Cases Characterized by Somnolence.—Somnolence is a frequent and characteristic sign of brain syphilis, whatever the anatomical type of the disease may be. Oftentimes, it goes hand in hand with the other symptoms, improving as they improve, or deepening into coma as the disease increases. Cases are on record in which somnolence, deepening into coma, has ended in death without other symptoms. Oppenheim especially has emphasized the clinical importance of this particular variety of mental affection as a herald of attacks, or as an isolated symptom. He says that the condition imitates normal sleep, not only in its general characteristics, but also in the way the patient disposes the limbs and responds to stimulation. When awaked, he goes to sleep again. Reports of such cases are not numerous in the literature, although Oppenheim says he has seen several. He regards them as of serious prognosis. Keyes has also mentioned these cases as particularly liable to occur after exposure to great heat. The following case illustrates a mild grade of the condition, from which there was perfect recovery. The patient was thirty-five years of age when he contracted syphilis in 1894. He was treated systematically for two years. In the spring of 1898 he was in the South, where the heat was intense. All the time he was there he was lazy and heavy, feeling very sleepy most of the time. He was unable to perform his work satisfactorily, and returned to New York in July. He there gained fifteen or twenty pounds of flesh, which made him distinctly overweight. When seen by me in October, 1898, these symptoms were practically unchanged. He still felt lazy and sleepy and without activity. He could do his work, but it required great effort. His recollecting power was good, but he was very forgetful through inattention. For example, he frequently rode past his station on the elevated, forgot to come to meals, etc. This was a distinct change from his previous habits. The patient took little interest in the examination. Seemed sleepy and apathetic, and while his case was being discussed he sat with eyes covered with the hands.

The only physical signs demonstrable were a slight weakness in the left leg and slight increase in the knee jerk on the left side. The patient was put on an energetic course of inunctions and iodides, and cleared up in every way in six weeks. Since that time he has had occasional courses of the iodide. But the only subsequent symptom at all suggestive of specific trouble was an enlargement of one pupil, which probably came on suddenly. This pupil returned to its normal size in about two months, under treatment.

Cases Characterized by Attacks.—Under this heading it is intended to include cases of epileptoid character.

Every case of brain syphilis may at some time or another have an attack consisting of a sudden increase of existing symptoms or a sudden development of new symptoms. Such attacks may herald hemiplegia or aphasia; they may change the course of a meningitis—they may cause death. Under these conditions the attack marks a distinct epoch in the disease. The cases I wish to speak of now differ from the preceding in that the attacks are the main feature of the malady, recurring with a certain regularity and not being followed, for a time at least, by other symptoms. This group is an extremely important one. The cases which go to form it are numerous and are not infrequently mistaken for epilepsy of other origin. In the larger number of cases the symptoms are focal or Jacksonian. Then they are as varied as brain functions themselves. Aphasia, either motor or sensory, dysarthria, hemianopsia, and other temporary disturbances of vision; one sided tingling and numbness or even partial anæsthesia; convulsive movements of a few muscles or of groups of muscles; or dizziness or petit mal, with its amnæsias and other equivalents of temporary mental unbalancement. All of these, and countless variations of them, may exist, without remarkable variation or sequelæ for weeks or months, or even years. Once begun as recurring attacks they are apt to be very frequent, occurring several times a week or every day or many times a day. They may follow a true epileptoid course for a long time, though ultimately they are complicated by an extension of symptoms. The following case offers a fair example of this condition. The attacks were cut short by specific treatment.

The patient, a stenographer, forty-one years of age, referred to me by Dr. E. L. Keyes, Jr., contracted syphilis in 1881. Treated systematically for three years. In 1897 he had an attack of partial hemiplegia, from which he recovered perfectly in three months. In the spring of 1901, he began to have feelings of numbness in the tongue, then down the right side, then down the left side. These would come and last a minute or two, and then disappear without leaving any after effects whatever. These attacks stopped independently of treatment. On September 14 they began again, and lasted until the 23d, the date of my examination. During those nine days the attacks were very frequent, there being ten or eleven of them daily. All affected the right side with sensations of tingling and numbness. There was no twitching of muscles, but motion was nevertheless affected. For example, the patient was walking when one attack came on. He had to sit down as the right leg became unruly and ataxic, although not paralyzed. There was no disturbance of speech either as motor or sensory aphasia. But there was agraphia, as in one attack the patient was writing and had to stop. He could hold the pen and make strokes with it, but could not form the characters. He had slight headache during the attacks, but no dizziness. The longest attack lasted three minutes. In no attack was there disturbance of consciousness. The attacks left no sequelæ and he felt well between them. The physical examination was absolutely negative. Under mixed treatment, the patient made a perfect recovery. In this case the absence of both physical and mental signs of paresis, the fact that the attacks only occurred in series with intervals of perfect health, and their disappearance under treatment, led to the diagnosis of syphilis as opposed to paresis.

The pathological explanation of these Jacksonian attacks is in the great majority of cases, to be found in diseases of the blood vessels. They may also result from local gummatous growths from the bone, from the meninges or in the brain itself.

General epileptic attacks, identical with the seizures of idiopathic epilepsy are also observed in persons who have had syphilis. They form a considerable proportion of the cases of "late epilepsy" or epilepsy developing in adult life. In the great majority of cases they are due to generalized intracranial disease, either of a vascular or productive character. In many cases, the physical evidences of such disease are at once apparent on examination of the patient, showing themselves chiefly as symptoms of descending degeneration in the pyramidal tracts. In other cases, the attacks are the unique initial evidences. After a longer or shorter time, there may develop evidences of focal lesions. In still other cases no such signs ever develop, and the question arises, is the epilepsy really due to the syphilitic poison? This question discussed at length, would lead to too long a controversy for this paper. Answered briefly, it may be said that it is the consensus of opinion that the general epilepsy of syphilitics is in the majority of cases due to specific and histologically definable disease in intracranial structures and that such disease may be, but oftener is not, influenced by treatment. In some cases there are no evidences of specific disease other than the fits. In the latter it is supposed that syphilis acts as one of many causes and the epilepsy connot be distinguished from ordinary idiopathic epilepsy. The one exception to this is as follows: Fournier describes epileptic attacks as occurring during the second or florid stage of syphilis. He believes that they depend solely upon the action of the syphilis toxins on the ganglion cells of the cortex; and that they tend either spontaneously, or by treatment, to recover. These cases must be very rare, most authors being unfamiliar with them.

The epileptic equivalents are rarely mentioned as symptoms of syphilis. Such a case has, however, been described by Bechterew (*Revue Neurologique*, 1897, No. 1).

The patient (probably) became syphilitic at age of fifteen. At the age of twenty-seven, he began to have headaches, with nocturnal exacerbations, over the frontal and parietal regions. Then came short periods of disturbed consciousness followed in a few weeks by genuine periods of automatism, during which the patient tore up banknotes, went away from home and was lost, etc. Examination now showed slightly enlarged and painful areas on both sides of the skull. After two weeks of treatment with the iodide and inunctions, the swelling and pain disappeared and the attacks of automatism ceased.

Anty-post syphilitic affection characterized by recurring attacks immediately suggests general paresis; and the diagnosis between paresis and brain syphilis characterized by attacks, is frequently difficult and often enough impossible. When either the physical or mental signs of paresis are pronounced, or unmistakable symptoms of syphilis are present, differentiation should cause no great embarrassment. But in default of these latter, and in view of the fact that the initial symptoms of paresis may be limited to grand or petit mal seizures, to transitory periods of dizziness or of unconsciousness, or of paralysis, and that such manifestations may exist as unique symptoms for months or years, it is readily apparent how difficult the problem may be. In themselves, the attacks of paresis may be identical with those of brain syphilis, so that the only means of differentiation are the associated symptoms and the course which the disease follows.

In the following case the youth of the patient, the short-time interval between the acquisition of syphilis and the development of cerebral symptoms, and the absence of all mental symptoms, speak for syphilis rather than paresis; yet absolutely positive diagnosis appears to me impossible. A young man, twenty-two years of age, referred to me by Dr. Chetwood, contracted syphilis two and a half years ago. From that time until the present he has been under systematic treatment with mercury and the iodides. His first cerebral accident occurred about eighteen months after the chancre. It consisted in a severe attack of dizziness. Three months later there came on, gradually, a partial palsy of the right leg, which slowly passed off again. A similar attack came shortly afterwards. Recently he had two attacks, with only a week's interval. One of them consisted in partial hemianopsia, with tingling in the right half of the face and in the right hand; the other, in hemianopsia only. Both lasted about half an hour. Aside from these attacks the patient is in fairly good health. No headache. No mental disturbances other than nervousness about himself. The pupils respond, and the knee-jerks are active. There is some tremor of lips, face and tongue. These symptoms were not checked by specific treatment.

In all cases, with the possible exception of Fournier's "syphilitic epilepsy," epileptiform attacks in persons who have had syphilis are extremely important symptoms. If due to general paresis, their significance is most gloomy. If due to brain disease, and they pass unrecognized and untreated, they will pretty surely eventuate in an apopletic seizure. If recognized, and vigorously treated, there is every hope that they will disappear without entailing further mischief. In this latter eventuality they will have served as danger signals of service.

Syphilis and Trauma.—By Saenger (*Die Beurtheilung der Nervenerkrankungen nach Unfall*, Stuttgart, 1896), and others, syphilis as an important factor in predisposing to the traumatic neuroses has been duly emphasized. Whatever rôle it may play in the etiology of these baffling affections, in their symptomatology it plays none. From their clinical manifestations, or from their course, the preexistence of syphilis can neither be affirmed nor denied. It is not intended to speak of these disorders under the present heading, but rather of those in which syphilitics after definite traumatic injuries, develope nervous symptoms of characteristic type. The researches of Ehrnzooth (*Deut. Zeit. f. Nervenh.*, 1901) have demonstrated that local injuries to the nervous system create a *locus minoris resistentiæ* which facilitates the action of toxic principles. Thus two series of animals were injected with cultures of various pathogenic bacteria. The animals of one series had previously been subjected to slight injuries to the head. The injured animals showed a much lessened degree of resistance, both local and general, to the bacteria, than the uninjured ones. It would seem that these experiments would agree with the clinical relations between syphilis and trauma; that local brain injury would create a *locus minoris resistentiæ,* upon which the specific poison would act; and that trauma would occupy an important place in the etiology of brain syphilis. The earliest writers on syphilis of the nervous system have emphasized such a relationship. Yet, in the extremely voluminous literature of the syphilis question, there are but few instances recorded in which it is made plain. Much more has been written on the traumatic origin of tabes and paresis than upon that of syphilis of the brain; yet, on *a priori* grounds there is far greater reason to suppose that the former diseases are less often the unique results of injury than the latter. From a considerable experience with general traumatic injuries of the nervous system, and with syphilis of the nervous system, and from a careful overhauling of the literature bearing on this point, I have come to the conclusion that trauma as a direct excitant of brain syphilis is extremely rare. That it does sometimes so act, however, cannot be denied.

Nonne ("Syphilis and Nerven System," Berlin, 1902) reports a case of brain tumor and one of basal meningitis, both valuable in their etiological relations. In the first, a young woman, two years after infection and six weeks after a fall on the head, from which she was unconscious for an hour, developed symptoms of brain tumor. Remedies proving unavailing, operation was resorted to, and a gumma was found in the anterior central convolution. The second case, which was verified at autopsy, was that of a longshoreman who, with the history of syphilis three years previously, developed the symptoms of a progressive basal meningitis. These came on as a result of a fall which had caused a severe cerebral concussion.

The following case, for the early history of which I am indebted to Dr. Frederick Peterson, is the only one I have personally observed. A single man, thirty-five years of age, two years after contracting syphilis, for which he had received thorough and apparently effective treatment, was hit on the head with a mallet. He received a slight scalp wound, which just reached the periosteum. He was not rendered unconscious, and did not complain of headache. He developed, however, a condition of somnolence and inattention. He would lie in bed till the afternoon; he lost interest in things, and was more or less oblivious to his surroundings. About three weeks after the accident he suddenly developed a left facial palsy and the right pupil became larger than the left.

Under energetic specific treatment these focal symptoms and the great somnolence vanished, and during the five years the patient has been under observation no focal symptoms have reappeared, with the exception of slight sluggishness of the pupils. Mentally, however, the patient underwent a complete change from the first. Immediately after the accident, as has been said, somnolence and apathy were pronounced, which disappeared for a time under specific treatment. In the succeeding months, however, the patient became irritable and very erratic, and developed delusions of persecution. He finally threatened homicide against one particular person, who, he thought, had used him ill, so that it was necessary to have him committed to an institution. This idea of injury, which was an insane delusion, faded away with time, and the patient's liberty was restored to him. But he remained partly demented and to the present time has been entirely incapable of resuming his business. Specific treatment has proved, for the mental symptoms, entirely ineffectual. The absence of physical signs and the long persistence, without material change of the dementia, argue the diagnosis of cerebral syphilis, of which the immediate exciting cause was trauma.

Cerebrospinal Types.—Syphilis in its attacks upon the central nervous system has the tendency to make deposits, microscopic though they be, in both brain and spinal cord. It is probable that most, if not all, cases of nervous syphilis are cerebrospinal, anatomically. Clinically, the cerebrospinal character of the affection may or may not make itself apparent. In many cases the clinical type is exclusively cerebral or exclusively spinal; in others, while the conspicuous symptoms are cerebral, there are also symptoms pointing to spinal involvement; in still others with the spinal symptoms well in the foreground, there are also evidences of lesions in the brain. Thus a patient in whom the suggestive complaints and prominent objective symptoms indicate brain disease may also have the purely spinal symptoms of diminution or loss of one or both knee-jerks, or of slight retention of urine, or of pains or paræsthesiæ in definite peripheral nerve areas; or in so-called spinal syphilis, *e. g.* meningomyelitis, pseudo tabes, etc., careful examination often reveals irregularities or inequalities in the pupils, or an immobile pupil, or a paretic ocular muscle; or the patient may complain of headache in a way to make the existence of brain disease almost certain. These cases are well recognized and present only slight difficulties of diagnosis.

When, on the other hand, the symptoms are cerebrospinal from the beginning, the clinical picture is apt to be much more obscure. With a fairly acute course, and with pronounced symptoms as in a case of Oppenheim's (Die Syphilitischen Erkrankungen des Gehirns) the nature of the trouble is usually unmistakable. But in cases of slow development and rather uncertain symptomatology, error in diagnosis is easily possible, if not excusable. In some ways these cases resemble multiple sclerosis—in others, the signs are hardly definite enough to certainly put them out of the class of neurasthenia. The following is an example of the class of case referred to:

A. J., thirty-nine years of age, was referred to me in April, 1900, by Dr. E. L. Keyes. The patient had syphilis in 1887, which lasted, with intermissions and under treatment, for two years. There were no further recurrences until July, 1899. The following symptoms then developed: partial retention of urine, impotence, sensations of coldness in the legs and numbness in the feet, and slight ataxic difficulty in walking. No pains. Dizzy attacks came occasionally, and at one time the patient had difficulty in speaking for several days. Examination showed a slight static ataxia with normal knee-jerks. The pupils responded normally to light. The left pupil was larger than the right, and there was, perhaps, a slight ptosis in the left eye. The patient has occasional attacks of diplopia. He complains also of general physical weakness and lack of energy. Specific treatment had failed to give any relief.

It was to call attention to this class of case that the cerebrospinal group was mentioned in this paper. Such cases are beyond the ordinary rules of differential diagnosis as laid down in the textbooks, and depend for their recognition upon the individual experience and thoroughness of the examiner. I am inclined to think that they are fairly frequent, but often pass unrecognized.

Psychoses and Neuroses.—Before closing, I wish to say one word of these conditions: Their relationship to syphilis is very hard to define. Maniacal and melancholic mental states, or dulness and sleepiness, merging into dementia, are ordinary clinical expressions of organic brain syphilis. They are symptomatic only. Theoretically, therefore, they should be differentiated from the purely functional states included under the terms psychosis and neurosis. Is such a differentiation possible? Is it possible to determine whether there is such a thing as a syphilitic melancholia or syphilitic neurasthenia existing as a pure functional disturbance of nerve cells without the gross syphilitic lesions in connective tissues? If so, can the diagnosis be made from the symptoms, and is the antisyphilitic the proper therapeutic method?

My personal experience would lead me to answer no to these questions. But there are a few, though very few, cases in literature which would seem to indicate that they might be answered in the affirmative. In considering such cases sight must not be lost of the variation in the personal equation of the observer or the possibility of the existence of vascular or meningeal affections, too slight to be recognized as such, yet sufficient to give a wide range to psychical disturbances. Certain it is that psychoses and neuroses, such as neurasthenia, hysteria, melancholia and dementia are disproportionately frequent in persons who have had syphilis. Neurasthenia is, by far, the most frequent of this group. In my private records, more than 25 per cent. of the male cases of non-traumatic neurasthenia have had syphilis. Of these a large number received active antisyphilitic treatment. It has always been a question in my mind if the toxic effects of treatment upon the nervous system were not in many cases as responsible as the venereal disease. I think we all have seen cases of diseases of the nervous system in which a syphilitic origin, while not probable, could not be absolutely denied, and in which, largely on speculation, vigorous mercurial treatment, and large doses of iodide, were instituted. It has been my experience in several such cases to see the patients get rapidly and progressively worse—more rapidly and more progressively than the natural course of the disease would have led one to expect. It has seemed to me under such circumstances that the toxic effects of these medicines gave a strong downward impetus; and consequently I have ceased believing that such treatment could "do no harm." An interesting case of such toxic effects is given by Kowalewsky (*Centralblatt für Nervenheilk. and Psych.*, March, 1893).

A soldier, healthy until the age of thirty-one, then contracts syphilis. Under mercury the symptoms quickly disappeared, but years later there were recurring cerebral attacks, characterized by dizziness, headache, hemiplegia, etc. During three months the patient received sixty injunctions of one drachm each of unguenti cinerei and large quantities of iodide. Toward the end of this time, and as the paretic symptoms were disappearing, the patient became very irritable, capricious and fearful. He was afraid to be alone, afraid something was going to happen, was sleepless, restless and excitable. Thus, although the evidences of organic disease were disappearing under the treatment, those of functional nature were appearing and getting worse. With the cessation of treatment, the neurasthenic symptoms improved and finally disappeared. In a succeeding attack the same phenomena occurred, the appearance of neurasthenia under specific treatment and its disappearance when the treatment was stopped. With such facts in view, it is perfectly legitimate to inquire if syphilis is not sometimes made to bear the stigma of neurasthenia, when it really belongs to iodism and mercurialization. I fully believe it does. But I am none the less ready to admit that syphilis and syphilis alone is responsible for many of the post-syphilitic neurasthenias. But in the vast majority of these the functional nervous disturbances result from the malnutrition brought about by the venereal disease; and the proper treatment consists in general tonic measures rather than in specific remedies. In a few cases, perhaps, the direct poison of syphilis is responsible. In these the symptoms will disappear under anti-syphilitic remedies.

The other neuroses and psychoses can be dismissed with brief mention. Epilepsy has already been spoken of. In the predisposing causes of hysteria, syphilis is commonly spoken of, especially by French authors. It has never been a reasonably probable cause in any cases which have come under my observation. Melancholic symptoms are common after syphilis. They frequently accompany the organic brain lesions and are prominent in the post-syphilitic neurasthenias. But I have not been able to find any well authenticated cases of the pure psychosis melancholia which were cured by antisyphilitic treatment. In mania, the differential diagnosis between organic lesion and psychosis is much more difficult. Berkeley ("Mental Diseases," New York, 1900) describes under Furibund delirium cases in which, after prodromal periods of headache, moroseness, etc., a mania of furious type develops, which lasts for days or weeks, and is succeeded by partial coma. The anatomical substratum of this condition is doubtful. It is probable that in most cases of syphilitic mania meningitis or vascular disease could be demonstrated.

Post-syphilitic dementia is in all probability due to vascular disease. In it, therefore, specific remedies are distinctly indicated, though, unfortunately, they are not always successful.

Helpful Galactose.—A hitherto unknown element in milk, a new ferment, has been discovered at this station, called galactose, which is proving of value in the ripening of cheese. The properties of this ferment are similar to the secretion of the pancreatic organ in the human body. Old cheese is a predigested food, and the digestion is wrought by the galactose. It was found that the galactose would go on working at very low temperatures, temperatures at which bacteria were practically inert. Cheese was put into refrigerators and kept frozen for months. Other cheese was kept just above the freezing point. It was found that the finest cheese is cured at from 40° to 45° F. Practical cheese manufacturers had maintained that 50° was the lowest temperature at which cheese could be worked without becoming bitter and worthless. The new discovery will, it is believed, revolutionize cheese manufacture, doing away with all curing rooms, the cheese being sent directly to the refrigerator—*W. S. Harwood in Scribner's Magazine.*

MULTIPLE NEURITIS.*

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The diagnosis of multiple neuritis in its classical form is a very simple proposition, but at the bedside there are few classical cases, so that in this disease, as in many others, errors in diagnosis are not infrequent; as the prognosis of multiple neuritis is usually favorable under proper treatment, and the prognosis of the diseases with which it is usually confounded is very bad, a correct diagnosis is a matter of great importance. The disease is the result of some kind of poison and while the action of this agent may be limited to the peripheral portion of the neurons, yet there are cases in which the cell body as well is impaired, and this also makes confusion in diagnosis. The principal poisons producing a multiple peripheral neuritis are alcohol lead, arsenic, and the toxins of the various micro organisms, especially those that produce diphtheria, influenza, typhoid fever, gonorrhœa, syphilis, leprosy, and beriberi.

In the typical cases of multiple neuritis, we have a symmetrical localization of motor, sensory, and vasomotor symptoms. In earlier stages the symptoms are the result of irritation of the nerve, while the later symptoms are those of destruction. Thus we have in the beginning muscular cramps and spasms, shooting pains, and paresthesia. Later on, paralysis and anæsthesia. If all the cases were thus characterized, there would never be any difficulty in diagnosis, but, unfortunately, in some cases the motor phenomena dominate or stand alone; in other cases the sensory symptoms are equally prominent, and are associated with a very small amount of muscular weakness; while in still other cases the vasomotor phenomena eclipse the other symptoms. As examples of the distinctly motor type, we have lead paralysis, Landry's paralysis, and tetany. Of the sensory type, pseudotabes and leprosy. Of the vasomotor type, erythromelagia and Reynaud's disease.

The common form of multiple neuritis is that which has its etiology in alcoholism, and this ordinarily presents to us the mixed type, the type in which the motor, sensory, and vasomotor parts are each more or less involved. The diagnosis of alcoholic neuritis will be based upon the evidences of chronic alcoholic poisoning, found in the digestive, circulatory and nervous systems. The onset is usually insidious, weeks or months being necessary for its full development; the earlier symptoms are numbness, tingling, muscular cramps and tremors, and vasomotor disturbances, such as either cold and clammy hands or feet, or a hot and burning sensation in the same extremities. Progression of the disease is characterized by more intense pains by nerve and muscular tenderness to pressure, followed by cutaneous anæsthesia, and we have frequently this anæsthesia with muscular hyperesthesia. The paralysis soon results in a quadriplegia, with foot and wrist-drop. In the earlier stages knee-jerk is often exaggerated, and there is hyperextension of the great toes, but these soon disappear, and patellar reflex is lost and the toes become flexed. With paralysis there is a progressive atrophy; the muscles soon lose, in pronounced cases, reaction to faradism, and they require strong interrupted galvanic currents to produce contraction. The very early appearance of these electrical reactions make a valuable aid to the differentiation of multiple neuritis from anterior poliomyelitis, in which latter disease these electrical reactions are established only after a much greater interval of time. The escape of the muscles of the trunk in all the ordinary cases, and the control the patient has over the sphincters, of the bladder and rectum, are valuable aids in differentiation from myelitis.

In a few cases there is a very marked psychic disturbance, which may be either in the way of exaltation or depression, both alike accompanied with marked failure in memory. These psychic symptoms are probably as much a part of the general alcoholism as they are of the special manifestations of the neuritis.

Arsenical neuritis—which is rare—very much resembles the alcoholic form. The differentiation from alcoholic neuritis was made in the few cases I have seen by the absence of all evidences of alcoholism, by the œdema of the eyelids, pigmentation, the epigastric pain and nausea. These cases were the result of the continued use of large doses of Fowler's solution; in them the tremors were more marked than in alcoholic neuritis, and the knee-jerks and superficial reflexes were present. Some cases are the result of a combined action of alcohol and arsenic, as witness the remarkable epidemic from beer that occurred in Manchester, Eng., in 1900, (*Journal American Medical Association*, January 26, 1901). Another good example of the mixed type of multiple neuritis is beriberi, and the intimate association which the country now has with the Oriental peoples, where this disease is by no means uncommon, makes it quite necessary for the physician to be familiar with its general aspect. It is a specific form, the precise poison producing it is still in doubt. Recent investigation by Ross (*British Medical Journal*, February 8, 1902) would seem to indicate that arsenic may be the principal etiological factor, although hitherto this has been regarded as microbic. It is characterized by œdema of connective tissue, effusion in the serous cavities, the special liability to implication of the phrenic and pneumogastric nerves. There is usually a prodromal stage of several days or weeks, with general malaise, depression of spirits, headache, numbness, stiffness, cramps of legs, œdema of the ankles, diarrhœa, and usually a slight fever. These symptoms sometimes come on with great rapidity, the patient going to bed well, and waking up in the morning unable to walk or stand. The œdema of the legs increases, the hands and the face become puffy, the paralysis develops, knee-jerks are abolished, palpitation and cardiac dyspnœa become marked, and the urine is much diminished. After a variable space of time the renal secretion becomes abundant, the œdema disappears, and the legs and arms undergo a marked atrophy.

An example of the motor type of neuritis is found in lead palsy, of which there are two common types, characterized, the one by the lower arm symptoms (wrist-drop), and the other, not so common, the upper arm type. Lead as an etiologic factor in producing disturbances of the nervous system is a much more common one than many suppose. In cities like Chicago, where in the homes of many of our citizens the water supply is some part of the day deficient, the pipes, in fact, may be empty of water, and then become encrusted with oxide of lead. As the increased pressure fills up the pipes again, and water is drawn, particles of lead are detached and pass into the drinking vessel, an thus enter the bodies of the patients, and while we have in the blue line on the gums, when present, an excellent means of differentiation, yet we have many cases of lead poisoning in which this blue line is absent.

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*Read before the Tri-State Medical Society, April 3, 1902.

Another example of the motor type of neuritis is Landry's paralysis. This disease in its typical form has sensation intact and sphincters uninvolved. The rapid advancing paralysis, beginning in the legs and extending upward, presents such a striking clinical picture that an error in diagnosis is rarely possible. In the slowly progressing cases there may be great doubt for a time, and especially in such cases in which there is numbness and some pain, and paresthesia, still greater difficulty will be experienced in making a diagnosis.

Another form of the motor type of neuritis is tetany, and the one in which there should be but little difficulty in differentiation. The irritability of the nerves to the electrical current, and to pressure, and the easy development of the spasms of the hands and feet by pressure and percussion over nerve trunks, make such a picture that can rarely be mistaken for any other disease. A good example of the vasomotor type of multiple neuritis, and one, in my experience by no means uncommon, is erythromelalgia. Sensory symptoms are here present, sometimes to a very marked degree, but it must be by the redness of the skin of the feet that the diagnosis is made. It is a neuritis that is usually limited to the plantar nerve, and is multiple in that it usually involves both feet.

Treatment.—The treatment of these several forms of neuritis have, in common: rest, the relief of pain and insomnia, the use, in the early stages, of the constant galvanic current of low amperage, applied daily to the nerve trunks involved, attention to elimination by skin, bowels and kidneys. The several etiological factors give indications of treatment; the alcoholic require the bromides, with codeine in such doses as necessary to secure a reasonable degree of comfort, and the use of nerve tonics, of which strychnia is the most serviceable. In alcoholic neuritis it is absolutely necessary to withdraw at once and entirely the alcoholic stimulants. In the treatment of beri beri, it is the opinion of the physicians who have had much experience with the disease, that the patient must be removed from the locality where the disease was contracted, must have absolute rest in bed, mild laxatives, diuretics, tonics, and anodynes. When cardiac failure seems imminent, strychnia and nitroglycerine have given the best results.

After the acute stage of these several forms of multiple neuritis has passed, the patients all alike require vigorous restorative treatment. The hemoglobinometer will show the most of them to be markedly anæmic, and to relieve this, of course, some preparation of iron must be used. My experience with the various recent preparations of iron has not in the least diminished my confidence in Blaud's mass, which received at the hands of Niemeyer, so many years ago, such warm endorsement. With iron may be combined quinine. The diet throughout the case must be carefully regulated to suit the digestive condition of the patient. They all need a very liberal diet, but it must be carefully proportioned to their capacity, so as to avoid a possibility of autointoxication by the gastrointestinal tract. So soon as the acute pain has disappeared, the use of the galvanic current of a proper amperage, interrupted so as to produce muscular contraction, is indicated. The seances should be short, not more than three of four contractions of each group of muscles by a current of the least possible amperage should be made daily. This exercise of the atrophied muscles will ordinarily result in their slow development, and after a time they will respond to the faradic current and then it should be substituted. Gentle massage should be commenced at the same time the electrical exercise of the muscles begins, and the severity of this treatment should be increased as the muscular soreness subsides. There is nothing myterious about massage, and any one of ordinary intelligence can soon be taught do do it properly. Much benefit may be had by the hypodermic use of strychnine, a daily injection beginning with one-sixtieth and gradually increasing it to a full physiological dose. If the case does not yield, hypodermic injections of the chloride of gold and sodium, gr. 1–24, may be added to the daily treatment. So soon as advisable, the patient may be encouraged to make voluntary muscular movements, frequently and to the utmost extent possible. Many of these cases of multple neuritis in the beginning of the treatment are very discouraging, and the physician is apt to give them up as hopeless too soon. Some of the most satisfactory results that I have obtained have been in cases of long standing neuritis, abandoned by physicians as incurable.

The Technique of the Widal Reaction.—F. Pröscher recommends the following method, which ensures uniformity of results, requires a minimum amount of serum, and involves but little risk in manipulation. The blood is collected in U-shaped capillary tubes of glass having an outside diameter of about 2 mm. One end of the tube is touched to the drops exuding from a small incision in the tip of the ear and is quickly filled by capillarity, after which both ends are closed with sealing-wax. In the laboratory the tube is placed in the centrifuge, and a stroke of the file serves to separate the serum-filled portion of the tube from that containing the clot. A 1 cc. pipette, graduated in one-hundredths, is held point up and the contents of the tube transferred to it again, which is easily effected by capillarity. The amount of serum in the pipette is read off and then blown into a test tube containing 1 c.c. of physiological salt solution. This mixture is further diluted by exactly the amount required to make a dilution of 1:10. The dilution is continued by putting ½ c.c. of salt solution into several test tubes, the first of which is allowed to remain empty. One-half c.c. of the 1:10 dilution is placed in tubes one and two, one-half c.c. out of tube two is placed in tube three, and one-half c.c. of this mixture in tube four. Each tube then contains one-half c.c. of diluted serum, in strengths of 1:10; 1:20; 1:40; etc., five dilutions being usually made and one tube being filled only with salt solution as a control. Each tube then receives one-half c.c. of a typhoid bouillon culture, which, after one day of growth, is killed by the addition of 1 per cent. of formalin, and has been allowed to settle for two days at a temperature of 37° C. The tubes now contain equal quantities of fluid and of culture and differ only by the amount of serum present, the dilution of which is now, of course, doubled. The tubes are immediately emptied into small glass dishes, which are placed one on top of the other, and put in the thermostat to be examined at the end of one and two hours. The inspection is made under the low power (50 diameters), and but little practice is required to recognize artefacts, and by considering all doubtful reactions negative consistent results are regularly obtained.—*Centralblatt für Bakt. Parasit. u. Infectionskrankheiten.*

Nobel Prizes.—According to an official statement recently issued, the endowment of the Nobel Foundation is about $7,500,000, and the value of each of the five prizes to be awarded at the close of the present year will be nearly $40,000.—*Scientific American Supplement.*

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BACTERIOLOGY AND PHTHISIS.

THE views of the majority of scientific and medical men with regard to the bacteriology of pulmonary tuberculosis and its importance have varied considerably.

The advance of bacteriology since its inception has been remarkable and startling, until at the present time the sole aim of medical science would seem to be the discovery of disease-producing bacilli. There are, however, signs that a certain change of front as to the supreme consequence of microbes in causing disease is taking place, and many medical men are beginning to ask themselves whether the power of germs in this respect have not been overestimated.

At the American Congress of Tuberculosis, which met at the Hotel Majestic, New York city, on June 2, 3, and 4, the disposition to regard with a somewhat more lenient eye than formerly the reputed evil influence of microorganisms in connection with consumption was much in evidence.

Dr. Edwin Lewis, Secretary of the committee, read a paper in the second day's discussion on "The Importance of Individual Predisposition in the Development of Tuberculosis, with Some Remarks on the Relation of Metabolism to Human Susceptibility."

In the course of his remarks Dr. Lewis said that, in spite of the influence of Koch's discoveries on all discussion of tuberculosis, the specific treatment of the disease was no further advanced than it was twenty years ago, partly due, perhaps, to the reliance upon laboratory research more than on independent and clinical work.

It is a certain fact, the speaker went on to say, "that while at least 50 per cent. of mankind are susceptible to the bacillus of tuberculosis, only 14 per cent. really die from its harmful effects. . . . The meagre results of the struggle with this disease show that valuable time has been lost in directing energy toward the extinction of the tubercle bacillus. In other words, the patient had been neglected, and important changes in his mental economy had been overlooked too much for his good and for the advancement of medical science."

Dr. Lewis gave the following as his conclusions:

1. Individual predisposition is a far more important factor in the development of clinical tuberculosis than bacterial infection *per se.*

2. The constancy of a pronounced failure in metabolistic equilibrium, during and preceding clinical tuberculosis, points to its importance as the constituting factor of individual predisposition.

3. The study of ferments in physiologic processes shows that the enzymes are the working elements in the maintenance of normal metabolism, and justifies the conclusion that conditions of malnutrition are the result of their absence, decrease, or variation.

4. Study of the chemistry and biology of the bacillus tuberculosis and the conditions favoring and resulting from its growth in the animal body points to the fact that it possesses certain ferments in its organism which, under favorable conditions, perform the functions common to organic life.

5. Immunity to tuberculosis may be considered as the result and complement of those metabolistic changes in living tissue whereby the enzymes, through greater potency than those of the bacillus tuberculosis, are able to maintain a normal osmotic and functional activity in the ultimate cells.

6. Susceptibility to tuberculosis may be considered as a negative condition of organic tissue, whereby enzymes are less potent in the maintenance of normal osmotic and functional activity of component cells than those of the tubercle bacillus in establishing bacteriogenesis.

Dr. W. Howship Dickinson, Consulting Physician to St. George's Hospital and to the Hospital for Sick Children, London, delivered, a few weeks ago, a lecture, in which he made an eloquent protest against the popular conception of and the craze for bacteriology.

He said, in part, "The pathology of the present day is, above all things, bacteriological. It inclines to attribute all diseases with which bacteria have been associated simply and singly to a bacterial origin, confidently assumes that where microbes have not been found they will be, and sanguinely trusts that when found they will submit to control with a tractability in the future which our experience gives us no good warrant to expect. The other day I read in the *Lancet* of a bacillus of fatigue, and should hear, without astonishment, of bacilli of political or theological bias impelling their bearers to toryism or radicalism, scepticism or credulity. We see in tuberculosis, most obviously when it affects the lungs, the assured influence, in the first place, of general ill health and, in the second place, the scarcely less assured influence of local inflammation. The microorganism, though the primary cause, is of secondary importance. The implantation of the organism, as is clinically indicated, and, it may be added, pathologically demonstrated, in connection with inflamed tissue or inflammatory products, shows pulmonary consumption, in the beginning, at least, as a local disease, due to local causes. What we have to consider is not the bacillus, but the reception afforded it. It is not so much a question of the seed as the soil.

Such considerations gain practical value when we have regard to the ill-success which has hitherto attended attempts to cure phthisis by direct attack upon the bacillus; in other words, by the inhalation of germicides, could we kill the parasite we might expect to arrest the disease, though we should still have to deal with the injuries already inflicted. But the difficulty is to kill the guest, without hurting the host. The microorganism appears more difficult to destroy than the tissues among which it lies."

The common-sense, practical and only really efficient manner of successfully treating consumption as yet known is by means of pure dry air, and by feeding its victim with a sufficiency of nourishing wholesome food. To call such methods curative is perhaps something of a misnomer; they are not actually curative, but they no not aggravate the inflammatory symptoms, and by letting nature work, tend to build up the system, so that it is frequently enabled to throw off the humors of disease.

Nowadays the personal factor is too much disregarded, the microbe is looked upon as the "*fons et origo*" of the mischief, and all efforts are exerted to compass its destruction, while the human being is too lightly considered.

As Dr. Dickinson truly remarks, "In the contest between the man and the microbe, it is more to the purpose to back the man than to attack the microbe."

YELLOW FEVER IN EUROPE.

The Yellow Fever Institute of the United States Marine Hospital Service has just published a bulletin on yellow fever in France, Italy, Great Britain and Austria and the bibliography of yellow fever in Europe, compiled by Dr. J. M. Eager, Passed Assistant Surgeon, M. H. S.

The first reliable account of the importation of yellow fever into France relates that the disease was brought to Brest by a squadron of men-o'-war from Santo Domingo.

The American ship *Columbia* also arrived at Marseilles in 1802 with yellow fever aboard.

In 1821 an epidemic of yellow fever occurred in Spain, and several persons suffering from the malady were conveyed by sea to the port of Marseilles. In 1839 a ship with numerous cases of yellow fever aboard entered Brest.

In the year 1861 there occurred at Saint Nazaire the only important epidemic of yellow fever that ever broke out in France. In an article on mosquitos and yellow fever, published in Paris last year, DeGouved concludes that the epidemic of Saint Nazaire, so carefully observed and recorded by Melier, was determined by mosquitos infected at Havana and transmitted to France in the hold of a ship. In this article on mosquitos and yellow fever, published October 12, 1901, in *Le Bulletin Medical*, Paris, DeGouved says: I In our opinion, all the facts of the case adapt themselves in a perfect fashion to the theory of the propagation of yellow fever by mosquitos. We may assume at the outset that during the loading of a suspected vessel at Havana a certain number of mosquitos, previously infected by sucking the blood of yellow-fever patients living in the near neighborhood, could enter the vessel's hold filled with cases of sugar and many stalks of sugar cane placed as a filling in the angular places of stowage to hold the cases in place and prevent friction. The stalks could have furnished the mosquitos with the necessary nourishment during the voyage.

During the broiling calms that followed for five days after the departure of the vessel from Havana, the mosquitos, excited by the heat of the atmosphere of the hold, could very easily pass the defective bulkhead that separated the hold from the lodgment of a certain number of the crew and, installing themselves in that place, sting the sailors, and thus inoculate them with the germs of the disease. All the other cases of infection are explained very simply, since they all occurred in individuals who had been for a longer or shorter time in the hold of the vessel or in individuals who, like the sailors of the other vessels, had been down the wind from the infected ship. With all the cases of yellow fever that occurred at Saint Nazaire and Montoir, the malady was not propagated by any of the effects of the crew, taken with them to their families, nor by the ship's cargo sent directly to Nantes by the railroad.

The history of the two epidemics in Italy alleged to have been yellow fever, namely those at Leghorn in 1804 and at Torre Annunziata in 1833, are of interest, says Dr. Eager, because of the heated discussions that arose as to the diagnosis and the strenuous opposition that was made against branding the affected communities with the name of yellow fever conditions recalling the story of many an epidemic that has prevailed in various localities in the United States.

The question as to whether the epidemics in Italy were yellow fever or not has never been definitely made clear. The medical men disputed vigorously on the point, and the majority in the end decided against the disease being named yellow fever. Those who went so far as to diagnose, stated that icteroid typhus and infective fever, characterized by jaundice, were the maladies by which the sick persons had been attacked.

Since 1883, although it has been a frequent occurrence in Italian ports to have vessels arrive from South American ports with a history of yellow fever on board during the voyage, no cases have been registered ashore. In Great Britain in 1817, in 1852, in 1857, in 1864 and in 1865 vessels have arrived with cases of yellow fever aboard, but no cases have been reported ashore.

The history of yellow fever in Europe concludes with two deaths from the disease in hospital in Trieste, Austria. Two of the crew of an Italian ship which arrived at Genoa went by land to Trieste, where they were stricken by yellow fever and died in hospital. There is no record of an extension of the disease.

The interesting part of Dr. Eager's narrative to American readers will be the apparent confirmation of the findings of the United States Army Commission on Yellow Fever at Havana, afforded by the epidemic of the disease at Saint Nazaire, France, in 1861. Dr. Gouved brings a strong case against the mosquitos as carriers of infection in his account of the said epidemic.

POST-GRADUATE INSTRUCTION.

In the present issue of the Medical Record a very complete account is given of the post-graduate schools, and of the other means of post-graduate instruction provided in Germany and Austria and in Great Britain, in order to supply American graduates who may be thinking of taking supplementaay courses abroad with information as to the resources of the medical centers of Europe in this respect.

If those who have taken a degree in this country are desirous of placing the coping stone upon their medical education by studying in foreign schools, no more suitable centers could be chosen than Berlin and Vienna, with their magnificent clinics. London, too, with its vast, almost unlimited wealth of clinical material, offers a rich field to the searcher after practical knowledge, and in addition possesses the great advantage to the American medical man that the language of the country is his own. At the same time the fact might be borne in mind that America was long before England in recognizing the value of the German and Austrian Polykliniks, and that she has improved upon her models. At the present time the large post-graduate clinics of the United States are conducted on a more systematic plan than those on the European continent, and are not, as there, scattered in various buildings with no regular method. The saving of time rendered possible by the American arrangement is obvious, and makes the post-graduate institutions of this country equal to any in the world.

The need, nay the necessity, in most instances of after-training for the medical man under existing circumstances, is freely a knowledged on all hands. Post-graduate institutions provide the necessary opportunities to study the practical part of the profession, denied to the majority while students. With the increase of knowledge of medical science, and especially of bacteriology, the curriculum of the medical student has been made so full, not to say overflowing, that the burden on the youth of average ability is too great for him to think of spending time on matters that do not directly concern the gaining of his degree. All his energies are bent upon passing his examinations as creditably as possible, the natural consequence being that, as a rule, when qualified, the young physician or surgeon is in no way fitted forthwith to commence practice, and if he intends to take up a specialty, or to proceed with research work, after-training is absolutely imperative.

These remarks apply particularly to America, where in many parts the medical course is still painfully brief, while nowhere is it so long as in Great Britain or on the continent. The amount of medical lore that a student of the average medical school of this country is expected to cram into his brain is alarming, and accentuates the need of efficient post-graduate instruction. As to whether it is wise to include in the medical curriculum such a bewildering multiplicity of subjects, as is now the case, is an open question. No less an authority than Huxley entered an eloquent protest against the practice. Nevertheless, we have to deal here with things as they are, not as they might or should be.

It may be said then that a course of instruction in foreign medical schools will have the effect of widening a man's mind not only so far as medical subjects are concerned, but in all those matters which pertain to a liberal education. But the individual who cannot afford, or perhaps does not wish to leave his own country, may console himself with the conviction that he might go farther and fare worse.

The account given in this number of the means afforded for post-graduate education in the United States will clearly demonstrate the fact that these are abundant, and that in many respects the system in vogue here is unsurpassed. There is, however, it must be confessed, one branch of post-graduate education in which Great Britain is not only superior to America, but easily leads the world. Reference is had to instruction in tropical diseases. The opinion has been expressed many times in the MEDICAL RECORD that a school of tropical medicine should be established in this country. The United States has within her own borders sub-tropical districts, and is, besides, the owner of tropical islands. It need hardly be said that special study is required by the physician who would know and treat properly the diseases incidental to hot climates. But this necessary knowledge cannot be had unless generous opportunities are provided for instruction.

THE EFFECT OF WAR UPON THE BIRTH AND DEATH RATE.

War not only influences the mortality of the army in the field, but has a maleficent effect on the birth rate and death rate of the country which is fighting. A low birth rate may be explained, to some extent, by the fact that when a nation is at war, her people at home are less prosperous, and, consequently, marriages are not so frequent.

The increase of the death rate occurs, probably, for the reason that food is scarcer, and also because at a time when a country is engaged in a disastrous war, the minds of its inhabitants are adversely affected. Those who are in delicate health, or who are attacked with sickness succumb much more readily when the spirits are low, than when in a normal condition It is, indeed, the reaction of the mind upon the body.

The returns of the Registrar-General of Great Britain of births, marriages, and deaths for the year 1900 demonstrate the potency of the influence of war upon the birth and death rate

The births in 1900 numbered 927,062, or a rate of 28.7 per 1,000, this being the lowest on record and 1.3 per cent., under the mean rate of the past decade. The illegitimate birth rate was also the lowest on record.

There were 587,830 deaths, or 18.2 per 1,000, as against 17, 17.4, and 17.5 in the previous three years. The number of deaths directly due to alcoholism was 3,683, while the death rate from this cause was 132 males and 95 females per 1,900,000. These rates constitute a highest on record. Tuberculosis claimed 61,302 victims, or a death rate of 10.4 per cent of the deaths from all causes. The death rate of the army was 27.6 per 1,000, as compared with 10, 12 and 10.5 in the preceding three years. The mortality rate in the army abroad was 36.1 per 1,000, as compared with an average of 14.5 in the past five years, and the death rate at home was 8.2, as compared with an average of 4.3 in the previous five years.

Thus it will be seen that war drains the life blood of a nation. Nothing is said in the above returns as to the action war is asserted to have on the production of sex. On the authority of German scientists, it has been declared that the females of a nation at war are apt to give birth to a much larger number of males than is ordinarily the case.

WAR ON MOSQUITOS ON LONG ISLAND.

The Long Island North Shore Improvement Association, through its Executive Committee, undertook a survey for the purpose of locating the breeding places and habitats of the mosquito, with the intention of initiating an active campaign against this insect during the coming summer. The committee has also published a small book giving the reports of the engineers and entomologists who made the survey, with the recommendations for the treatment of the breeding places revealed by the examination.

According to the New York *Sun*, the preliminary examination was made under the direction of Henry Clay Weeks, the engineer, who, associated with Dr. L. O. Howard, Chief of the Division of Entomology of the United States Department of Agriculture, had charge of the work for Mr. Matheson at Lloyd's Neck, Cold Spring Harbor, last summer.

Professor N. S. Shaler, dean of the Lawrence Scientific School of Harvard University, was retained to make a special examination of the salt marshes, and there were associated with Mr. Weeks, as entomologists, Professor Charles B. Davenport, professor of entomology at the University of Chicago, and F. E. Lutz, an instructor in biology at the same institution.

The territory examined is about seventy-five square miles in extent. Professor Davenport and Mr. Lutz walked over the whole district, examining the pools and streams, and even the artificial receptacles of water, which might be the breeding places of mosquitos.

When their detailed reports had been turned in to Mr Weeks, the engineer and his assistants went over all the places indicated and examined them with a view to recommending measures to be taken to get rid of the pest

The seven kinds of relief measures recommended in the report are as follows: First—Many of the useless accumulations of water will be removed entirely, either by filling or draining. Second—The salt marshes will be handled; the problem here is to drain them, or to keep them covered with salt water, or to treat them so that there will be no accumulations of brackish water between high tides. Third—To prevent the breeding of mosquitos in the streams by straightening the banks and so regulating their courses, that there will be no pools of stagnant or slowly moving water. Fourth—To prevent the breeding of mosquitos in springs, by confining these to definite banks and by draining or filling springy areas. Fifth—The breeding in ponds and bodies of water which cannot be drained or filled, can be largely prevented by making the edges of the pond regular and freeing them from vegetation, so that there are no accumulations of water so shallow that they are not accessible to fish. The maintenance of certain kinds of fish in ponds so treated would probably entirely prevent breeding, or at least prevent them from breeding to any serious extent. Sixth—To carefully cover barrels and tanks and to tightly cover cisterns with the additional precaution of keeping a few fish in the latter. Lastly, cesspools, drains and catch basins should be kept tightly covered, and petroleum should be used also.

The estimated cost of the proposed undertaking is $141,000.

It is satisfactory to observe that in many parts of the United States determined efforts are to be made to exterminate or, at any rate, to diminish the mosquito pest. That much may be done in this direction has been clearly shown in the case of Havana, where mosquitos have been practically banished from the city itself and its immediate vicinity. The most radical, albeit, the most expensive measure, is doubtless the most permanent and effective, namely, draining, but where it is impossible to do this, the other methods recommended by the experts in Long Island will serve to mitigate the mosquito plague.

CANCER RESEARCH.

The quest of the origin of cancer bids fair to be fervently followed by scientists of various nationalities. Germany for some time has been making investigations into the causation of the disease, in a systematic manner, but then state-aided laboratory workers in Germany enjoy facilities for research denied to those of other nations. The United States has of late made a considerable amount of progress in scientific research, especially with regard to cancer at the Buffalo State Laboratory—thanks to the munificence of private individuals. Undoubtedly, too, when all the splendidly endowed laboratories in different parts of the country have been fully equipped, some striking results may be confidently anticipated.

In Great Britain a forward movement, with the object of probing the mysteries of cancer, is at the present time taking place. The scheme of a combined cancer research, first suggested by the London *Practitioner* would now appear to be on the road to realization.

The fund asked for ($500,000)—by no means an excessive one—will, it is said, be raised without much difficulty, but whether it will be sufficient or not remains to be proved. The plan proposed is that a Committee chosen by the foremost medical bodies shall supervise the investigations.

The *Practitioner* and *Hospital*, both fear that the machinery will be too complicated. Research by a committee, says the *Practitioner*, would not seem incongruous in a Gilbertian opera.

It may be taken as certain that however carefully the Committees are selected, the superior person will be in the ascendant and the superior person has been, and by the law of his nature must be, the greatest obstacle to medical progress.

The *Hospital* remarks that the ordinary history of scientific discovery is that it has been the result of the patient industry of some single worker, who in most cases has been sustained against failure, or even against ridicule and obloquy, by his own intense conviction of the gleams of light, by which he was endeavoring to guide his steps.

The view taken is that a committee of worthy commonplace men would probably kill all originality, and, with supreme self-confidence, would proceed on the even tenor of their way along the lines already mapped out, and would frown upon any deviation from the beaten path.

It is to be sincerely hoped—at any rate in this country—that the greater part of the magnificent sums donated to the cause of scientific research will not be expended in elaborate and ornate buildings. A simple building, furnished with all the necessary apparatus, will answer the purpose equally as well as a splendid imposing structure. After all, it is workers themselves who count, and they should not be stinted and starved as they too often are.

It may be said that, on the whole, the outlook for the discovery of the origin of cancer is more hopeful than ever before.

THE RETIREMENT OF SURGEON-GENERAL STERNBERG.

The estimation in which Surgeon-General George M. Sternberg, U. S. Army, just retired for age, is held by the members of his corps and the leaders of the profession of the country at large, is evidenced by the complimentary dinners given him in Washington on May 28, and in New York on June 13. To be thus honored falls to the lot of few, and it must be very pleasant to General Sternberg to feel that at the close of his official career his scientific and military efforts have been pronounced good by those best qualified to pass judgment on their merits. His recent retirement, after forty-one years of most varied service as a practising surgeon, sanitarian, and executive, marks the close of a period of medical progress unequalled in the history of the Army Medical Department. Three times brevetted for gallantry in action, a recognized authority the world over on sanitary matters, the wise and able head of his department through the trying period of the wars with Spain, in the Philippines, and in China, his retirement from active service is a distinct loss to his corps and country. The value of his services to the army, the nation, and humanity will long be remembered. General Sternberg enters upon his well-earned rest with the respect, affection, and good wishes of all with whom he came in contact.

FOOD IN THE TROPICS.

There is no entirely decided agreement among those who are entitled to speak with authority as to the kind of food most suited to the white man dwelling in the tropics. Major Seaman has insisted that but a comparatively small quantity of flesh food is necessary to sustain the physical vigor of the American soldier in the Philippines. Captain Munson holds, that while so large an amount of meat as is consumed by the soldier in temperate climates is superfluous and even hurtful to the health, yet that a certain substantial meat ration is needful. Others again assert that the meat allowance should not be curtailed, but, on the other hand, perhaps, increased.

A writer in the *American Journal of Military Surgery* for May referring to the subject of food in the tropics, says the ration as issued and cooked in this country is not suitable for the soldier in the tropics, and this has been demonstrated by experience, and by a board of officers and by scientific deduction.

It may be taken that Captain Munson's view of the food question as regards the soldier in the tropics is, probably, nearer the truth than any other which has been brought forward. The subject of diet in the tropics is one of infinitely great importance, indeed of the very first moment The digestive system of the white man residing in these climes suffers on account of sedentary habits, intermittent fever, unsuitable food and bad cooking. Decomposing food, too, is a fruitful source of liver derangements. Meat must be eaten shortly after the animal has been killed, or unless there are facilities for preserving it in refrigerators—the meat will quickly become tainted.

Dr. Harford-Battersby, writing in *Climate*, May, gives some useful hints with regard to the food most fitting for a white man in tropical countries.

He believes that concentrated essences are very useful in their place, but that one should not live principally on concentrated foods, or by disuse the digestive apparatus will be weakened. Fresh meat should be partaken of when procurable, and fowl. Fish is also a very valuable article of diet, but great care must be taken to ensure that the fish is fresh, as it very rapidly decomposes, and may be a source of serious risk.

The lack of vegetables is another great drawback in the tropics. There is much difficulty in obtaining an adequate supply of green food, although lettuces can be grown, whilst cabbages and some other green vegetables may be cultivated with more or less success. The potato will not grow in the tropics, but the yam is an excellent substitute, and the sweet potato can be obtained in many parts. Cassava is another most nourishing vegetable, and forms the staple of the diet of many native African races. Fruit, of course, is abundantly plentiful, headed by the succulent banana

Milk is usually difficult to procure, and there are portions of the tropics where it cannot be obtained. Another problem, hard of solution, is how to keep it sweet, as it naturally contaminates very easily. It would appear that the only method of temporarily preserving it is by sterilization.

Cereals, the chief of which is corn, are the mainstay of tropical climates.

It may be assumed then as a generally accepted fact that a white man in the tropics is unable to live and thrive on the same food upon which the natives exist, but requires a mixed diet with a certain quantity of meat, a good supply of vegetables and a larger amount of saccharine matter than he is accustomed to eat when living in the temperate zone

His greatest care, however, must be to abstain from alcoholic beverages. If a newcomer drinks even moderately he, undoubtedly, runs great risks, and it may be said without fear of contradiction, that indulgence in alcohol has ruined the health of more white men than any one cause. Total abstinence is the surest way to preserve one's health in tropical countries

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Motor Ambulances for Paris—Paris, like London, is beginning to appreciate the fact that horse and hand ambulances are behind the times and travel far too slowly to give an injured person an opportunity of being treated promptly, and thus of being afforded a fair chance of recovery. The Paris correspondent of the *Lancet* says that complaints have several times been made with respect to the slowness of the ambulance vehicles belonging to the city, for they are drawn by only one horse, which is not always a fast goer. The question of the speedy arrival of the vehicle at the scene of an accident being of the first importance, it would at least be desirable for it to have two horses. Another thing is that the harnessing of the horses takes time. It would be very much quicker and more practical to use motor vehicles now that they are sufficiently speedy and trustworthy. For the daily removal of military patients special tram-cars are used, but even these are far from perfect. The idea of letting them run on the tramway lines is an excellent one, for it makes the journey both easier and quicker, but it is a mistake to use old vehicles, and it would be a good thing if the military tram-cars, which are no longer serviceable, were sent back to the car-builders, for those which are at present running in Paris have a deplorable appearance, and this service is, in several respects, open to improvements.

Electric Light on the Eyes.—A Russian specialist has decided that, contrary to the general opinion, electric light plays less havoc with the eyes than other forms of artificial light. He bases his deductions on the fact that disease and damage to the eye are proportioned to the frequency of the closure of the lids. He found that the lids close in a minute 6.8 times with candle light, 2.8 times with gas light, 2.2 times with sun light and 1.8 times with electric light.

News of the Week.

The New Surgeon-General of the Army.—Gen. William H. Forwood, who has succeeded Gen. Sternberg as surgeon-general of the Army, was born in Delaware in 1838 and was educated in medicine at the University of Pennsylvania. He was appointed an assistant surgeon in the army in August, 1861. His service has been long and honorable, including the Civil War, Indian campaigns, the war with Spain, the insurrection in the Philippines and the expedition in China. His first service was as executive officer at the Seminary Hospital, Georgetown, D. C., at the outbreak of the Civil War, soon after which he went to the front and took part in many memorable battles and engagements, including Yorktown, Gaines' Mills, Malvern Hill, the Second Bull Run, Antietam, Gettysburg, and Brandy Station. He attended the wounded under fire many times, and the night after the battle of Gaines' Mills, assisted by two soldiers, he succeeded in passing through the enemy's lines and in bringing off an officer from a point on the field where he had fallen severely wounded during the day. He was later captured by the enemy, but succeeded in making his escape under a hot fire. His horse was killed under him at the battle of Fairfield, near Gettysburg; and at the battle of Brandy Station he was shot through the right breast, from the effects of which he had much trouble for many years. He was twice brevetted during the Civil War for "faithful and meritorious services."

He was the only medical officer at Fort Riley, Kansas, in the fall of 1866, when there was an epidemic of cholera with many deaths. During a leave of absence in the fall of 1870 he volunteered to nurse yellow fever patients at the quarantine station, near Philadelphia, Pa., and spent nearly the whole of his leave there, in order to gain experience with a disease which he had never before had an opportunity of seeing.

For many years after the Civil War Gen. Forwood served on the western frontier, taking part in the campaigns against Indians. He served as surgeon and naturalist to the exploring expeditions sent through Wyoming, Montana, and Idaho during the years 1881, 1882, and 1883. The President and Secretary of War were with the last one of these expeditions. From 1890 to 1898, he was attending surgeon at the Soldier's Home, Washington, D. C., and during the same period he was professor of military surgery at the Army Medical School and professor of surgical pathology at Georgetown University. He also had charge of the 1,000-bed military general hospital at Savannah, Ga., and the establishment of the great tent hospital at Montauk Point in 1898. From December, 1898, to January, 1901, he was chief surgeon of the Department of California, and since that time he has been assistant to Surgeon-General Sternberg, at the same time serving as president of the Army Medical School. He is a recognized authority on military surgery, and has written many articles on this subject for standard text-books.

Gen. Forwood was promoted captain in 1866, major in 1876, lieutenant-colonel in 1891 and colonel in 1897. At the time of his nomination to be surgeon-general he was the senior officer in the medical department of the Army. His tenure of office as surgeon-general will be short, as he will retire for age in September next.

A Discussion on Leprosy was held at a recent meeting of the Medico-Chirurgical Society of London, the special point discussed being the etiology of the disease. According to a report cabled to the *New York Times*, Dr. Hansen of Bergen contended that leprosy was entirely contagious, and that to prove Hutchinson's theory it would be necessary to discover the bacillus of leprosy in the cured fish. He declared that the people of Norway were now eating more fish than ever before, yet leprosy was disappearing because of its strict segregation. He said that several Norwegian lepers had emigrated to the United States, and that their descendants were unleprous, which went to prove that leprosy was not hereditary, but simply contagious. Dr. Thin also supported the contagion theory. Mr. Jonathan Hutchinson, however, stoutly reiterated his belief, which he said had been strengthened by his recent researches in South Africa, that leprosy resulted from eating badly cured fish. He declared his faith that the leprous bacillus would soon be found in the fish, and he reasserted his reasons from his experience for not believing the disease to be contagious.

College of Physicians and Surgeons.—At the commencement of Columbia University, on June 11, the degree of M.D. was conferred on 144 graduates. The ten honor men were: C. E. Webster, Jr., Seward Erdman, H. Von W. Schulte, A. M. Peppenheimer, Ralph M. Beach, William T. Bull, James Francis Rice, Austen Fox Riggs, Philip Bissell, and Henry W. Titus, the first three of whom received the first, second, and third Harsen prizes respectively. The Harsen prizes for clinical reports were awarded to J. F. Saphir, I. S. Hirsch, and E. A. Spitzka. The fellowships of the Alumni Association were awarded as follows: Fellow in Anatomy, Edward Anthony Spitzka; Fellows in Pathology, Hughes Dayton and Augustus B. Wadsworth. The Alumni Association Prize was awarded this year to Dr. George Alfred Lawrence. The Alonzo Clark Scholarship, established to promote the discovery of new facts in medical science, was given to Dr. Augustus Jerome Lartigau.

Corps of Summer Visiting Physicians.—The Board of Health has appointed seventy-seven physicians who will make up the summer corps. Of these physicians forty-six are from this borough; twenty-four from Brooklyn, three from The Bronx and two each from Richmond and Queens. The physicians appointed work during July, August and September chiefly among the poor children. They receive $100 a month each. Nearly 80 per cent. of the physicians appointed will be made permanent medical school inspectors when they have finished with their duties on the summer corps.

The Seaside Hotel of St. John's Guild was opened for the reception of patients on Monday, June 16. Patients are sent to the hospital by the Staten Island Ferry, a nurse and orderly being in attendance on the 10 A.M. and 2.30 P.M. boats.

Navy Department, Bureau of Medicine and Surgery, Washington, D. C.—Changes in the medical corps of the navy, week ending June 14, 1902: June 7.—Surgeon J. W. Ross, retired, detached from duty under the War Department at the Hospital Las Animas, Havana, Cuba, and ordered home. June 12.—Assistant Surgeon E. M. Brown ordered to the Naval Hospital, Mare Island, Cal., for duty.

Examination for Coroner's Physician.—The Municipal Civil Service Commission announces that a competitive examination will be held on Monday, July 7, for the position of Coroner's Physician. Applications for this examination must be made to the Commission, at 346 Broadway, Manhattan, not later than Wednesday, July 2. Candidates must be duly authorized to practise medicine in the State of New York, and must present their diplomas as evidence thereof. This marks an important change in the method of selection of these officers, the appointments having been made previously without competitive examination. The salary attached to the office in the Boroughs of Manhattan, Brooklyn, and The Bronx is $3,000 a year, and in the Boroughs of Queens and Richmond, $1,500 a year.

North Hudson Hospital.—At the annual meeting of the Board of Governors of the North Hudson Hospital, held June 9, 1902, the following were re-elected as the Medical Board: *Attending Surgeons*, Drs. Richard Schlemm, Louis E. Poole, A. J. Walscheid, and F. B. Stellwagon; *Attending Physicians*, Drs. E. E. De Groff, John T. Luck, J. J. Benson, and C. M. De Meritt; *Consulting Surgeons*, Drs. Frank D. Gray and Talbot R. Chambers; *Consulting Physicians*, Drs. John P. Henry and Geo. W. King.

College of Physicians of Philadelphia.—At a stated meeting, held June 4, Dr. George C. Harlan read a "Memoir of the late Dr. William F. Norris;" Drs. J. M. Anders and L. Napoleon Boston read a paper entitled "Bence-Jones Albumosuria, with Report of Three Cases and a Review of the Literature." In one of the cases there was evidently neoplastic bone disease, probably myelomata; in the second the symptoms were strongly suggestive of such disease; while in the third there was evidence of preexisting nephritis. Drs. David L. Edsall and Caspar W. Miller presented a communication entitled "A Study of Absorption, Metabolism and Intestinal Putrefaction in Two Cases Nourished Exclusively by the Rectum." It was demonstrated that rectal alimentation was entirely inadequate, only a portion of the nutrient enema being digested and absorbed, a large portion undergoing putrefaction under the influence of the bacteria present, as shown by the increase in the ethereal sulphates in the urine. Drs. Robert G. Le Conte and Morris J. Lewis presented a communication entitled "Infection of Ovarian Cyst During Typhoid Fever, with Report of Two Cases; Operation, Relapse, Recovery." Dr. Edward Jackson read a paper entitled "The Degree of Protrusion of the Eyes, with an Instrument for Its Measurement." The device consists of a bit of cardboard or other material with a concave aspect to be directed toward the orbits, and ruled on each side in such a manner that the projection of the cornea in front of the vertical plane of the orbits can be easily read. The instrument is useful in determining degrees of exopthalmos, enophthalmos, etc.

Bequests to Charitable Institutions.—By the will of the late Ferdinand J. Dreer, an antiquarian and a liberal patron of educational and charitable objects, of Philadelphia it is directed that at the expiration of ten years, or earlier if the surplus warrants, the residue of the surplus income be divided into fifty-six parts, to be distributed among thirteen institutions, including the following hospitals and homes: Hayes Mechanics' Home, ten parts; Home for Aged and Infirm Colored Persons, three parts; Frederick Douglas Hospital and Training School, three parts; Home of Industry for Discharged Prisoners, five parts; Southern Home for Destitute Children, five parts; Presbyterian Home for Widows and Single Women, two parts; Presbyterian Hospital, two parts; German Hospital, ten parts. The value of the estate is placed nominally at $200,000 and upward. Upon the death without issue of the testator's two sons, one-half of a trust fund of $200,000, created for their benefit, is to be distributed among twenty-two institutions, including the following hospitals and homes: Home for Incurables, Presbyterian Hospital, Jewish Hospital, Howard Hospital and Infirmary for Incurables, Presbyterian Orphanage, House of Industry for Discharged Prisoners, Southern Home for Destitute Children, Hospital of the Women's Homeopathic Association, Rush Hospital for Consumptives, St. Christopher's Hospital for Children, Orphans' Home and Asylum for the Aged and Infirm of the Evangelical Lutheran Church, and Hayes Mechanics' Home. The residuary estate is bequeathed to thirteen institutions, including the Hayes Mechanics' Home, Home for Aged and Infirm Colored Couples, Frederick Douglas Hospital and Training School, Home of Industry for Discharged Prisoners, Southern Home, Presbyterian Home, Presbyterian Hospital, German Hospital.

By the will of the late Valentine Geng of Upper Darby Township, Pa., bequests aggregating $36,000 are made as follows: St. Mary's Hospital, Philadelphia; Old Colored Folks Home, Pennsylvania Training School for Feeble-Minded Children, Presbyterian Hospital, Philadelphia; Baptist Orphanage, Angora; German Hospital, Philadelphia; Jewish Hospital, Philadelphia, each $5,000; Chester Hospital, $1,000.

Dr. A. Edward Davis has resigned from the medical staff of the Manhattan Eye and Ear Hospital.

The American Medical Association.—At the closing session of the American Medical Association in Saratoga, the recommendation of the House of Delegates to meet next year at Little Rock was rejected, and it was decided to meet at New Orleans in May, 1903.

A Dinner to Dr. Sternberg.—A complimentary dinner was given to ex-Surgeon-General George M. Sternberg of the United States Army at Delmonico's on the evening of June 13 to give his colleagues in the medical profession an opportunity of expressing their appreciation of the work which the officer has done during his term of service. He was retired on the age limit on June 8. About one hundred physicians and surgeons of the country were present. several of them making addresses. The banquet was presided over by Dr. E. G. Janeway of this city.

An Alleged Cure for Diabetes.—The London correspondent of the *New York Times* cables to his journal that Dr. A. C. Faulds of Glasgow has discovered a remedy for diabetes in an infusion of dried eucalyptus leaves. He uses this in preference to the oil of eucalyptus, and says that his experiments were prompted by learning that the remedy was used by the natives of New Zealand. Of forty-six diabetic patients treated with eucalyptus, Dr. Faulds claims to have cured fifteen, or 33 per cent.

Obituary Notes.—Dr. OTIS R. FREEMAN, who was believed to be the oldest practicing physician in America, died at his home in Freehold, N. J., on June 8, at the age of ninety-four years. He had been confined to the house for several weeks, but only five days before his death had set the fractured arm of a boy who called at his house for relief. Dr. Freeman was a graduate of the Medical Department of Dartmouth College in 1843. He served as surgeon during the Civil War, and on one occasion, he together with Dr. Lydy of Philadelphia, worked at the amputating table for fourteen hours without rest. While serving in the war he received an injury from which he never recovered.

Dr. GEORGE W. WOODS, a retired medical director of the United States Navy, well known in army and navy circles, is dead in San Francisco. He was born in New Bedford, Mass., in 1838.

Dr. **Stephen C. Russell**, the oldest practicing physician in New Orleans, died there June 12, aged eighty-three. He was a native of Yarmouth, Me., but studied medicine at the Tulane University, from which he was graduated in 1848. He went to California in the gold days and practiced there and at Panama. Returning to New Orleans in 1851 he was active in the yellow fever epidemics of 1852, 1853 and 1856. He was for years Secretary of the Louisiana State Board of Health.

Dr. **Edward N. Whittier** died in Boston on June 14, after a brief illness. He was born in Gorham, Me., on July 2, 1841. He entered Brown University in 1858 and graduated in 1862. He served in many campaigns and battles with the Army of the Potomac. At the close of the war he went to Boston and entered the Harvard Medical School, graduating with the class of '60. He was an instructor at the Harvard Medical School for many years.

Dr. **Cloyes W. Gleason** died in Philadelphia on May 30 at the age of eighty-one years. He was a graduate of the medical department of the University of Pennsylvania and was the first professor of anatomy and physiology in the Woman's Medical College of Pennsylvania.

Dr. **Thomas F. Corson**, died in Philadelphia on May 28 at the age of sixty years. The Civil War breaking out while he was a student in the medical department of the University of Pennsylvania he enlisted and served as an assistant surgeon in the Sixty-seventh Pennsylvania Volunteers until the end of the war. When peace was declared he resumed the study of medicine and was graduated in 1866. He engaged in the practice of his profession for a time, but subsequently conducted a drug store, and eventually became a dealer in real estate. He was a cousin of the late distinguished Dr. Hiram Corson of Montgomery County.

Dr. **Joseph Eastman** of Indianapolis died on June 5, at the age of sixty years, from cancer of the liver. He was born in Fulton County, N. Y., in 1842. At the beginning of the Civil War he volunteered in one of the New York regiments, but was soon invalided by typhoid fever, and on his recovery was detailed to hospital duty. This turned his thoughts to medicine and, while still in the army, he studied at the Georgetown College, receiving a degree in 1865. He then immediately joined the medical corps and served as assistant surgeon of volunteers. After being mustered out he began practice in Indiana, but soon came to New York to take an additional medical course, and was graduated again at the Bellevue Hospital Medical College in 1870. A few years later he moved to Indianapolis, where he soon gained an enviable reputation as a gynecologist and abdominal surgeon.

Dr. **Hallock R. Maine** died at his home in Brooklyn on June 13 of pneumonia. He was born in 1865 and was graduated from the College of Physicians and Surgeons in this city in 1888. He was attending physician to the Kings County Hospital.

Dr. **Selden H. Talcott**, superintendent of the Homœopathic New York State Hospital at Middletown, died on June 14. He was a graduate of the New York Homœopathic Medical College in 1872, and in 1875 was appointed chief of staff of the Ward's Island Hospital. Two years later he was appointed superintendent of the Middletown State Hospital, and about a month ago a dinner was given to him in this city in commemoration of the close of his quarter century of service.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

LONDON HOSPITAL—DR. WM. MILLER ORD'S DEATH—MALARIA FROM THE GENERAL PRACTITIONER'S POINT OF VIEW—CANCER—ROYAL SOCIETY—MEDICAL SOCIETY.

London, May 23, 1902.

Yesterday the Lord Mayor opened the new operating department of the London Hospital. This consists of a theater, four operating rooms, three rooms for anæsthetizing, four recovery rooms or small wards, five operation wards, together with sterilizing rooms and storage-room for instruments, etc. Besides these, there are nine other rooms devoted to the use of surgeons, nurses, etc. The department occupies about 270 by 60 feet, and is fitted with electric light throughout. No expense has been spared in the equipment, which seems complete, with every modern appliance, and the buildings are carried out in every particular according to the most advanced sanitary science. The department is well worthy of our largest and, on the whole, perhaps, the best hospital in the metropolis. The money has been provided by a generous Jewish donor, who has made two conditions, viz., that his name is not to be divulged, and that the department is to be open to patients without distinction of religion.

Dr. Wm. Miller Ord, Consulting Physician of St. Thomas's Hospital, died on the 14th inst., aged sixty-seven years. You will, probably, remember him chiefly for his fine work in reference to myxœdema, the pathology of which he laid down, and in other ways completed Gull's discovery. His numerous pupils remember him rather as the brilliant but exact clinical teacher, and regard his investigations into myxœdema as paralleled by other clinical researches. His personal friends dilate on the man and the companion as overshadowing in their estimation the teacher and the scholar. He will be missed for many a year to come.

Dr. Patrick Manson has been discoursing at the Medical Society on the diagnosis of malaria from the standpoint of the practitioner in England. We see but little of it here, much less than you do, I suppose, and therefore your readers may like to have the gist of what so experienced a tropical authority said when he tried to see his subject from the general practitioner's point of view. Recent discoveries, he asserted, enable us to be precise and absolutely sure of the diagnosis in ninety-nine cases out of 100. The pathognomonic indications he arranged as (1) clinical; (2) therapeutical; (3) microscopical. The only classical symptom justifying a diagnosis of malaria was periodicity—but that only tertian or quartan. The appearance of a quotidian periodicity, he said, was common enough in malaria, but it was only an appearance. It was doubtful whether true quotidian periodicity ever occurs; if it does, it must be very rare. The parasites are either tertian or quartan in habit, and the recurrence of the symptoms corresponds. Multiple infection may give rise to diurnal return of symptoms, but that is not true quotidian periodicity, whatever it may be clinically. Therapeutic diagnosis resolved itself into the effect of quinine. In England it never failed to arrest an attack. Persistence after four days' dosing (10 gr. t.i.d.) proves the case is not malarial. But the quinine must, of course, be absorbed. Often, to get the effect on account of the state of the stomach, we must resort to enemata or hypodermic injections. Tablets and coated pills are dangerous.

Microscopical diagnosis is the most satisfactory if the observer has experience. The beginner cannot expect to obtain reliable results. It is easy enough when one has been properly taught and then had large experience. But every practitioner should learn to prepare blood films fit for submitting to an expert. This is often not the case, and Dr. Manson had received many useless specimens. The best method was that of Christophers & Stephens. The patient must not have taken quinine recently, for even in small doses it will cause the disappearance of the parasites temporarily, and sometimes for a long time.

We have known for some years that during and after malarial attacks the leucocytes are diminished in proportion to the red corpuscles, the diminution being chiefly in the polymorphonuclears, so that there is a relative increase in the large mononuclears. This does not seem to be affected by the use of quinine, and so has been considered a diagnostic indication. Drs. Christophers and Stephens reported to the Royal Society that an increase of mononuclears "beyond 15 per cent. is proof of an actual or recent malarial infection." Captain Rogers, I. M. S., endorses this. So does Dr. C. W. Daniels, Superintendent of the Tropical School here. He has had great experience, and is fortified in his conclusions by other observers. He puts the value of the test as about equal to that of agglutination in typhoid fever. It is obvious that a test of this kind can only be properly made by those of wide experience in examining the blood.

To return to Dr. Manson's views on malaria. He repudiates a rather common opinion that the infection may last a lifetime. He believes a malignant tertian tends to die out in from one and a half to two years, a benign tertian in two to two and one-half years, and a quartan in about three years. Old Indians talk of jungle fever when they get a feverish cold, which others call influenza or something else. Dr. Manson has seen many reputedly malarial patients from places in England, formerly malarious, but they all turned out to be something else. He believes the plasmodium has died out in England like the wolf and the wild boar.

As a special hint, he added that a positive diagnosis of malaria does not exclude other diseases for malaria, rather predisposes to them. So, too, an explosion of latent malaria is favored by other infections, especially typhoid and tubercle.

Mr. Bryant brought before the Medico-Chirurgical Society, on May 13, a table of forty-six cases of cancer of the breast which had survived operation for periods of from five to thirty-two years. He has always been of the opinion that the three years of freedom from recurrence commonly laid down as an indication of cure is misleading. In the cases now tabulated there was an absence of recurrence in nine from five to ten years, and in eight from ten to twenty years. Thirteen of these patients are now alive and well. In nineteen cases recurrence took place at the seat of operation; in three of these a second operation was performed, two of them continued well four years, and the third ten years. In nine cases recurrence took place in three to seven years, and in three no second operation was done. There were ten cases of recurrence in which the second breast was involved, and four in which there was cancerous disease in other parts of the body.

Taking the tables as a whole, it appeared that in half recurrence took place in five years or less, in the other half in six to thirty-two years, and in two-thirds of these last the interval was ten years. It is thus clear that operation is not so unsatisfactory as is generally supposed.

In recurrent cases unfavorable for operation, Mr. Bryant said x-rays should be employed, but admitted they were not free from danger in inexperienced hands, and a three-months' course seemed the shortest period likely to do good.

Sir W. Mitchell Banks said he at one time lost 10 per cent. of cases. But since the rebuilding of the hospital he had had only one death out of between ninety and one hundred cases. Nothing could be more erroneous than the old three-year limit. Out of fifty-eight cases which he had been able to follow up six died from local recurrence, twelve from general without local recurrence. In twelve there was no return for five to eighteen years; fourteen are now well after five to ten years, twelve after ten to twenty years, and two after twenty and twenty-three years. The most important point was early operation. In his opinion the disease returned in the lymphatics of the skin around the scar, and therefore he removed the skin freely at his operations. But he regarded Halsted's operation as quite unnecessary. When the cervical glands were involved the case was beyond the reach of surgery; when they were not, such an operation was unnecessary and dangerous.

Mr. Godlee then read a paper on "Tropical Abscess of the Liver," and described eleven cases. He thought perihepatitis, which is usually peritonitis, was an element of safety in operating, as it localized abscess. So also pleurisy; when present, might be protective. Extreme chronicity characterized tropical abscess, though some cases were very acute, and these might be multiple and very septic, and should be classed separately. Some had been described as multiple which were not so. Most abscesses are single. The best place to open them, when possible, was in the lower axilla. Most of those in the right lobe could be reached from that situation. Those in the left lobe, and some others, too, must be opened in the epigastrium. The dangers and disadvantages of posterior and lateral incisions were dealt with.

Dr. Patrick Manson remarked that his operation was intended for general practitioners far from assistance. He had never seen serious consequences from the escape of pus into the abdominal cavity.

Dr. Crombie said small abscesses were still successfully treated by aspiration, and even large ones are sometimes cured by repeated aspiration. He had not met with any serious result from this treatment in thirty years' experience, perhaps because the pus was aseptic, for some usually escaped into the cavity. Hemorrhage was apt to occur, but was controlled by pressure.

Mr. James Cantlie advocated Manson's operation of aspiration as far the best for inexperienced or unassisted operators. With it hemorrhage was greatly obviated, as incision with the knife was the chief cause. He advised a rubber, rather than a metal, drainage tube. Among the numerous cases in which he had aspirated only two had been fatal.

Dr. Rockwood said he had operated on 100 cases in twenty-five years. In chronic apyretic cases aspiration sufficed. In acute cases with thick pus excision of rib might be called for, lateral incision failing.

The Royal Society's annual conversazione was held on the 14th inst. There was, as usual, a brilliant assemblage of Fellows and their friends. Numerous experiments and specimens served to entertain the company.

At the annual meeting of the Medical Society of London the election of officers for the ensuing year took place. Mr. A. Pearce Gould is the new president.

Progress of Medical Science.

The Boston Medical and Surgical Journal, June 5, 1902.

A Case of Meningeal Hemorrhage and Nephritis Supervening upon a Purpuric Diathesis of Twenty-five Years' Duration.—Robert T. Edes reports the case of a woman of forty years, who died in March, 1902, after suffering from purpura for twenty-five years. An interesting point in the case is the relationship to rheumatism, as shown by pain and swelling existing at the same time as the petechiæ, but not always at the same place, and on one occasion, at least, when there were no petechiæ anywhere. On the other hand there was a dissimilarity to rheumatism in the complete integrity of the heart, and the absence of atheroma. The existence of acute nephritis toward the end was indisputable. At the autopsy, meningeal hemorrhages were found, without cerebral hemorrhage and without sclerosis, a rare occurrence in this form of purpura.

A Case Mistaken for Phthisis Produced by Half of a Small Dental Plate Lodged in the Right Primary Bronchus.—George F. Pope reports the case of a man who coughed up half of a small guttapercha plate measuring seven-eighths of an inch in the longest diameter and eleven-sixteenths of an inch in the opposite. Two years and a half previously, while wearing a small plate for the four upper incisor teeth, he received a violent blow in the mouth. The false teeth were all knocked out of the plate and it was broken in two. In the excitement of the moment he thought he had inhaled one of the teeth, but the doctors he consulted laughed at the idea, and he never mentioned it again. After this he developed pain in the apex of the right lung, and a troublesome cough, losing health and strength He went from one physician to another, and all but one told him he had phthisis. On physical examination the writer found that the chest symptoms were clearing up, and the patient had gained four pounds in weight since the expulsion of the foreign body one week before.

A Case of Thrombosis of the Central Vein of the Retina, Complicating Carcinoma of the Uterus.—Charles J. Aldrich reports the case of a woman of forty-six suffering from uterine cancer, who was attacked with sudden blindness of the left eye. While straining at stool the week before, she noticed a "film" in front of the eyes. This continued throughout the day notwithstanding the fact that she had no headache. The next day she could not see with the left eye "except in spots." The day following the eye was blind to everything but light. There were no ocular palsies, pupils reacted to light and accommodation, and were of equal size. She suffered from no headache, nor anything suggesting intracranial disturbance. Ophthalmoscopic examination revealed a marked hemorrhagic retinitis in the left eye, which was thought to be due to the obstruction of the central vein of the retina. The slow onset of the blindness, the fibrinous condition of the blood, so commonly present in carcinomatous disease, seemed to argue for a thrombosis rather than an embolism. About two months later the patient could see forms moving about the room, but not the pictures hanging on the wall. The hemorrhages are practically absorbed.

The Boston Medical and Surgical Journal, June 12, 1902.

The Struggle against Consumption.—Edward G. Otis says that the public or state sanatorium subserves three most important purposes: (1) It affords the best means of cure; (2) It isolates the consumptive; (3) It sends forth, in its cured patients, teachers of wholesome hygienic living and of the avoidance of danger from the sputum. Leper houses accomplished the extermination of leprosy in Western Europe—sanatoria alone will not exterminate consumption, but they will greatly aid in so doing. We must also labor in the way of general phrophylaxis, educate the public as to the danger of infection, teach it that in the consumptive, and in him alone, resides all the danger, for it has been estimated that he emits daily 800,000,000 tubercle bacilli. Associations for the prevention of tuberculosis have already done an immense amount of good. In New York the mortality from consumption has diminished more than 35 per cent. since 1886. Our hope in the struggle is founded on four great facts: (1) That pulmonary tuberculosis is contagious and not inherited; (2) That it is avoidable; (3) That it is curable; (4) That the sputum of the consumptive is the main source of infection; and that this is accessible and can be controlled.

New York Medical Journal, June 7, 1902.

Some Considerations on the Hygienic and Prophylactic Treatment of Myopia.—The measures advised by A. Duane are comprised in the following rules: (1) Making the patient employ the full correction of his myopia all the time and both for distance and near. This is of prime importance in all varieties of myopia, low, medium, and high, and, if applied early, may check the progress of the myopia altogether; (2) Proper attention to illumination, the size and legibility of the print, the quality of paper used in the books read, the relative height and disposition of the seat and desk, and the many other factors that have been brought out by the zealous investigators into the subject of school hygiene. These are important but subsidiary matters; (3) In low and medium myopia, moderate restriction of near work, or rather its better distribution, so that it is done mainly by daylight and not for too long at any one time. Furthermore, momentary rest of the eyes at frequent intervals during the work. These rules to be the more strictly enforced, the higher the myopia and the younger the patient; (4) In high myopia with evidences of progress, much more stringent restriction of near work. Open-air work to be encouraged and the adoption of confining and eye-taxing occupations forbidden; (5) In medium and especially in high myopia, plenty of sleep and out-of-door exercise; (6) Re-examination of the patient at frequent intervals (which in the case of high myopia should be very frequent), to determine how much the myopia has increased. If it has increased, the glasses should be increased also up to the full strength, and the hygienic regulations above detailed modified accordingly.

Gunshot Wounds of the Stomach with Report of a Case.—P. F. Eve reports an interesting case of this nature in which recovery took place. He lays down his method of operating as follows: After assuring himself that the wound has actually penetrated the abdominal cavity, he performs immediate laparotomy and makes careful search for visceral lesions; if any are found, the serous and muscular coats are brought into apposition by inverting the apertures and closed by Lembert's sutures. In a few cases where the openings were quite small, he has used a purse-string suture, strengthened by one or two Lembert's sutures. He makes it a rule, after repairing the wounds of the stomach, to flush out the abdominal cavity with a copious saline solution, using as much as three to eight gallons in each individual case. This is done because he does not believe we can with certainty determine whether or not any portion of the contents of the stomach has passed into the abdominal cavity. In the after-treatment of these cases great care must be exercised in feeding the patient. He does not allow anything, even of a liquid nature, to pass into the stomach until after the fourth or fifth day, maintaining the patient during this time solely by rectal nutritious enemata. After the fifth or sixth day the patient is allowed, at intervals of from two to four hours, a small quantity of egg-albumen, augmented by beef-juice, administered about the end of the eighth day. He does not allow the patient to take solid food into the stomach under eighteen or twenty days from the receipt of the injury, and is very guarded even after this period to withhold from him any article of food which would produce fermentation.

Medical News, June 14, 1902.

Stone in the Female Bladder.—H. H. Stoner states that the reason of the infrequency of stone in the female bladder is to be found in the shortness and large caliber of the female urethra. The etiological factors are the same in both sexes. In nearly all the recorded cases of calculi in the female bladder the cause has been assignable to foreign substances introduced from without. These constitute the nucleus. The symptoms of stone are practically the same in both sexes. The stone when once formed must be removed. There are three methods: litholapaxy, suprapubic cystotomy, and cystovaginal incision. The choice of operation will depend upon the circumstances connected with the case.

Hysteria, Its Etiology and Management.—Joseph M. Aikin declares that hysteria is more frequent in females than in males, and most likely to appear between the ages of ten and twenty-five years. Heredity is an important etiological factor. In hysteria there are sensory, motor, and mental symptoms. Certain senses are often perverted. Over-sensitiveness is quite common. Neuralgia is complained of. Sometimes there is a rigidity of the muscles. The mental symptoms are impaired memory and will power. Motor accidents, like paralyses and contractions, occur. Sensory accidents are sudden headaches and other painful sensations of sudden onset. They cease just as quickly. Visceral symptoms are many and varied. A continued remittent or intermittent fever is occasionally found in hysterics. The cause of hysteria is always chronic. Treatment must be directed mainly to a control of the mental nature of the patient. The nervous system must be repaired. Treatment must be general for the disease, and special as applied to each individual, according to the characteristics of the patient.

Philadelphia Medical Journal, June 7, 1902.

Operations upon the "Green Groin."—Joseph Price states that the class of cases coming under this title would better be called those of gangrenous appendix than appendicitis. Although surgical interference may be prompt in these cases the appendix is found to be gangrenous and sloughing with one or more perforations and a free leakage. A large part of the right groin is filled with lemon-colored or septic fluids, the omentum fixed with a cluster of bowel adhesions underneath, occasionally a "derby hat" abdomen, with the entire peritoneal cavity filled with bowel contents, lymph and other inflammatory products. The fact that large numbers even of the neglected and greatly complicated cases are saved shows how easy it would be to save them all before such unfavorable complications occur. The diagnosis of appendicitis is usually easy. In some cases, however, it is difficult. Some cases simulate typhoid, and must be carefully distinguished. Opium treatment has no place in the management of intraperitoneal pathology, and even as an adjunct to surgery is needless and positively harmful. It favors restlessness and apprehension and blunts centers that should not be blunted. A very good rule to follow is to adopt one of two methods in the fulminating cases. If there is bowel obstruction and persistent vomiting with evidences of a general peritonitis, operate through the central incision, free all adhesions, remove the appendix and drain. If cathartics act freely before operation, and general symptoms are not prominent, then the lateral incision is the one of choice

A Case of Severed Spinal Cord in Which Myelorrhaphy Was Followed by Partial Return of Function.—Francis T. Stewart and Richard H. Harte report this case. The patient was a woman twenty-six years of age. She had been shot twice with a 32-caliber revolver. One ball entered about one inch to the right of the seventh dorsal spine and passed directly into the spinal canal; the other lodged beneath the skin in the right lumbar region and was easily removed. At the time of the accident the pain of the bullet was felt, then a mighty contraction of the lower extremities, and finally a sensation as if the lower part of the body had been lost. Consciousness was retained. There was immediate and complete abolition of motion and sensation below a line transecting the lower part of the tenth dorsal spine and a point three and one-quarter inches above the umbilicus, the distance between the ensiform and the umbilicus being five inches. This line of demarcation was sharply defined and was superimposed by a belt of hyperæsthesia reaching as high as the ensiform process; just before operation this layer of hyperæsthesia also became anæsthetic. The superficial and deep reflexes of the lower limbs could not be elicited. Three hours after the accident the operation was performed. When the muscles on either side had been dissected back, the right lamina of the seventh dorsal vertebra was found to be crushed in and the left lamina of the same vertebra fractured at its base. The spines and laminæ of the seventh and eighth dorsal vertebræ were removed and the spinal cord was seen to be divided by a space of three-quarters of an inch. The ends of the cord were approximated with three chromicized catgut sutures; one suture was passed antero-posteriorly through the entire thickness of the cord, and the other two transversely. The dura mater could not be approximated. A small gauze drain was inserted down to the cord and left twenty-four hours. The muscles were united and the skin closed. The condition of the patient at the sixteenth month after the accident is most encouraging. The patient voluntarily flexes the toes, flexes and extends the legs and the thighs, and rotates the thighs. Flexion is more powerful than extension. The bowels move every second day and are under perfect control, except when diarrhœa is present. The patient has the sense of touch, temperature, pain and position all over. There are no reactions of degeneration and no trophic changes in the skin or nails. The writers have submitted this case, which they believe to be the first myelorrhaphy performed in man, as evidence of the power of the spinal axones to regenerate.

Philadelphia Medical Journal, June 14, 1902.

Food Preservatives.—Henry Leffmann speaks of a number of food preservatives, as vinegar, salt, saltpeter, which some authorities designate as permissible antiseptics while they call boric acid, salicylic acid and certain other substances poisons. The writer declares that this is an arbitrary statement, as the whole question is one of dose. The question as to what is a poison cannot be answered unless the questions of dose and manner of administration are taken into account. If the word is interpreted broadly, many articles of food would come into the category of poisons. As to the preservation of butter with boric acid, an average consumption of half a pound of butter per week for an adult would mean the ingestion of 17 1-2 grains of the preservative. This is well within the ordinary medicinal dose. As to meat this preserved, there is no evidence to show that the quantity of preservative employed is sufficient to do harm.

A Study of Heredity.—Hiram A. Wright asserts that heredity is a powerful factor in determining the qualities of the physical body, and environment is of minor importance; while, as to the mental and moral traits manifested, environment is the powerful factor, and heredity is entirely inoperative. The writer then refers to precocious children, the so-called prodigies, and states that an ultra believer in heredity will advance the argument of accumulative atavistic influence, or some similar theory. This would imply the transmission from parent to offspring, per spermatozoon or ovum, of actual definite knowledge of music or numbers, or whatever the child excels in, which he holds to be a positive absurdity. The writer believes that prior to the birth of this present body, some have acquired a knowledge of music or numbers and stored it up in the ego (soul), and now there becomes manifest that which was learned in a previous incarnation. Mentally and morally we are the architects of our own destiny, and we are neither blessed nor cursed by heredity.

The Place of Drugs in the Treatment of Stomach Troubles.—Boardman Reed says that the majority of medicines given empirically in cases of so-called dyspepsia probably do more harm than good. Great strain on the nervous system reacts very injuriously upon the digestive infection, and the patient must have rest and time for recuperation. Gastric neurasthenia is far more amenable to treatment by hygienic and mechanical measures, than by drugs. However, a careful use of certain well-selected remedies can often do good, after examinations of the secretions and excretions. Small doses of the bromides, the hypophosphites, the glycerophosphates, dilute phosphoric acid, and the preparations of iron, zinc, arsenic, silver, and gold are among the remedies which can often be so used with advantage, unless they have been used in excess before. In cases of excessive gastric secretion, the administration of alkalies is generally necessary. In acid gastric catarrh, or in round ulcer of the stomach, with hypersecretion, the same treatment is necessary plus lavage in the former and rest in bed in the case of ulcer, besides rectal feeding for a week or two, with milk diet later. In cases of deficient secretion, an entirely opposite line of treatment is necessary. Often from five to thirty drops of official dilute hydrochloric acid with pepsin is very beneficial. Bitter tonics do good in some cases. Massage and exercise have their place. In atrophy, strychnine may be necessary. Intragastric faradism does much good in atonic conditions and in dilatation from atonic causes.

The Lancet, May 31, 1902.

Note on Two Cases of "Ulcerated Sore Throat."—E. C. Bousfield reports two cases of undoubted diphtheria. They were seen in consultation, but the attending physician refused to have a culture made, claiming that the first case was merely one of tonsillitis, though at the time speech was indistinct and palatal paralysis had supervened. The author makes a plea for the abandonment of any such diagnosis as "ulcerated" sore throat. A slough under the conditions suggested means either syphilis or diphtheria. He has had a large municipal experience in handling diphtheria cultures, and advises that the swab be thoroughly wet before it is applied to a suspicious case. Ordinary water will answer for this purpose. The use of a dry swab may cause adherence of the material taken up to its meshes, while a wet swab is compact, and will more surely transfer the poison to the culture medium.

The Powers of Natural Resistance or the Personal Factor in Disease of Microbic Origin.—Stephen Mackenzie considers this question with reference to influenza, tuberculosis, rheumatic fever, and appendicitis. His general line of argument is that there are two factors—the soil and the seed, each necessary to constitute the disease, but that the relative share which they appear to take varies in importance in different diseases. We, as practical physicians, have to obtain our knowledge as to the microorganisms concerned in these diseases and their chemico-physiological action from those who devote themselves to these studies, whilst we have to observe the effects of the microorganisms on the human body, and how the body reacts to the germs of the disease. The infective diseases existed long before the discovery of the germs, and we have accumulated a large store of knowledge of the clinical course, the treatment, and the issue of these diseases. This accumulated experience is of great value, though apt to be overlooked by the keen interest excited by fresh discoveries. It is against this tendency that the author enters a protest, and he points out that what is true is not necessarily new. We must never forget that the *soil* is of as great importance to study as is the *seed* in the proper understanding and treatment of diseases of microbic origin.

British Medical Journal, May 31, 1902.

Quinine in Blackwater Fever.—H. M. Dowler, in a residence of three years in the Dooars, Bengal, cared for nine cases of blackwater fever. Eight occurred in Europeans. With the exception of one fatal case they were all treated with quinine bihydrochloride hypodermically, in doses of from two to three grains. In no case did the color of the urine become darker after its use. After giving some 500 hypodermic injections of quinine, usually the bihydrochloride, in three grains doses for adults and proportionately less for children, in various malarial conditions, the writer has never met with a case of hæmoglobinuria consecutive to its use.

The Curative Effect of the X-Rays on Callous Sinuses of the Abdominal Wall.—D. Berry Hart reports two cases of callous abdominal sinus which healed with marvellous rapidity after a few exposures to the *x*-rays. The first patient had a persistent sinus in the abdominal wall, after an incision in the right iliac fossa to evacuate bloody fluid of unknown origin. This sinus was five to six inches long, and ran from near the iliac spine downward and inward to the uterus. It had existed for several months. In order to see its course, an *x*-ray photograph was taken. This was followed by an almost magical cicatrization of the sinus after plugging with iodoform gauze for several weeks had failed. The second case was that of a sinus, which had persisted for some months in a case of operations for extraperitoneal gestation where fetal bones had been retained for five years. A narrow sinus into the shrunk sac remained. It would finally admit the index finger. Cure was effected after three exposures to the *x*-rays. The sinus has reopened a little, but there may be some bone present.

Remarks on the Removal of Prostatic Adenomata.—William Thomson says that there are many conflicting views concerning the removal of the prostate. Certain surgeons believe it possible to remove the whole prostate, while others believe that this is impossible. A normal prostate would be more difficult to remove than an enlarged one, even in a dead body. The conflict of testimony is perplexing. The opposition is based mainly upon the relation of the normal parts, but it is necessary to take into consideration also the influence of pathological changes which may make possible to the surgeon what is impossible in the view of the anatomist. Some of the opponents hold that there are certain conditions which must attend extirpation of the entire prostate, namely, the concurrent removal of the seminal ducts and the prostatic urethra. If this is true, then it may be truly claimed that the prostate can be completely enucleated, because in several reported cases the urethra and ducts have been so removed. To the patient, at least, it is not of much moment whether a prostatectomy is done, or adenomata only are removed. If the functional ease of former days be restored to him, he will be satisfied. In the writer's own case, he removed two adenomatous tumors, leaving behind a layer of prostatic tissue representing the gland proper, but squeezed out of recognition by the pressure of the pathological growth. Nothing can now be felt in the rectum to indicate a prostate at all, while the bladder function is as good as it was twenty years ago.

Deutsche medicinische Wochenschrift, May 15, 1902.

Diagnostic Value of the Old Tuberculin.—Bandelier, as the result of experimental research and clinical observations, thinks that in the present knowledge the best results in the early diagnosis of tuberculosis are to be obtained by the use of tuberculin, and hence that it should come into routine employment, not only in tubercular sanitoria, but also in general hospitals and in private practice. In order to obtain reliable result the method of tuberculin injections recommended by Koch must be rigidly adhered to. Tuberculin injections are also the best means with which to determine the existence of recovery in any given case.

The Operative Treatment of Large Umbilical Hernias and Ruptures of the Abdominal Wall.—Heinrich says that in radical operations upon large umbilical hernias the best results are to be obtained by over-lapping the fascia of the opposite recti muscles, but leaving the muscles themselves entirely intact. The essential point consists in freeing a sufficient portion of the fascia of one rectus and uniting it by *silk* sutures to the fascia of the opposite rectus. Catgut is not suitable for such suturing and such would be absorbed before firm union had taken place. The silk suture is left permanently *in situ*. If proper antiseptic precautions are followed no suppuration occurs. By following this method the recti are left intact and the abdominal wall is not weakened. The latter always occurs in large umbilical hernias when the recti muscles are directly united, their fibers being transversely separated by the tension produced. When the rupture does not occur in the median line the fascia of the recti cannot, of course, be used, and a direct union of the abdominal muscles is necessary.

Deutsche medicinische Wochenschrift, May 22, 1902.

Pneumococcus Sepsis.—A. Prochaska reports, in detail, four cases in which the pneumococcus was isolated in pure culture from the blood. These microorganisms were also present in the sputum in all the cases. In one case in which a nephritis was present they were found in the urine. The symptomatology and course of the infection were somewhat varying. In all the cases the primary symptoms were pulmonary and were merely those of an ordinary bronchial catarrh. In the first case a hemorrhagic nephritis soon developed, ran an acute course, and terminated in recovery. Cases two and three were characterized by a marked periodicity in the symptoms. For this reason careful search was made for the malarial organism, but without avail. The subsequent isolation of the pneumococcus from the blood in both cases definitely settled the etiology. In both cases recovery took place. In the fourth case the primary bronchitis was improving when suddenly high fever, cyanosis, and collapse appeared. Death shortly supervened. In none of the cases was there any pulmonary consolidation. The author believes that pneumococcus sepsis is much more frequent than is generally supposed, and that in many cases the clinical picture known as "grippe" or "influenza" is attributable thereto. A bacteriological examination of the blood is greatly to be desired in all similar acute infections in which the etiology cannot be definitely determined in some other manner.

Berliner klinische Wochenschrift, May 19, 1902.

The Results of Nitrate of Silver in Ophthalmia of the New-Born.—Ernst Runge disagrees with Ludwig Hirsch, who holds that nitrate of silver does not give uniformly good results in preventing ophthalmia in the new-born. Runge reports 1,000 cases which were so treated. In none of these did the disease develop immediately after birth. In one case ophthalmia appeared during the second week of life. These cases taken in conjunction with those reported by Schallehn in 1897 make 1,917 cases which were treated with nitrate of silver. In none of these was an early infection present, and in only three a late infection (during the second week). Runge used a 2-per-cent. solution of the nitrate, but Gusseron has shown that a 1-per-cent. solution is equally efficient. In all cases the instillation should be practised not later than one hour after birth. If practised after this time the results obtained are not nearly so good. In cases subsequently to be reported it is greatly to be desired that the time of instillation be noted.

Tubercle Bacilli in the Nail Dirt of Children.—Kornel Preisich and Aladar Schütz report the examination of the nail dirt of sixty-six children with a view to demonstrating the presence of tubercle bacilli therein. This was successfully done in fourteen cases or 21.2 per cent. The children were taken promiscuously without respect to their living in tuberculous surroundings. Of the fourteen cases in which tubercle bacilli were found nine gave an hereditary history of tuberculosis. In all cases in which an hereditary history of bone tuberculosis was present tubercle bacilli were found. The method used in demonstrating the presence of the tubercle bacilli was usually that of the stained preparations. At first animal inoculation was tried, but it was found that very frequently the animal quickly died of some acute infection. This work demonstrates the importance of the nail dirt of children in the spread of tuberculosis.

Berliner klinische Wochenschrift, May 26, 1902.

Mechanism of the Action of Amboceptors.—P. Ehrlich and H. Sachs bring forward two facts to show that the amboceptors do not "sensibilize" the red blood cells, as claimed by Bordet, but that they unite with the complements to form a third substance (hæmolysin), which produces the phenomena of hæmolysis. In the first place, complementoids, which may be present in inactive sera, unite with amboceptors of active sera which have been heated to 50° to 51°C. for thirty minutes, and prevent the reactions of such sera when a complement is subsequently added. Furthermore, if normal hæmolytic ox-serum is heated for thirty minutes to 55°C., and then the red blood cells of the guinea-pig are placed in contact with it for one hour at 37°C., and then centrifuged off, the addition to them of a complement does not produce hæmolysis, showing that such red blood cells have not been "sensibilized." If, however, the red blood cells are kept at 0°C. for one hour with the inactive ox-serum and at the expiration of this time a complement is added to the entire mixture, hæmolysis promptly occurs, showing that the amboceptors have not been taken up by the erythrocytes but are still present in the fluid.

"Tube-Shaped" Vision Field in Hysteria.—Richard Greeff describes, under this name, a marked concentric contraction of the field of vision which is characteristic of hysteria and which is available for diagnostic purposes. Many cases have been observed by the author which bear out this statement. In these cases the acuteness of vision is practically normal, but ophthalmoscopic examination shows a marked contraction of the field of vision. Pain in the eyes is often a prominent symptom. Various nervous manifestations are usually present, The entire clinical picture may closely simulate an organic ocular or nervous condition. A case in exemplification is reported in detail.

Münchener medicinische Wochenschrift, May 20, 1902.

Hæmoglobinuria of Pregnancy.—L. Brauer describes under this name a form of hæmoglobinuria which occurs during pregnancy, which is accomplished by icterus, but which is not assignable to any definite cause. A case is reported of a woman who had gone through six pregnancies, in the last three of which hæmoglobinuria and icterus had been present, but had quickly subsided after labor. The patient many years previous had experienced an indefinite attack of malaria, but the hæmoglobinuria could not reasonably be attributed to this cause. It is probable that in these cases the hæmoglobinuria is brought about by the action of metabolic products formed during pregnancy upon red-blood cells of diminished resistance.

Antithyreoidin Treatment of Graves's Disease.—Schultes reports the treatment of a case of Graves's disease with the antithyreoidin preparation as recommended by Möbius. The patient had suffered from the disease for about four years, which during this time had increased greatly in severity, although various forms of treatment had been used. Of the diagnosis there could be no doubt. Both Stellwag's and Gräfe's signs were present. When the administration of anti-thyreoidin was begun all other treatment was suspended. This was begun in doses of 0.5 three times daily and gradually increased until the daily dose amounted to 13.5. At first the drug was given in sherry, but later raspberry juice was substituted. The entire period of administration was about two months. At the end of this time the patient was greatly improved. The pulse rate, which at the beginning was 120 per minute, became normal. The thyroid gland was reduced markedly in size. All the nervous symptoms had completely disappeared. The exophthalmus, however, was not altered, and was fully as prominent as at the beginning of the treatment.

The Serum Treatment of Graves's Disease.—Wilhelm Goebel reports the successful treatment of a case of Graves's disease by the administration of the milk of a goat whose thyroid gland had been extirpated. Since, however, other treatment (massage and electricity) was conjointly used the recovery cannot reasonably be entirely attributed to the milk. With the disappearance of the subjective symptoms both the exophthalmus and thyroid enlargement were much reduced. For many reasons it is not reasonable to suppose that the milk or serum of animals, from whom the thyroid gland has been removed contains an anti-body, that is a substance which neutralizes thyreoidin, since the effects produced by these are very different from those obtained by the administrations of known anti-sera (anti-tetanic and anti-diphtheritic). It is generally supposed that the symptoms of Graves's disease are caused by an overproduction by the thyroid gland of thyroid-iodine. This substance, however, can only be produced when iodine combinations are present in the body. Since the thyroid gland is the only organ of the body which can produce such combinations the milk and serum of animals from which this gland has been removed cannot contain such iodine combinations. Consequently when such milk or serum is administered as food to patients with Graves's disease, thyreoidin is not formed at all or only in very small amount. It seems certain that the beneficial effect of these substances is thus to be accounted for.

Münchener medicinische Wochenschrift, May 27, 1902.

Treatment of Melæna Neonatorum.—Max Döllner draws attention to the value of subcutaneous injections of gelatin in the treatment of this condition. A case is reported of a child two days old in which violent and persistent intestinal hemorrhage was present. At hourly intervals three subcutaneous injections of 10 c.c. each of a 2 per cent. gelatin solution were administered. Marked improvement took place after the third injection, but since there was slight hemorrhage five hours thereafter an additional 10 c.c. of the gelatin solution was given at that time. Rapid recovery occurred. Since the therapy of melæna neonatorum has hitherto been practically without avail, the extended use of subcutaneous gelatin injections is earnestly advocated.

New Method of Tendon Transplantation.—Max Mainzer says that, in many instances in which it is impossible to unite the tendon of the paralyzed muscle directly with that of the sound muscle because of the excessive tension thereby produced, the latter muscle may be prolongated with a portion of the tendon of another paralyzed muscle. Hitherto such prolongation has been accomplished by means of catgut or silk ligatures. In certain cases the mechanical irritation produced by the catgut or silk gives rise to results which are ultimately unsatisfactory. In this class of cases the method here advised is of special utility. Two cases are reported in which it was adopted. In the first case the tendon used for prolongation was completely separated from its own muscle, but in the second case this continuity was not disturbed. Equally good results were obtained in both cases and the method is earnestly recommended in all cases in which silk or catgut ligatures are contraindicated.

Diagnosis of Actinomycosis.—Karl Doepke says that, bacteriologically, a diagnosis of actinomycosis can be made in three ways: (1) By the microscopical examination of an unstained preparation of the purulent material and the demonstration of characteristic bulbous rods therein; (2) By the microscopical examination of a preparation stained by Gram's method, in which there may be seen long rods or threads devoid of bulbous extremities. The spore-forms are usually encountered free in such a preparation; (3) By the microscopical examination of sections stained by Gram's method, in which both bulbous and non-bulbous rods or threads are found. It should be remembered, however, that while the demonstration of the bulbous forms establishes a diagnosis, their absence does not negative a diagnosis. The bulbous portions of the rods or threads are true spores which, under favorable conditions, may develop (1) into chain-like bulbous threads; (2) into long spiral rods, and (3) into short or long segmented threads. A sufficient observation of the vegetative forms always shows the formation in them of spores.

French and Italian Journals.

Acute Œdema of the Cervix of the Gravid Uterus in a Multipara Who Five Years before Had Had a Unilateral Ablation of the Adnexa.—Delestre reports Varnier's observations on a patient who suffered from œdema of the cervix uteri. By means of photographs taken of the patient under observation he has convinced himself that the gravid uterus did not sink down during the crises of cervical prolapse. The labor in this case was normal. Varnier states that since the preceding pregnancy, six years before, the patient had had no sign or symptom of prolapse. Extirpation of the adnexa on the left side for ovarian cyst, four years before, had deprived the uterus of one of its ways for discharging its secretion.—*Le Bulletin Médical*, May 24, 1902.

Treatment of Smallpox by Red Light and Antisepsis.—Barbary has done some good work in this line. He placed eight young patients in rooms which were lighted only by red light. Even the lamps that were used of red glass. Besides this a vigorous antiseptic treatment was instituted. Four times a day lotions of sublimate, 1 to 2,000, were used on the bodies of the patients, and twice a day lotions of the sublimate, of the strength of 1 to 4,000, were applied to the faces. Also, twice a day the following powder was applied to the face: Salicylate of sodium 5; cherry laurel water, 10; alcohol, 10; The patients took every day 1 gm. of phenic acid. Under this treatment the patients have had almost no fever, the convalescence was rapid and no scars were left.—*La Médecine Moderne*, May 21, 1902.

Some Modifications of Schenk's Method (Artificial Hyperæmia) in the Treatment of Pulmonary Tuberculosis.—Torindo Silvestri first describes Schenk's method of inducing hyperæmia by stasis in consumptives in order to favor the formation of connective tissue, attenuation or destruction of the microbes, and to exercise an absorptive action on certain pathological formations of an inflammatory nature. To obtain this hyperæmia the patient must be kept in a position of lateral decubitus on the affected side, and the bed should be so inclined that the pulmonary apex is lower than the trunk. The writer does not approve of the hot local applications advised by Schenk, but prefers cold sponging. He reports the history of the treatment of two cases, in which the result was all that could be desired.—*La Riforma Medica*, May 17, 1902.

Some Indications for the Physiological Serum.—Luigi Fornaca and Ferdinando Micheli have found that injections of physiological salt solution, in doses varying from 10 to 50 c.c., are of great benefit in convalescents whose nervous system needs stimulation, in hysterical, neurasthenic, and paralytic patients in the stage of depression—the action on general nutrition is marked, and the functioning power of all the organs is improved. The action of the serum appears to consist in an increase in the resistance and in the number of the red-blood cells, in modifications of the nutritional exchanges as shown by increase of the urine and of urea, stimulation of the functions of bone marrow and of the liver cells, increased activity of the heart and kidneys, with restoration of the circulatory equilibrium, and a consequent increase of reflex excitability of the nerve centers. The action of the serum is therefore seen to be both stimulating and antitoxic.—*La Riforma Medica, May* 9, 1902.

The Histological Changes Caused by Colloid Metallic Solutions and by Electrolytically Dissociated Solutions.—G. Galeotti and C. Todde conclude that colloid metallic solutions, especially of metals such as platinum, gold, and silver, which are soluble with difficulty, affect the organic nutritive exchanges, and even the cellular metabolism of certain tissues. The result is grave loss of strength and considerable cellular atrophy. The circulatory changes, such as infarct, stasis, and hemorrhages, which occur, may be considered as secondary and dependent on the impaired condition of nutrition of the tissues and especially of the blood-vessel walls. On the other hand, after treatment by the same metals, given in the form of saline solutions, we have the symptoms of a somewhat slow intoxication, with degenerative phenomena in the various organs, to be explained by the supposition of direct combinations between the metallic irons and the protoplasmic molecule, which altogether change the structure of the latter.—*Lo Sperimentale*, Vol. 56, No. 11.

Action of Grape Juice on the Organism.—The grape is composed of various constituents which give it its value in the so-called grape cure. Water, grape sugar, cream of tartar, tartaric and malic acids, albuminoids, various minerals, as potassium salts, lime, magnesia, the oxides of iron and manganese, a little silicium and alumina, also certain acids-phosphoric, sulphuric and nitric. There are traces of chlorides and a small quantity of soda, and phosphates, The seeds contain tannin. Grape juice from its constituents is a veritable natural mineral water. In taking the grape juice cure the quantity at first taken is small and is gradually increased, the length of the time of treatment being from three to six weeks. Walking and exercise in the open air assist very much in bringing about good results during the time of this cure. The general health is improved, the appetite is increased, and the digestive functions are greatly improved. The patient usually puts on flesh. This cure is especially indicated in affections of the digestive organs, visceral congestions, ascites, jaundice, in cases of hepatic calculi, diarrhœa, habitual constipation, in certain skin troubles, and in neurasthenia; pulmonary tuberculosis is benefited by this treatment, but the intestines must be in good condition. It seems contraindicated only in persons who are too fat or who have a tendency to become so, and during the period of menstruation.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, May 22, 1902.

Prophylaxis and Treatment of Eczema in Sucklings.—A. Schwab states that we should bend our efforts toward the proper nourishment of infants, and thus avoid digestive troubles, which are the consequence of improper feeding, especially when the child inherits the arthritic diathesis. If the child is breast-fed, then the mother or nurse should carefully regulate her life. It is the tendency of a nursing mother to eat too much. This should be avoided. Her method of life should not be changed too abruptly. As the mother is affected so will be the child. She should eat food easy of digestion. Excess in alcoholic drinks in the mother engenders eczema in the nursing child. Alcohol and coffee should be prohibited. Water and milk are good drinks for the nursing mother. Daily exercise and a calm, even life should be followed. The child should be nursed every two and one-half hours during the day and twice during the night during the first three months, and every three hours later. If the child is fed artificially, the food should be cow's milk. This should be sterilized. Instead of giving drugs, the child's intestines should be carefully watched, and great care must be taken to avoid the formation of toxins therein. Moderate use of alkalins, a bit of bicarbonate of soda, and for a laxative magnesia can be recommended. As for local applications, the simpler they are the better. Inert powders are the best. These, combined with an emolient, to loosen the crusts, offer the treatment of choice. It is also important to see that the child does not scratch itself. It may be necessary to tie the hands during the night.—*La Presse Medicale*, May 21, 1902.

Cancer of the Ampulla of Vater.—Maury reports the case of a man aged sixty-seven years with cancer of the ampulla of Vater. The symptoms were those which have been established by Hanot and Rendu: insidious onset, intermittent jaundice, and frequent diarrhœa. Later, when the orifice of the ductus choledochus was completely obstructed by the tumor, the jaundice became permanent.—*Journal des Praticiens*, May 24, 1902.

Chronic Rheumatism of the Large Joints.—This case is reported by Variot. The patient was a boy of twelve years. After an attack of scarlet fever he was afflicted with rheumatism, which was localized in the large joints, the shoulders, elbows, hips, and knees. The fingers were not affected. This attack was followed by ankylosis of the joints affected and trophic troubles of the skin, which was hard, infiltrated, œdematous, and covered with scales. These cases are rare. The child was treated with great success for five months with hot baths, the iodides, and massage. He seems to walk better after taking lemon juice, according to the method of Desplats.—*La Presse Médicale*, May 24, 1902.

Fibroma of the Uterus; Ulcerated Polyp of the Uterus.—The subject of this case, a woman thirty years of age, was a patient of Duret's. She was a widow. Since the age of fourteen years she had suffered from extreme paroxysms of pain in the lower abdomen. These attacks would be followed by periods of comfort. Metrorrhagia had supervened for some years. The cause of this was explained after the operation by the discovery of an ulcerated, sessile polypus in the body of the uterus. The fibroma was of the size of two fists and was taken out piecemeal on account of its position and peritoneal adhesions which made it very difficult to remove. The ovaries were sclerocystic.—*Journal des Sciences Médicales de Lille*, May 24, 1902.

Changes in the Pulse in Childhood.—G. A. Dotti asserts that the pulse undergoes greater changes normally and pathologically in children than in adults. In typhoid fever arrhythmia appears from the fifteenth to the thirtieth day and disappears from the thirty-fifth to the fiftieth. In pneumonia the pulse resembles that of typhoid fever more than it does in other pulmonary diseases, in which there is irregularity rather than a true intermittence. In influenza the arrhythmia appears somewhat early. In diphtheritic angina of slight import there is merely tachycardia and a small pulse, but in grave cases there is bradycardia. This also occurs in the convalescence from scarlatina.—*Rivista Critica di Clinica Medica*, May, 1902.

Retention of Chlorides in Nephritis.—Ch. Achard and M. Loeper have given this subject considerable attention. This retention of chlorides is met with under two conditions: (1) In nephritis which complicates an acute disease, and in acute primary nephritis; (2) In the acute attacks which are incident to the course of chronic nephritis. In subacute nephritis the chlorides ingested are eliminated in a variable proportion, but generally feebly. In chronic nephritis, aside from attacks of uræmia, sometimes a large proportion of the chlorides ingested passes into the urine. When uræmia exists, the elimination is small; when the uræmia is fatal the elimination is nil. The authors conclude that the deficiency of chlorides in the urine is not a direct effect of the renal lesions; the modifications of the excretion of chlorides are not exclusively dependent upon the state of the kidneys.—*Journal des Praticiens*, May 24, 1902.

Scleroderma.—Du Castel says that under the name scleroderma is designated an affection characterized by a chronic inflammation of the derma, ending in atrophy and in the fibrous transformation of the skin, which loses its suppleness and natural elasticity, becoming rigid and like cicatricial tissue. It also becomes more or less yellow, having the appearance of old ivory, with violet colored patches here and there. It is not really known whether scleroderma has for a point of departure an inflammation of the vessels, of the nerves, of the connective tissue, or of the thyroid body. Its nature is a cause of dispute to both neurologists and dermatologists. This disease has certain relations to myxœdema. It is said that occasionally pregnancy, labor and menstrual troubles are the cause. When scleroderma is localized it can be cured, when it is generalized it is cured with difficulty. The means employed are general and local. The first embrace life in the open air, inhalations of oxygen, hydrotherapy, tonics, cod liver oil, antiphlogistics, iodides, salicylic acid, both internally and externally. The writer has had no results from thyroid extract. The local treatment consists of electrolysis, the continuous electric current, electric baths and massage. Sometimes arsenic, strychnine, the phosphates, bromides and valerianates are given.—*Gazette des Hôpitaux Civils et Militaires*, May 20 and 22, 1902.

Books Received.

A PRACTICAL TREATISE ON SMALLPOX. By GEORGE H. FOX. Parts I and II. Illustrated. J. B. Lippincott Company, Philadelphia, Pa. Price, $3.00.

THE NEUROSES OF THE GENITO-URINARY SYSTEM IN THE MALE WITH STERILITY AND IMPOTENCE. By DR. R. ULTZMANN. Second edition, revised. 12mo, 198 pages. F. A. Davis Company, Philadelphia, Pa. Price, extra cloth, $1.00 net.

MINOR SURGERY AND BANDAGING, INCLUDING TREATMENT OF FRACTURES, ETC. By HENRY R. WHARTON, M.D. Fifth edition. 12mo, 621 pages. Illustrated. Lea Brothers & Co., Philadelphia.

INTUBATION DU LARYNX (Instruments, Technique, Avantages). By LE DR. PEREZ-AVENDANO. 16mo, 274 pages. Illustrated. C. Naud, Paris. Price Fr. 4.

THE PRACTITIONER'S MANUAL. By CHARLES W. ALLEN, M.D. Second edition revised and enlarged. 8vo. 889 pages. William Wood & Co., New York. Price, muslin, $6.00 net; half morocco, $7.00 net.

GRUNDRISS DER PATHOLOGISCHEN ANATOMIE. By PROF. DR. LANGERHANS. 8vo, 743 pages. Illustrated. S. Karger, Berlin, Germany.

DIE AETIOLOGIE DES AKUTEN GELENKRHEUMATISMUS, By Dr. A. MENZER. 8vo, 126 pages. Illustrated. August Hirschwald, Berlin, Germany.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Vol. XIV, 435 pages. Illustrated, published by the Association.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Thirteenth Session. By WALTER L. CARR. Vol. XIII. 8vo, 294 pages.

REPORTS ON PLANS FOR THE EXTERMINATION OF MOSQUITOES ON THE NORTH SHORE OF LONG ISLAND, BETWEEN HEMPSTEAD HARBOR AND COLD SPRING HARBOR, 1902. 8vo, 124 pages. Press of Styles & Cash, New York City.

A MANUAL OF SURGICAL TREATMENT. By DRS. CHEYNE and BURGHARD. 8vo, 479 pages. Vol. VI. Illustrated. Lea Brothers & Co., New York. Price, cloth, $5.00 net.

THE LIFE OF SAINT LUKE. By EDWARD CLAPTON. 12mo, 80 pages. J. & A. Churchill, London, England. Price, 60 cts. net.

THIRD ANNUAL REPORT OF THE STATE BOARD OF INSANITY OF MASSACHUSETTS, 1901. 8vo, 43 pages. Wright & Potter Printing Co., Boston, Mass.

VISUAL ECONOMICS, WITH RULES FOR ESTIMATION OF THE EARNING ABILITY AFTER INJURIES TO THE EYES. By MAGNUS & H. V. WÜRDEMANN. 8vo, 144 pages. C. H. Porth, Milwaukee, Wis. Price, $2.50.

PRACTICAL DIETETICS, WITH SPECIAL REFERENCE TO DIET IN DISEASE.. By W. GILMAN THOMPSON. Second edition, enlarged and thoroughly revised. 8vo, 828 pages. D. Appleton & Co., New York.

DYNAMIC ASPECTS OF NUTRITION AND HEREDITY. By FRANK HORRIDGE. 12mo, 175 pages. William Wood & Co., New York. Price, muslin, $1.50 net.

ACUTE DILATATION OF THE STOMACH. By H. CAMPBELL THOMSON, M.D. 8vo, 54 pages. Illustrated. William Wood & Co. Price, muslin, 75 cts. net.

Society Reports.

AMERICAN MEDICAL ASSOCIATION.

GENERAL SESSION.

Fourth Day—Friday, June 13.

This, the closing session, was held at noon, and was very brief, occupying not over ten minutes. The attendance was in keeping with the brevity of the session, there being only about sixty present. An epitome of the work done by the House of Delegates was presented.

Electioneering Debars from Office.—The following resolution, presented to the House of Delegates by Drs. Forshay and McCormack, was adopted amid applause:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that the solicitation of votes for office is not in keeping with the dignity of the medical profession, nor in harmony with the spirit of the association, and that such solicitation shall be taken to be a disqualification for any office in the gift of the association.

Distribution of Samples.—At the request of the section on Materia Medica the rule was adopted, that the distribution at the meeting of samples and of advertising matter shall be limited to persons bearing the official badge of the association.

Committee on Reciprocity.—The question of securing uniform requirements in the different states for a license to practise medicine was one that came up on several occasions and would not down. Finally, on motion of Dr. William H. Welch of Baltimore, the President appointed the following committee to consider this important subject and report at the next meeting of the House of Delegates: Drs. W. L. Rodman, Pennsylvania; William H. Welch, Maryland; Joseph M. Matthews, Kentucky; H. Beates, Jr., Pennsylania, and Murray, Montana.

Committee on Revision of Code of Ethics.—The following were appointed on this committee: Dr. E. Eliot Harris of New York, chairman; Dr. Joseph D. Bryant, New York; Dr. T. J. Happel, Tennessee; Dr. Nicholas Senn, Illinois; and Dr. William H. Welch, Maryland.

Representation of the Sections.—It was proposed to amend the by-laws so that "Each Section shall have the privilege of sending to the House of Delegates one delegate for every 500 members registered in such section at the annual session at which the delegates are elected, and one for each fraction of that number; but each section shall have one delegate." It was also proposed to repeal the section of the by-laws providing for alternate delegates.

Place of Meeting.—The question of the place of meeting was reconsidered, and instead of Hot Springs, Ark., New Orleans was chosen, the meeting to be held there between May 1st and 15th, 1903.

SURGICAL SECTION.

Third Day—Thursday, June 12.

The Symptomatology of Renal and Ureteral Disease.—Dr. C. L. Leonard of Philadelphia had found that the larger the calculus in the kidney the fewer and less severe the symptoms. When the calculus entered the ureter while in its progress downward intermittent hydronephrosis often occurred. With complete infraction there were no evidences in the constituents of the urine to show which kidney was at fault. The persistence of pyelitis or a cystitis should excite suspicion of the presence of a stone in the ureter. After a stone of small size had been demonstrated in the ureter, the expectant line of treatment should be followed, as the stone would in all probability be passed spontaneously. Pus could only be of value in the diagnosis when its source had been demonstrated by the catheter in the ureter. Rœntgen rays were the most valuable means of diagnosis of the presence of stone.

Infrapubic Section for Prostatotomy and Prostatectomy.—Dr. E. Wyllys Andrews of Chicago read this paper and said that unless the bony and ligamentous structures outside the gland crowded it there would be no stoppage to the flow of urine even in great hypertrophy. The prostate was situated in a rigid triangle under the symphysis pubis with ligaments behind, so that there was not much mobility given to it. It was advised that the supports to the gland below be cut away and then it would drop back and permit a free flow of urine through the urethra. In speaking of the various routes for operation on the gland the advantages of the suprapubic route was described as easiest of all. The Barnes bag in the rectum pushed the gland up into view, and the Trendelenburg position helped this. Bimanual enucleation was easy, one finger in the rectum to push up the gland and the fingers of the other hand to enucleate through the bladder. The disadvantage was the laying open the urinary tract to the possibility of infection. The ideal operation left the whole urinary tract unopened. The good results obtained from breaking down the supports of the prostate had been evidenced in the author's experience. It was advised that the levator ani be cut to permit the whole of the pelvic contents to fall backward, as this did not cause them to infringe upon the rectum, the coccyx also falling backward.

Drainage of Extravesical and Extraperitoneal Suppuration of the Male Pelvis.—Dr. Eugene Fuller of New York said that the blood vessels in the male pelvis played a most important rôle in controlling the direction of the course of pus spread in the male pelvis. Should the pelvic cavity fill, the pus was liable to run up over the pelvis to the kidney behind, over the symphysis in front or laterally burrow over or above Poupart's ligament down into the groin. Other courses were mentioned. The causes of suppuration were twofold. One through suppuration in abdominal cavity and spread to the pelvis or from outside, such as in symphyseotomy. The second source was infections within the pelvis itself; urinary extravasations, lacerations of the prostate and of the rectum. Clinical symptoms were liable to obscure, but were chiefly due to the primary injury. Frequent urination, without involvement of the bladder, localized pain, contraction of a leg and such symptoms were suspicious. Diagnosis made in special locations by palpation and vesical exploration. If the tumefaction be made out through rectal examination, no opening should be made into the rectum for drainage.

External Urethrotomy from the Standpoint of the General Surgeon.—Dr. J. C. Munro of Boston was sure that every surgeon should be an expert in this operation as it was a common and most fascinating one. It was rare that the urethra had to be opened from above. After the drainage tube, in four or five days he passed a small sound first, and immediately after its withdrawal put in a full-sized sound. This was repeated every third or fourth day. Unfortunately, the end results of these operations were hard to judge, as the patients were a dissolute set, who soon left when slight improvement came, then, later, they would wander from one hospital to another, and so the surgeon lost track of them.

Dr. Arthur T. Cabot of Boston often had to diagnose renal calculi without the presence of classical symptoms. Some moderate hydronephroses ended in malignant disease, and the differentiation was often difficult. Where negative evidence was required the ray was not to be depended upon. He did not think that a single skiagraph should be relied upon for a diagnosis of stone, for sometimes the *x*-ray failed to show them, as in stones below the brim of the pelvis the *x*-ray was interfered with by the bones. The situation of the pain was the most reliable symptom in the localization of the stone.

Dr. Murphy of Chicago showed that a partial prostatectomy might result in a urinary fistula because the prostatic urethra was of large caliber, and when the organ was removed that portion of the urethra sagged down, a pouch with a small fistula being formed at its bottom by the mucous membrane becoming attached to the skin of the perineum. Hence in prostatectomy a large portion of the floor of the urethra over the gland should be removed.

Dr. HUGH H. YOUNG of Baltimore urged the advantages of the cystoscope in the diagnosis of kidney ureteral and bladder disease. Prostatectomy has become a fad and should not be done on all cases. He did not mean to convey that it should never be employed, but in certain cases where the patient was desperately ill a Bottini operation would give most excellent results. In fifty cases operated upon by this method there had been excellent results and no recurrences. The success of the operation depended upon the possession of an instrument with various-sized blades to suit each particular case. No hard and set rule could be laid down to fix the size of the incision in every case.

Dr. PARKER SYMS of New York favored the perineal route above all others in every case. The Bottini operation was not surgical. It was best to dilate the bladder with a rubber bag before enucleating the gland, as in that way hemorrhage was controled.

Dr. EUGENE FULLER of New York thought that every case should have a prostatectomy done just as soon as possible to get at the patient and operate.

Essentials in the Construction of Hospitals for Great Cities.—Dr. J. A. OCHSNER of Chicago repudiated the idea that it was necessary to spread a hospital over a large area of ground. In building a hospital to-day modern conditions must be taken into consideration. It was wrong to put a hospital away from the residence portion of the city, as it was difficult to get the best physicians to attend such institutions. It would be well to have the hospital with a large space of ground about it, and to have it overlook a driveway or park. He advised building the institution several stories high, as the top stories would get practically the same air as in the country. It was not necessary to have a separate building for infected cases, because infection spreads by contact. Small wards were better than large ones. The old idea of fire in high buildings was now out of date in this time of absolutely fireproof construction. Elevators were so perfect to-day that the handling of patients was convenient. The modern hospital should face east and west, so that there would be sufficient sunlight. High buildings were more compact and were less expensive to heat, and took fewer attendants to do the work.

Dr. SHERMAN of San Francisco thought it was necessary to have hot and cold water in every ward, as it economized the time of the physician and nurse. Certain cases would necessarily have a prolonged convalescence, hence he advised having an annex in the suburbs of the city where these patients could be sent.

Anatomy for the Practitioner.—Dr. C. M. JACKSON of Columbia, Mo., urged the necessity of post-graduate work for the practitioner, both normal and pathological. It was possible for almost every physician to do this sort of work in his office. Anatomical material was available in every city. The laws of almost every State had provided a means whereby the cadaver was at the disposal of the medical man. These laws were divided into three classes: (1) States in which there were no statutes regarding the distribution of the unclaimed dead; (2) States where dissection was alone limited to the medical schools; (3) States where cadavers were free for every practitioner. These facts had been ascertained by writing to the Secretary of State or the secretary of the State Medical Societies. The best way to study the anatomy normal and pathologic was to embalm the bodies and cut them into sections. This could be very easily done. The methods of preparing and sectioning the bodies were given in detail.

Anatomical Treatment of Fractures of the Femoral Neck—Dr. C. E. RUTH of Keokuk, Ia., read this paper. With the usual treatment of these cases, the results were unsatisfactory. His method was to apply two means of extension: (1) Extension on the thigh as in Buck's method, and (2) Lateral extension by means of a band about the thigh just below the perineum in the normal axis of the neck of the bone. The treatment was the same in all cases except where there was impaction. Perfect adjustment of the fragments was easy if the capsular ligament was employed as an aid. Improper adjustment, and failure to maintain the adjustment, were the causes of failure to get union and resulted in deformity. The action of the muscles in these fractures was as important as in any other portion of the body. The direction of the lateral extensions should be about ten degrees outward and forty degrees forward. Pain always ceased after lateral traction had been made. Of forty cases sixteen resulted in perfect union, and in only three cases was there non-union. Five of his successful cases were over fifty years of age.

Treatment of Fracture of the Patella by Subcutaneous Purse-String Suture.—Dr. JOHN B. ROBERTS of Philadelphia said he had obtained excellent results by this method in transverse fractures of the patella. He would not operate immediately after the operation, but would put the knee in extension and flex the thigh on the abdomen, and apply cold for three or four days to reduce swelling and keep down hemorrhage. At the end of this period he cleansed the skin and passed a chromicized catgut suture about the bone, bringing the fractures as close together as was possible. In this way the prepatella bursa and the joint were not touched, thereby lessening the possibility of infection. The joint was then encased in a plaster cast and the patient put on crutches and permitted to go about his duties. At the end of the fifth week the cast was cut down and the knot removed. He had always gotten good results by this method.

Dr. LEVING of Milwaukee advised wiring a few days after the accident before operating.

Dr. LORD of Omaha said that bony union of the neck of the femur will take place in the aged if immobilization is maintained long enough.

Dr. CARL BECK of New York had seen cases of fracture of the patella in which strong silver wire had not been sufficient to hold the fragments together.

Acquired, Non-Malignant Stricture of the Rectum; Causes, Symptoms, and Treatment.—Dr. W. D. BULLARD of New York said that syphilis was not to be considered the most important etiologic factor in the causation of rectal strictures—chronic local irritation from any cause would produce it. Trauma in the female was the most frequent cause. An enlarged uterus or a retroflexion would shove up the rectum into a bulging prominence, and the concomitant obstipation by the passage of the hard fecal masses would induce ulceration of the projecting mucous membrane, ultimately resulting in stricture. Stricture was not caused very often by ulceration of the rectal valves. Prolapse of the rectum may narrow the lumen of the gut, and induce ulceration, which may result in stricture if not properly treated. It was advised that the general practitioner learn to recognize the presence of ulcers of the rectum and learn to employ local treatment.

Dr. W. J. MEANS of Columbus, Ohio, advocated the oblique incision of the fibers of sphincters in operating on rectal strictures, for the same reason as in cutting tendons.

Surgery of Rickets.—Dr. H. L. TAYLOR of New York, in an abstract of his paper, said that of all the cases treated in the Ruptured Crippled Hospital in New York 15 per. cent were of rachitic origin, and a large majority of these cases were under five years of age. All cases of bow-legs were not due to rickets. Some were produced by mechanical factors. Improper nutrition was the chief factor in the production of rickets. Rachitic spine must be diagnosed from Pott's disease of the vertebra. Here one did not find the sharp knuckle of Pott's disease, but a rounded kyphos. Pigeon-breast could be cured by removal of obstructions to the respiratory tract, especially enlarged tonsils and adenoids. Lung gymnastics were of great assistance. He then briefly reviewed the results of their various orthopedic operations in rachitic conditions.

Two Successful Operations for Brain Tumor.—Dr. Joseph Ransohoff of Cincinnati, Ohio, narrated the histories of two cases of brain tumor, and showed the specimens. One was a case of gliosarcoma, now living, nine years after operation. He thought that this was the oldest case on record. The second case was operated upon and a tuberculoma was removed from the arm-lip center. In reviewing the diagnosis the more marked the general symptoms, the less emphasized the localizing symptoms. This is the eighteenth recovered case of removal of a tubercle from the brains: four are now living, one five years after the operation. Of the thirty-five brain tumors operated upon only fourteen have recovered.

Fracture of the Lower End of the Radius Illustrated by Lantern Slides.—Dr. Carl Beck of New York gave a most interesting demonstration of the true condition of affairs in fracture of this locality, by means of *x*-ray pictures. He said that fully 85 per cent. of all fractures occurred in this region. Contrary to the fixed idea, the *x*-ray showed that the lower fragment in Colles's fracture might be displaced downward and sidewise toward the ulna. In this condition he employed a rubber catheter in the interosseous space to push the lower fragment out. The *x*-rays showed that plaster of paris was the best method of putting up these fractures. The thumb must be in the proper position to hold the fragments in apposition.

Fourth Day—Friday, June 13.

Traumatic Rupture of the Abdominal Viscera.—Dr. D. N. Eisendrath of Chicago said that the object of the paper was to call the attention of the profession to the general lack of knowledge concerning this class of injuries, and the necessity in future of earlier diagnosis and operation. Traumatic ruptures were more frequent than gunshot and stab wounds together. Ruptures of kidneys and intestines formed 60 per cent. of injuries; next came liver and spleen. Mechanism of injury has much to do with which organ was involved. Hence it was necessary to inquire exactly what was the nature of the force. Force acted either directly or indirectly. In the former, if over a large area, a parenchymatous organ was more likely to be ruptured. If over a circumscribed area, the intestine or bladder would more certainly be ruptured. In direct force, such as falls on the feet or buttocks or head, the liver and kidney might be affected.

A Study of the Relative Merits of the Various Methods of Intestinal Anastomosis.—Dr. R. C. Coffey of Portland, Ore., has practiced these various methods on over 600 cadavers and on twenty pigs. These animals were chosen because their intestine closely resembled that of the human subject. In accuracy, the Connell and Halsted methods. In the Connell continuous suture the ligature had been found in the lumen of the gut two and a half months after the operation. The O'Hara forceps was dangerous and never to be used. The crushable button was good. The Murphy button was best for rapid work, but was liable to be retained as a foreign body in the intestine. The author advocated the use of a cone made of a potato or turnip, through which two long pins were passed transfixing the gut.

Dr. Connell of Leadville, Col., realized that the continuous suture was apt to remain in situ. He had advocated the leaving of the last knot in the lumen of the gut to prevent leakage. The surety of the operation was greater if all the intestinal coats were included in the sutures. Two layers of sutures increased the time of operation and the liability to gangrene.

One Thousand Personally Conducted Cases of Ethyl Chloride Narcosis.—Dr. M. W. Ware of New York has had 95 per cent. satisfactory anæsthesias in his cases by this method. The color was natural, the respiration and pulse but slightly affected by the drug. In 12,000 collected cases there was but one death and the autopsy on this patient revealed a condition of the organs such as would have caused death in any sort of an anæsthesia.

Officers Elected.—Jas. E. Moore, of Minneapolis, Minn., was elected president of the section for the next year, and Dr. John C. Munro of Boston secretary.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Third Day, Thursday, June 12, 1902.

Vaginal Section for the Uncomplicated Symptom of Sterility.—Dr. J. R. Goffe of New York called attention in his paper to cases of sterility in which there were no other symptoms but that of sterility. He divided all cases of sterility in women into extraperitoneal and intraperitoneal, and asserted that sterility might be pathologic or mechanical, or both. He advised the examination of the man before undertaking any radical measures on the woman. Sterility might be present in a woman free from any other symptoms pointing to disease in the pelvis. Under these circumstances he thought the surgeon justified in performing vaginal section and considered that laparotomy should be done to relieve the condition. The author cited four cases in which he performed a vaginal operation and found occlusion of the Fallopian tubes and cysts on the ovaries. The cysts were easily opened and the obstruction in the Fallopian tubes removed. In one case the cervix was infantile; this was dilated and uterus curretted. Of these four cases, two were followed by pregnancy. These cases showed that it was justifiable to open into the peritoneal cavity for the relief of this symptom.

Dr. Watkins of Chicago thought it justifiable to do this operation, yet the examination of the male should be done first before submitting the woman to so severe an operation. He found that after adhesions about the tube had been removed they would again form.

Dr. Merrill Ricketts of Cincinnati considered the paper full of good points. It was the duty of the surgeon to make a thorough examination of the husband. The fimbriated extremity of the tube was, in many cases, bound down and occluded, and pregnancy could not take place. In freeing the opening, he passes a probe into the tube to dilate it and often finds this method will fill a tube diseased with hydrosalpinx. The latter should be drained and the tube thus saved. He preferred conservative surgery in all cases of operation on the Fallopian tubes to a pathological exhibit.

Dr. G. B. Massey of Philadelphia entered a protest against the undue anxiety of the surgeon to perform radical operations; they should use palliative measures and endeavor to restore the functions of the woman by other means.

Dr. Hause of Cincinnati desired to report a case in which he had separated the tubes from the adhesions, with the result that childbirth had followed. He favored the operation, and said that even when a small piece of the ovary was left success was often achieved.

Dr. C. L. Bonifield of Cincinnati objected to the title of the paper because, as there were other symptoms present, there must be some other pathological condition. He hesitated to open the abdominal cavity unless some disease was shown to be present.

Dr. J. R. Goffe, in closing the discussion, said that when the source of the adhesion has been removed, the adhesions themselves would melt away. The inflammatory action, with resulting adhesions, was kept up by the infection. It was wise to make an exploratory incision for the relief of this one symptom of sterility. He defended the title of his paper on the ground that there were no other symptoms present in the cases cited.

The Influence of Prolapse of the Kidney on the Production of Pelvic Disease in the Female.—Dr. A. H. Goblet of New York demonstrated in this paper how a prolapsed kidney might obstruct the return circulation from the pelvis and might cause pelvic congestion with all the attending evils. The kidney in the normal condition lay in front of the renal vein, and a slight prolapse caused a pressure on the vein, impeding the circulation. The ureter, in the more pronounced cases, was pressed upon and obstructed the flow of urine, thus causing a hydronephrosis. This condition was aggravated when the woman was up and doing her household work because of a marked inward turn of the lower segment of the kidney, due to pressure of the clothes upon the abdominal muscles. These cases showed no evidence of prolapsed kidney after death, the kidney returning to its normal position when the person was recumbent. The symptoms were marked, though pain in the region of the kidneys was rare. The concomitant symptoms of anæmia and loss of flesh were present in the exaggerated form of the prolapse. Manipulation of the kidney produced irritation, and for that reason the use of belts had been found to be objectionable; their constant pressure caused increased flow of urine and irritation of the kidney. The only radical cure was the fixation of the kidney by the usual method. The author considered it advisable to operate early before permanent injury had been done to the pelvic organs and a condition of chronic invalidism had been set up. All these symptoms were averted or might be made to entirely disappear if the kidney were properly anchored.

Dr. G. B. Massey of Philadelphia opened the discussion. He objected strongly to these operations, asserting that the pressure supposed to be made by a floating or prolapsed kidney was imaginary and that no kidney could make a backward pressure. A falling forward might take place, but not with the results stated by the author. He also vigorously opposed any operative procedure; the knife, he said, was used entirely too much. The symptoms spoken of did not occur. The prolapsed and floating kidney was the result of loss of fat, anæmia, weakness and malaise. He believed a cure could be obtained by the use of nitro-muriatic acid, compound rhubarb pill, stimulation of the abdominal cavity by hte galvanic current and general massage.

Dr. Mathews of Detroit asserted that about 40 per cent. have loose or floating kidney; a very small number produce any pelvic congestion. He believed that fixation of the kidney was the only radical method of relieving the condition, yet, as a large number occurred in old women, with relaxed and flabby abdominal muscles, they could not be operated upon.

Dr. Dunning of Indianapolis said that no more difficult question had been presented as to the cause for removal and the effect. The speaker claimed to have been among the first to operate on prolapsed kidney in this country and for a time had done not less than once a day. He had maintained that many symptoms owed their origin to the prolapsed kidney, and that fixation of the organ would give relief, but in a short time he had found that the symptoms did not always disappear. Then came a reaction and the operation became a rarity. The use of the pad had then come in vogue. The operation he did not consider dangerous, but the relief was very small unless supplemented by other therapeutic measures.

Dr. C. P. Noble of Philadelphia said the author had mixed up cause and effect. He pictured a woman who had borne several children, having a relaxed abdomen and flabby muscles with a loss of fat, a neurotic temperament and anæmia. Such a woman would most likely have prolapse of the kidney. Improve the general condition and the kidney would return to its normal position. He doubted if there could occur such damage to the kidney from pressure as had been described by the author.

Dr. C. S. Bacon of Chicago believed displacement of the kidney due to weakness of the abdominal walls and that treatment should be directed toward strengthening the abdominal muscles.

Dr. S. G. Kolisher of Chicago maintained that the kidney does not fall backward, even in the upright position, but that it fell away from the vein. If the general conditions were improved, the patient's symptoms would be relieved.

Dr. Goblet, in closing the discussion, said be believed the loss of fat, malaise, anæmia, and nervous condition were due to prolapse of the kidney and the consequent pressure on the vessels. The latter occurred when a patient was up, clothed, and doing her work.

Pathological Condition of the Omentum as a Surgical Factor.—The Best Method of Treatment.—Dr. H. O. Marcy of Boston was the author of this paper. He called attention to the uses of the omentum, in preventing the loss of heat, and injury, helping to support the abdominal viscera, acting as a protective, throwing out lymph cells and preventing infection. It varied in size and in the amount of fatty deposit. Modern surgery had exceptionally demonstrated the physiological importance of the omentum. He believed the pathologic factors incident to the omentum should be kept in mind. The parietal adhesions were the cause of obscure and often marked suffering. After operation, every vent should be carefully repaired, and the omentum should be spread out and carefully replaced. When these conditions were not fulfilled, a displacement of the omentum into the pelvic cavity might take place and occlusion of the gut result.

Dr. F. H. Wiggin of New York insisted upon attention to the proper technic in operations upon the omentum. He found that by filling the abdominal cavity with saline solution, the omentum could be readily replaced and retained in position, and adhesion could be prevented. It was important to put in the stitches before the saline fluid was used, as the necessary movements of suturing would empty the abdomen of fluid.

Dr. Marcy, in closing the discussion, said he considered the suggestion of the last speaker a very good one.

What Cases of Placenta Prævia Can Be Best Treated by Cæsarian Section?—Dr. F. D. Donoghue of Boston, the author of this paper, asserted that the justification for cæsarian section in certain cases could be found in its superiority in saving fetal life without adding to the mother's danger. He did not urge the cæsarian section as a substitute for version or the other forms of delivery except in extreme cases, but he advocated it in cases of placenta prævia centralis, occurring in primiparæ and in the presence of severe hemorrhage and rigid os.

Dr. Holmes of Chicago said that the statistics of placenta prævia were valueless; the average practitioner not only did not know how to treat these cases, but did not always recognize them, and a large number were not reported. The proper method of using the tampon should be taught in our schools, for this the speaker considered the best instrument in the hands of the general practitioner. He desired to give one warning, *i.e.* the dangers of infection by the attending physician, which precluded the radical operation of cæsarian section. The death rate after operation was very high, and infection was the usual cause of death. Again, the danger of hemorrhage was still present and as difficult of control as through the vagina. He acknowledged that more babies were saved, but maintained that more mothers were lost.

Dr. G. T. Harrison of New York objected to the operation of cæsarian section in cases of placenta prævia. The life of the mother must be first considered. No operation should be done when infection had taken place as a result of examinations and delay. All efforts should be directed toward saving the life of the mother and ignoring that of the child. By gradual dilatation the danger from hemorrhage had been reduced to the minimum.

Dr. DONOGHUE, in closing, said he valued the life of the mother, but it should be remembered that no child is saved by the other method and all can be saved by the cæsarian section.

The Restoration of the Pelvic Floor.—Dr. C. A. L. REED of Cincinnati read this paper. He spoke of the pathology of injuries to the pelvic floor as consisting of laceration of the superficial structures and the impairment of the muscular apparatus. To be successful the operation for the restoration of the pelvic floor must consist in free dissection of the parts, careful isolation of the injured muscles, a perfect restoration of their integrity, and restoration of the superficial structures.

Drainage versus Radical Operation for Suppuration in the Female Pelvis.—Dr. C. P. NOBLE of Philadelphia compared in this paper the advantages and disadvantages of the two methods. He favored the conservative plan and preferred the vaginal opening as being less liable to infection and presenting the minimum danger of peritonitis. The openings should be free and made from side to side of the walls of abscess or suppurating cavity. The mortality and permanent results of the radical operation for pelvic suppuration were in favor of the vaginal method. The immediate and permanent results of drainage for complicated cases of pelvic abscess were in favor of the radical operation. He was not in favor of using too sharp an instrument; scissors were preferable.

Adenomyomata of the Female Generative Organs.—Dr. THOMAS S. CULLEN of Baltimore demonstrated by lantern slides the three groups into which adenomyomata were divided in the uterus, viz.: (1) Where the uterus preserves a relatively normal contour; (2) When subperitoneal or intraligamentary; and (3) When submucous. He said that adenomyomata of the uterus were derived from the uterine mucosa or from a portion of Muller's ducts. The life history of adenomyomata resembled that of ordinary myomata; they were detected during the child-bearing period of life. In all these cases the prognosis was favorable after operation.

Dr. H. O. MARCY of Boston spoke of the increased vascularity of the uterus in all classes of adenomyomata.

Post-Operative Intestinal Paresis.—Dr. F. H. Wiggin of New York in this paper discussed that form of intestinal obstruction which takes place after operation, and is usually due to injury of the intestinal nerve supply, or to fermentative or putrefactive changes in the bowel contents. He had found it a fatal complication of the early convalescent period; it should be recognized early and treated promptly. Where the bowels had not moved, there was a sudden vomiting without premonitory nausea, pain, or uneasiness. The prophylactic treatment in all operative cases should be a cathartic every day for three days, and a saline enema the day before operation. When the vomiting began, a seidlitz powder should be given at once, being allowed to mix in the stomach, so as to produce a strong evolution of gas in the stomach. The hypodermic administration of strychnia, 1-30 gr.; atropine, 1-60 gr.; physostigmin, 1-50 gr., was recommended.

Dr. MARCY of Boston thought the method a good one; he would like to see it tried in these cases, as they are both alarming and sudden.

Dr. C. L. BONIFIELD of Cincinnati said he had read a paper on this subject and fully endorsed the author's views. In his cases he had used strychnia. The cause of the condition was apparently to sepsis, and the exposure of the bowels to cold during the operation. He did not believe in the use of salines before the operation, but he gave compound extract of colocynth seven days before.

Dr. WIGGIN, in closing, said he did not give salines by the mouth before operation; the saline enema given the day before was, however, very useful. On the postmortem examination no sepsis was found. Action must be taken promptly. In one case the seidlitz powder had been given through a stomach tube; there was no nausea or colic—only a sudden regurgitation. When patient refused food, a Seidlitz powder should be given.

FOURTH DAY, FRIDAY, JUNE 13.

Critical Remarks on the Methods of Operation in Vogue for Cystocele with and without Prolapse of the Uterus.—Dr. C. O. THEINHAUS of Milwaukee proposed in this paper manifold methods for the radical cure of cystocele with or without uterine prolapse. A very small number of operations had fulfilled the promises of their originators that there would be no recurrence. The most rational and best methods make use of the uterus as a supporting agent for the bladder, thereby blocking its further descent.

Dr. W. T. METCALF of Detroit considered it more satisfactory to remove the uterus, as all these cases occurred in old women and after the child-bearing period.

Dr. BOYD of Philadelphia considered prolapse of uterus as a cystocele and believed in treating it as such. He removes the cervix and suspends the uterus, as this gives better results.

Dr. C. L. BONIFIELD of Cincinnati thought prolapse was a hernia occurring late in life, after the birth of many children and consequent upon abdominal relaxation and loss of fat. He found general tonics of service. The operation of removal of the cervix and suspension of uterus he considered valuable, but much could be done by rest, tonics and massage.

Dr. DUNNING of Indianapolis thought the cases should be divided into two classes, women who had passed the menopause, and those capable of bearing children. In the first, the uterus should be removed. In all cases he repaired the perineum, and attached the uterus to the abdominal wall.

Surgical Treatment of Internal Hemorrhoids.—Dr. WM. F. METCALF of Detroit spoke of the effects of internal hemorrhoids on women, and commented on the similarity of the reflex phenomena of internal hemorrhoids to those produced by pathologic changes in the generative organs. He believed the operation was best done by gynecology, and should be done at the same time as the work upon the uterus and its adnexa. He objected to the ligature and tying *en masse*, with its resulting sloughs. He operates by cutting away the vein extremities and redundant tissue and leaves the denuded surface uncovered. When complicated with much redundant tissue and prolapse the diseased membrane should be amputated.

Officers Elected.—*Chairman*, A. Palmer Dudley of New York; *Secretary*, C. L. Bonifield of Cincinnati.

SECTION ON MEDICINE.

THIRD DAY—THURSDAY, JUNE 12.

The Occurrence of Gout in the United States, with an Analysis of Thirty-six Cases.—Dr. THOMAS B. FUTCHER of Baltimore read this paper and summarized as follows: (1) Gout in the United States is undoubtedly more common than is generally supposed; (2) Out of 13,400 medical cases admitted to Dr. Osler's medical wards in the Johns Hopkins' Hospital during a period of thirteen years there were thirty-five gout cases, or 0.24 per cent. of the total number of cases. For the same number of years at St. Bartholomew's Hospital there were 116 gout cases out of a total of 31,100 medical admissions, or 0.37 per cent. of the cases. Thus among hospital patients gout is only about one-third more frequent in London than in Baltimore; (3) All the thirty-six cases were in white males. The largest number of cases occurred in the fifth decade. Twenty-seven of the patients were native born Americans; (4) The majority of the cases appeared to have earned rather than have acquired their gout. Alcohol and lead seemed to be the most potent predisposing etiological factor; (5) Thirty-three of the thirty-six cases had reached the chronic stage before they came under observation. In seventeen of the cases tophi were present; (6) Among the more interesting complications may be mentioned three cases of gouty bursitis; one case of parotitis; one of pericarditis; one of retrocedent gout with symptoms simulating intestinal obstruction; (7) There was evidence of disease of the kidneys in the majority of the cases. Albuminuria occurred in twenty-seven and hyaline and granular casts in twenty-three instances; (8) Arteriosclerosis was present in twenty-three cases and a mitral systolic murmur in five cases; (9) Many gout cases are mistaken for rheumatism. Four of the cases were repeatedly diagnosed as such on early admissions. The appearance of tophi revealed their nature; (10) The series illustrates the great importance of examining the ears and the vicinity of the joints for the presence of tophi in all cases of multiple arthritis.

Syphilis of the Liver.—Dr. Charles G. Stockton of Buffalo read this paper. He said that, although the chief pathological changes induced by syphilis of the liver appeared to have been clearly studied and classified, the clinician occasionally meets with instances of undoubted syphilis in which there develop hepatic manifestations that so puzzle him as to the precise character of the morbid change that classification has to be abandoned. There is no fundamental difference between the pathology of congenital syphilis and that of the acquired disease. In either one we may have first: the diffuse hepatitis or parenchymatous degeneration, to be succeeded by the ingrowth of fibroid tissues; these changes are probably due to the local effect of the specific toxin rather than to local infection. Second, we have gummata occurring in large tumors, in scattered masses, in miliary granulomata, or in the tuiling stage, as mere aggregations of lymphoid cells; these lesions appear to be the outcome of stimulation of tissue from the local action of microorganisms. In some cases the liver is apparently invaded through the lymphatic system, sometimes by the route of the peritoneal cavity; in other cases the disease manifests itself in the bloodvessels, or by obliteration of some of the portal branches, or distributions of the hepatic artery. He then cited illustrative cases showing the conditions under which hypertrophy or deformity of the liver may occur, besides pain, ascites, jaundice, and other symptoms, commonly associated with affections of the liver other than syphilitic. It is generally conceded that serious syphilitic lesions of the liver occur only in the last stages of the disease. With the exception of perihepatitis and lymphatic involvement, he was sure that this was true. The last named lesion he had seen at a comparatively early period. Besides this, he was satisfied that in the early stages of the affection the liver was congested, moderately enlarged, somewhat tender and functioned poorly. Very likely this is the immediate result of a constitutional disturbance, *i. e.* the systemic intoxication. In conclusion, he expressed the opinion that lymphatic complications are more common in syphilis than one is likely to infer from the literature on the subject. The subject has not received the fulness of consideration that its importance seem to warrant.

The Treatment of Croupous Pneumonia.—Dr. E. Fletcher Ingals of Chicago read this paper, in which he gave an analysis of the cases treated in Cook County Hospital for the fifteen months preceding April 1, 1902. He reviewed the literature on the subject extensively, but presented no new ideas upon the subject. He said, in substance, that the frightful mortality in this disease had led our best pathologists to become therapeutic nihilists. Few physicians will admit that their efforts to mitigate the severity of pneumonia are of no avail. However, there are some remedial agents which deserve consideration. The patient should have abundent nourishment, but the stomach should not be overloaded. The oilsilk jacket may be applied. Pain may be relieved by hot or cold applications, by cupping, or by drugs. He recommended bromide of ammonium, or hyoscyamus, for cough. The temperature could be controlled by various means. He spoke of the action of various stimulants and antipneumococcus serum. In those cases in which the consolidation did not speedily resolve, he thought that the process could be stimulated by the administration of the chloride of calcium, the iodide of ammonium, and possibly by alkaline diuretics, such as acetate of potassium.

An Analysis of Sixty-five Cases of Gastroptosis.—Drs. J. Dutton Steele and Albert P. Francine of Philadelphia presented this paper. The conclusions reached were as follows: (1) Gastroptosis is much more common than might be inferred from the meagre reference made to it in a majority of the text-books upon general medicine. In women showing symptoms of gastric motor insufficiency its presence is almost constant, and it is probably the most important factor in the causation of such symptoms. It is much less frequent in men; (2) The occurrence of gastroptosis is not confined to any particular age or class of individuals. There are no causative factors common to all cases, and no explanation of its etiology hithertofore given is broad enough to call it satisfactory, if we except the theory of congenital predisposition, which is entirely hypothetical; (3) The position assumed by the stomach in all of their cases was vertical or subvertical. Total descent was not observed and probably is extremely rare. Some dilatation of the pyloric extremity was always present. When this dilatation affects the pyloric end alone it may perhaps safely be assured that the dilatation is secondary to the descent of the pyloris. In general dilatation and gastroptosis it is probable that the displacement is secondary to the dilatation. The data in regard to the position of the stomach were obtained in every case by inflation with air through the stomach tube. The colon was inflated through the rectum; (4) The transverse colon invariably shared in the displacement, assumed the "M" or "V" shape, and when inflated by air, was in close contact with the greater curvature of the stomach. The hepatic flexure may not be displaced or may sink to the level of the umbilicus. The splenic flexure lies behind the stomach and eludes demonstration; (5) The right kidney was movable in 60.9 per cent. of the cases. The left kidney rarely showed abnormal movability and the spleen in but one case. The fact that the liver was observed to be unduly movable and sagging downward in three of the six cases operated upon, suggest that ptosis of this organ may elude our methods of physical examination, and be more frequent than is usually supposed; (6) There is no condition of the gastric contents peculiar to gastroptosis. Absence or diminution of the free hydrochloric acid is the rule. In a few cases the amount was normal. Hyperacidity was rare and usually occurred in cases where general dilatation existed, and when there was a strong neurotic taint; (7) There were no characteristic changes in the blood or urine; (8) The subjective symptoms were those of gastric motor insufficiency and were of a mild grade in cases of primary ptosis, but more severe where general dilatation existed. Pain was present in the upper abdominal region in about half and in the lumbar region in a quarter of the cases; (9) The same causes that produced neurasthenia appeared to favor the development of ptosis of the abdominal viscera. When the two conditions are established they probably react upon each other deleteriously, but clinical evidence tends to contradict the theory, previously widespread, that they have a direct causative relation.

The Etiology of Acute Articular Rheumatism.—Dr. Geo. W. Webster of Chicago presented a paper on this subject and offered the following conclusions: (1) Many organisms produce arthritis; (2) Probably all cases of acute articular rheumatism are due to infection; (3) Probably all organisms known to cause either acute articular rheumatism, or other forms of arthritis, also give rise to other pathological conditions as well; (4) It would thus seem to be not merely a local infection or inflammation, but a general infection, the commonest seat of the principal lesion being the joints, but also involving the heart, both endocardium, pericardium, and muscle, occasionally the meninges and other structures, and caused by a diplococcus circulating freely in the blood. The diplococcus seems to be merely a germ capable of causing a widespread inflammation, and the joints are included in its sphere of action. Just as in pneumonia, we may have a general infection with local manifestations or inflammatory reaction in the meninges, the pleura, the endocardium, pericardium, post-nasal space, peritoneum, lymphatics and lungs, the latter being probably the usual site of the localizing inflammation; (5) It is quite possible that there is some hereditary diathetic or constitutional peculiarity, the nature of which is completely unknown to us, which may favor infections in general, and possibly that of rheumatic infection in particular; (6) That there may be varying degrees of susceptibility depending upon exhaustion, depressing influences, as cold and the like, seems reasonable. These are the occasions and not causes. They favor, but do not cause; (7) That susceptibility varies greatly there can be no doubt. Whether this depends upon alkali tension has not yet been demonstrated, but seems plausible on the ground of variation in the bactericidal action of the blood. This may explain the value of alkalie in the treatment of rheumatic affections.

Etiology and Prophylaxis of Cardiac Manifestations of Articular Rheumatism.—Dr. Joseph M. Patton of Chicago read this paper. He said that it had been admitted that many of the so-called hereditary diseases of the heart were probably of rheumatic origin, while it was generally conceded that those cardiopathies of early life which obtain with the entire absence of clinical history, or, at least, an indefinite mention of "growing pains," were of rheumatic origin. In several hundred ambulatory cases of acute and chronic disease of the heart observed during the last ten years, fully 30 per cent. failed absolutely to give any history of rheumatic manifestations, though usually some such history could be traced in the parents or other members of the family. Sansom believed that all cases practically of heart disease in individuals under thirty-five years of age were rheumatic, and that practically all fetal endocarditis was rheumatic. In a certain proportion of cases there appears a degree of myocarditis which cannot be explained by extension of inflammation or by embolic or other direct infective processes, and we must assume with Hanot that toxins are able of producing acute inflammation of the heart. Pericarditis, according to Baumgarten, occurs in about one-third of the cases of acute rheumatism. Of 150 cases of rheumatic heart disease reported by Lees, the pericardium was uninvolved in only nine instances. Twenty per cent. of Sibson's cases of acute rheumatism were complicated by pericarditis. Latham gave 7.5 per cent., and Chambers and Ormorod gave 13 per cent. and 71.7 per cent., respectively. Acute rheumatism is generally conceded to be the most frequent cause of endocarditis. Of Sibson's cases, 325 in number, 107 had endocarditis alone, and fifty-four endopericarditis. The occurrence of acute myodarditis in connection with rheumatism is generally admitted. With the treatment of acute rheumatism he emphasized his belief in the importance, so far as voiding heart complications were concerned, of early control of the condition, as shown by mitigation of the joint symptoms and subsidence of the fever, and he expressed his conviction that this was best obtained by the temporary employment of pure salicylic acid in sufficient dosage to produce relief of pain and fever, with sweating and more or less depression, to be followed by sodium salicylate combined with the alkaline diuretics. He believed the most effectual measure locally was the application of cold to the præcordium. It should be applied continuously. Hot applications have an analgesic effect and are more readily allowed by children. Their effect on the inflammatory condition was decidedly less than cold. Aconite had a distinctly beneficial effect in quieting the heart and slowing its action. In the earlier excitable stages aconite, combined with sodium bromide, would act to advantage.

Review of the Cases of Acute Articular Rheumatism in the Medical Clinic of the Johns Hopkins Hospital.—Dr. Thomas McCrae of Baltimore said that in a period of thirteen years there were 270 cases of acute articular rheumatism. This represented an admission of 294 cases which gave a percentage of two of all medical admissions. Of these 198 were males and seventy-two females; 223 were whites and forty-seven were colored. The largest increase was in the mid-decade, with the second decade coming next. The oldest patient was aged sixty-six years. The largest number occurred in the first half of the year and 55 per cent. in the months of February, March, April and May. September was the month with the fewest cases. There was a family history of rheumatism in 25 per cent. and of tuberculosis in 14 per cent. There was a previous history of rheumatism in 45 per cent., of tonsilitis, however, only in 4 per cent., and of chorea in 3 per cent. Nearly 40 per cent. gave a history of the more or less constant use of alcohol. In about 75 per cent. the age of the first attack was below thirty, the largest number (36 per cent.) being in the second, and only 8 per cent. in the first, decade. There was a history of exposure to cold, wet, etc., in 12 per cent. of all the cases. Arthritis was the most predominant symptom in onset in over 80 per cent., but in seventeen cases a chill occurred at the onset, in ten tonsillitis, and in single cases various conditions, among others trauma. The arthritis was, of course, an inevitable feature, more often in the legs than in the arms, the knee-joint being involved in over 50 per cent. In all the joints of the lower extremities both joints, *e. g.* both knees, were effected more frequently than one only, while the contrary was true in all the joints of the upper extremity. The average duration of fever was twelve days. There were not any cases of hyperpyrexia. About 30 per cent. of the cases had fever above 103. The heart sounds were clear throughout in 38 per cent.; definite organic lesions were present in 32 per cent., and the remaining cases were more or less doubtful. Of these seventy-eight doubtful cases, in eighteen there were murmurs present during the attack which disappeared. In the remaining sixty there was in all a systolic murmur of varying distribution, in a large number at the apex only, of soft quality and not transmitted. The heart condition in other ways normal. In nine cases the murmur disappeared under observation, all at the apex. In five of these the murmur was apparently due to an organic lesion, the other four being doubtful. The age at the first attack in reference to the cardiac condition showed that, of the patients who had the first attack below the age of twenty years, 45 per cent. had a definite lesion, while of those over the age of twenty at the first attack only 21 per cent. had a lesion. This pericarditis occurred in 6 per cent., and with the first attack in only three of the sixteen patients. The time varied from the fifth to the sixty-first day. The rub persisted for a period of from five to eighteen days. There was associated delirium in one instance only. The fever in the majority of the cases was not high, only three being above 103°. There was a leucocytosis of 15,000 to 25,000 in all of the seven cases in which counts were made. There was associated endocarditis in eight cases, doubtful in four cases, and no evidence of it in four. Effusion occurred in two cases, adherent pericardium in three, and death in three. The pulse rate of the series showed that in only 41 per cent. was the pulse raised over 100, only in thirteen cases, or 6 per cent., was it over 120. The urine was clear throughout in 48 per cent. Albumin was found on admission only, or once in 34 per cent., occasionally in 5 per cent., and throughout in 11 per cent. A positive diazo-reaction was given in three out of ninety-one cases. The average percentage of hæmoglobin in seventy-seven cases was sixty-six, the red cells in sixty-nine were 4,532,000, and the leucocytes in eighty-three were 11,700. In thirty-five cases the leucocytes were 10,000; the highest leucocyte count was 26,000. The average differential count showed nothing unusual. The average stay in the hospital was twenty-six days, and the average duration thirty-eight days. Cultures from the blood, joints, and urine were negative throughout. Death occurred in three of the series, all having pericarditis.

The Salicylates in Acute Rheumatism.—Dr. JAMES J. WALSH of NewYork read this paper. He said that it was generally conceded that the salicylates constitute the most satisfactory remedy for acute rheumatism, though they are no longer considered a specific for rheumatism in the sense that quinine is a specific for malaria. The salicylates do not effect secondary infectious complications of joint structures due to pus cocci, influenza bacillus, or other infections, nor to the arthritis due to the gonococci. Rheumatic cases that are influenced by the salicylates should be suspected to be dependent on some other etiology other than that of simple acute rheumatism. In regard to the dosage of salicylates he said that they were ineffective unless employed in large doses, from 90 to 120 grains per day. Many patients cannot stand this amount of the drug. Certain nervous individuals develop neurotic symptoms that may proceed to delirium. Again some stomachs will not tolerate salicylates; a disturbance of the digestion further adds to the impoverished condition of the system. The salicylates are distinctly irritants to the kidneys and should not be given in cases of nephritis. It will react to increase the anæmia and make heart complications more serious. In certain cases there is a development of salicylic dyspnœa, and if breathing becomes very rapid it must lead to the substitution of some other remedy. The form of salicylates that are used is a matter of clinical observation that each physician must decide for himself; but the criticisms are sufficiently numerous and authoritative to make it clear beyond a doubt that the subject is well worthy of consideration. He said with regard to the time at which the salicylates should be administered that there is some variance of opinion, but as the temperature of rheumatic patients is higher in the afternoon and evening and they are almost sure to be more uncomfortable and to present more symptoms of the affection at this time, it may be better to administer them so that the daily dose is given before four o'clock in the afternoon. In heart complications it seems advisable that alkalies should always be used in conjunction with the salicylates. Sufficient of the alkalies must be employed to render the urine alkaline. They are not employed with any thought of the presence in the blood either of uric acid or lactic acid, but entirely on clinical grounds. There is no doubt that the salicylates relieve the pain, lessen the fever, diminish the restlessness, and so make the patient very comfortable. There is considerable doubt, however, as to whether the remedy affects the rheumatic process itself. Hyperpyrexia is one of the complications that is undoubtedly much less frequent in acute rheumatism than before the introduction of the salicylates. As the salicylates are not specific for rheumatism and the beneficial effects obtained from them may also be derived from cognate coal-tar products, antipyrin has been very extensively used in Germany as a substitute. Like the salicylates antipyrin must be used in large doses. From 60 to 90 grains per day are employed for three or four or more days, until the painful symptoms of the rheumatic condition have subsided. Phenacetin in similar doses as those mentioned for antipyrin have also been employed with good results. Either of these drugs may prove effective when the salicylates fail.

The Influence of Ozonation upon the Blood.—Dr. G. LENOX CURTIS of New York thought that the profession at large had been slow to appreciate the importance of a thorough knowledge of the blood as an aid in diagnosis. He stated that unmistakable indications of disease are often recognized in specimens of fresh blood, of which photographs can be made. These should be attempted only within a few seconds after the fluid has been drawn, as even a brief exposure of the specimen to the air promotes failure. This method affords knowledge of obscure cases and enables the physician to institute treatment before ordinary symptoms are clearly established. The author held that good health was perpetual when normal conditions of blood, drink, and air-supply were conserved. When the microscope reveals the presence of morbid detritus, *i.e.* an abnormal state of the blood, the fluid must be restored by oxidation. Ozone, the "life-giving" principle of oxygen, can be produced by means of a high-tension electric machine, and forced into and through the body to such an extent as to destroy the *materies morbi* in the blood and other tissues. The machine for generating the current was described in the *New York Medical Journal*, January 18, and February 1, 1902. No shock is experienced by the patient. The machine is used in connection with a cabinet fitted with a glass reclining-slab, above and below which are clusters of incandescent lights. Reflectors are so arranged as to subject every portion of the patient's body to the effects of light-rays. The treatment consists of a twenty to thirty-minute period in the cabinet, during which the patient inhales nascent ozone, while his body is exposed to the heat and light-rays. At the same time the extremely high-tension current is passed through the body. This procedure brings on profuse perspiration, after which a shower and massage of the diseased area with the electrode complete the seance.

Officers elected for the ensuing year: *Chairman*, Dr. W. S. Thayer of Baltimore; *Secretary*, Dr. J. B. McIlroy of Mississippi; *Delegates*, Dr. J. M. Anders of Philadelphia for one year and Dr. C. G. Stockton of Buffalo for two years.

SECTION ON DISEASES OF CHILDREN.

FIRST DAY, TUESDAY JUNE 10.

Chairman's Address.—The meeting was called to order by the chairman, Dr. H. M. MCCLANAHAN of Omaha, Neb., who then delivered his address. His topic was "The Lessons from Pediatric Literature," and his address comprised a brief review and classification of the 477 purely pediatric articles which had appeared during the past year. His conclusion was, that while this literature gave evidence of a general advance in pediatrics, it did not appear to be up to the standard reached in other departments of medicine.

Tuberculous Peritonitis.—Dr. THOMAS MORGAN ROTCH of Boston, Mass., presented this paper. He said that the reason that laparotomy had been successful in some cases of tuberculous peritonitis was still not definitely known. Most commonly tuberculous peritonitis was secondary to tuberculosis of the mesenteric nodes, or of the intestine, lungs or lymph nodes elsewhere. It might arise in the course of various infectious diseases, especially the exanthemata. The ascites might be serous, seropurulent, or purulent in character. The form known as fibrous was essentially chronic, and did not exhibit much tendency to break down. In another variety there were large tuberculous deposits associated with caseation and breaking down. In these cases there was usually also involvement of the lungs. The symptoms of tuberculous peritonitis in infancy and early childhood are exceedingly obscure. If the temperature were elevated to 102° or 104° F., the difficulties were increased. If, however, the temperature remained between 100° and 102° the tuberculin test was available. It was of value, although its negative evidence was not decisive. Having determined the presence of tuberculous peritonitis, one should next ascertain whether or not there was tuberculosis elsewhere in the body. A swab culture from the pharynx would sometimes serve to detect the presence of the tubercle bacillus. Leucocytosis might or might not be present. In infants there was apt to be a miliary tuberculosis in the course of a general tuberculosis, and not as a rule associated with abdominal symptoms. If there was a localized tuberculous process in the peritoneum, chronic in its course, it was especially suitable for treatment by laparotomy. The most favorable form was that in which there was miliary tuberculosis of the peritoneum associated with ascites. In cases of fibrous tuberculous peritonitis the association of ascites improved the prognosis. Laparotomy could rarely be resorted to advantageously in the first year of life. In the third, or ulcerative form of tuberculosis of the peritoneum there was usually evidence of tuberculosis in the bronchial nodes or in the lungs. The danger of a localized tuberculosis becoming disseminated was a real one; hence, it was better to operate before such dissemination took place. An exploratory laparotomy in the early stage of the disease was not especially dangerous. From 1884 to 1902 the total number of cases admitted to the Children's Hospital, Boston, with a diagnosis of tuberculous peritonitis was sixty-one, thirty-nine of them being boys. After the age of one year this affection became more common, and was most frequent between the ages of two and four years. The average duration of the cases before admission was three months There was a family history of tuberculosis in 30 per cent. of the cases. Abdominal tenderness was generally absent. The movements of the bowels were not significant. The temperature was irregular, and, as a rule, slightly elevated. The pulse was more rapid than normal, but varied within wide limits. White blood counts had been made in twenty-three cases, and gave an average of 16,435, the maximum being 44,000 and the minimum 5,400. Thirty-seven per cent. died in the hospital after operation. Of the eighteen autopsies, in not one were the lessons of tuberculosis limited to the peritoneum. Seventeen cases showed tuberculosis lesions of the lungs, and 12 cases tuberculous lesions of the brain or meninges. Six of the cases proved to be practically inoperable because of adhesions to the abdominal wall and elsewhere, though a limited number of adhesions did not prevent a successful result. Tuberculosis of the mesenteric glands did not preclude a successful issue. The presence of tuberculous ulcers of the intestine was obviously an unfavorable sign. Fourteen of the successful cases had been traced, and eleven were known to be well at the present time; two had died, and one was suffering from a relapse.

Dr. J. M. Dodson of Chicago expressed his appreciation of the apparent reaction in favor of a more frequent resort to the tuberculin test as a means of diagnosis. This was a diagnostic aid of no mean importance. He thought the use of the *x*-ray in these cases held out some hope of therapeutic benefit. In a number of cases of tuberculous peritonitis in adults at the Presbyterian Hospital, Chicago, the *x*-ray had been used with gratifying results. There had been a subsidence of tenderness and pain, and a disappearance of the effusion and fever. He would suggest the use of this agent in those cases in which operation was contraindicated.

Cerebrospinal Fever.—Dr. J. P. Crozer Griffith of Philadelphia read this paper. He said that the disease was not very common in this country as compared with other infectious diseases, and the symptoms varied greatly in different epidemics and in the same epidemic. The chief types of the disease were: (1) The ordinary; (2) the malignant; (3) the mild; (4) the abortive, and (5) the chronic. Herpes was frequently seen and petechiæ often developed. In the malignant form the disease begins with extreme suddenness, and collapse and coma very soon develop, death occurring in a few hours. In the mild form, the patient hardly needs to go to bed, and the stiffness of the neck may be hardly perceptible. In these mild sporadic cases the diagnosis is practically impossible. He had rarely seen greater emaciation than in connection with this disease. In some cases the effect of the germ appeared to be localized more upon other organs than the brain and spinal cord. The author then reported three family epidemics in order to illustrate the tendency to variation. The third epidemic exemplified the relation of cerebrospinal meningitis to pneumonia—an interesting fact because of the well founded suspicion that these two diseases are due to the action of the same germ.

Dr. C. F. Wahrer of Madison, Iowa, reported a case, seen in consultation, in which he had felt justified in changing the diagnosis from typhoid fever to cerebrospinal fever because of the spinal rigidity and the application of Kernig's sign. The subsequent history had proved the correctness of his diagnosis.

Dr. I. A. Abt of Chicago, suggested the propriety of isolating cases of cerebrospinal fever, and reported an obscure case in which he had derived assistance both from lumbar puncture and the Widal test.

Dr. T. M. Rotch of Boston spoke of the pressing need, particularly in private practice, for an early and accurate diagnosis and prognosis in these difficult cases. After an extensive experience with lumbar puncture, he stated his belief that it is an exceedingly important procedure, and one which he had never seen do any harm. Often the finding of the diplococcus intracellularis in the fluid removed by lumbar puncture would at once clear up the diagnosis and indicate the serious nature of the malady. As the Widal reaction might persist for many months after an attack of typhoid, the presence of this reaction and of a clear fluid by lumbar puncture without evidence of meningitis, would point pretty surely to the diagnosis of typhoid fever with only the symptoms of meningitis arising from the toxins of typhoid. The bearing of such findings upon the prognosis was obvious. In very early life typhoid fever is a benign disease, and cerebrospinal meningitis an exceedingly dangerous one. So far, however, lumbar puncture had not apparently been curative, but he would advise a more general resort to this measure in the severe chronic cases characterized by stupor and a tendency to become idiotic. The fluid should be allowed to flow out under its own pressure and not be aspirated. Usually the favorable cases of cerebrospinal meningitis were those which last until the second or third week. If the disease lasts longer than this, the prognosis becomes more gloomy, not that the child is likely to die of the acute process, but because the disease is becoming chronic, with all the mental impairment and other damage that this implies. However, even some of these very chronic cases eventually recover, and it was well to bear in mind that there is a much better opportunity for recovery in this disease than in any other form of chronic central nervous disease.

Dr. Thomas J. Acker of Croton-on-Hudson called attention to the fact that, in fifteen or twenty cases that he had seen in general practice, the cerebrospinal meningitis had been ushered in very suddenly in the course of the night. He had found three remedies useful in this disease, viz., bromide of potassium, tincture of gelsemium, and Fowler's solution of arsenic.

Dr. Griffith, in closing, said that he was extremely skeptical as to the value of Kernig's sign, as he had found it repeatedly absent in cases of meningitis of various forms. Its absence was no proof that the affection was not a meningitis. He did not think there was any more occasion to isolate cerebrospinal fever than typhoid fever. The degree of opisthotonus commonly observed in cerebrospinal disease was striking. He had never seen more than temporary relief from lumbar puncture, but this was certainly often quite marked, so that one was sometimes justified in repeating this procedure solely on this account.

A Case of Typhoid Fever in an Infant.—Dr. E. F. Brush of Mount Vernon, N. Y., reported this case, after pointing out that the literature seemed to indicate the great rarity of typhoid fever in infants under one year old. His own case occurred in a family of nine persons, two adults and seven children, domiciled in a log house of two rooms in the backwoods of Maine. This family was completely isolated. The source of contagion was a polluted spring. The mother was nursing an infant of six months when she herself was attacked, and continued to do so for about one week. His object was to call attention to the fact that this infant did not contract the disease until it drank the polluted water in its bottle-food, and that then it contracted the disease just as did the adults in the family.

Dr. A. C. Cotton of Chicago said that within the past few years a large number of cases of undoubted typhoid fever in infants and young children had been reported, and he believed they reacted as readily to the Widal test as did adults.

Dr. J. P. Crozer Griffith of Philadelphia said that there were on record 418 cases of typhoid fever in childrien of two years and a half and under, of which about 180 were in the first year of life. He had seen typhoid fever in infants of three, seven and nine months.

Dr. Cotton added that it had been conclusively demonstrated that breast-fed infants are not exempt from typhoid fever and that the fœtus may contract the disease *in utero*.

The Clinical Results of Serum Therapy.—Dr. Edwin Rosenthal of Philadelphia laid down in this paper the general rule that a therapeutic serum should be used from the onset of the disease until the time that the blood has become changed by the products of disease—in other words,these sera are intended for the treatment of disease and not of its results.

SECOND DAY.—WEDNESDAY, JUNE 11.

Acute Gastroenteritis of Infants.— Dr. Margaret Taylor Shutt of Springfield, Ill., pointed out in this paper the effect of hot weather in causing depression of the vitality and producing thirst, with the consequent temptation to over-feeding. The chief germs found in the stools of children suffering from acute gastroenteritis are saprophytic. The early symptoms are fever, prostration, vomiting and abnormal stools; hence, the only doubt as to the diagnosis arose from the possibility that these symptoms were indicative of one of the exanthemata. The chief means of prevention were keeping the child cool and clean and supplying wholesome food in appropriate quantity. When the attack had already developed, all milk food should be stopped, and a purge should be given, and if the stools are offensive, it was well to flush out the colon. As a substitute food she preferred one of the preparations of peptonized beef, as she had never seen any laxative effect from this diet and no irritation of the kidneys. The importance of giving plenty of pure, cool water was insisted on. Bismuth should be administered in quantities sufficient to produce black stools. Opium should be given sparingly and with great caution. A change of air often worked wonders. The after-treatment was important, and consisted largely in very careful regulation of the diet, the resumption of milk diet being gradual.

Milk Idiosyncracies in Children.—Dr. Louis Fischer of New York read this paper. He said that a great many children digest milk with great difficulty, that fever often resulted from the fermentative changes brought about by the undigested milk. Hand-fed and marantic children evidently require a different food from healthy children. The author cited some instances in which whenever milk was given it produced gastric and intestinal disturbances and, at times, high fever. Large,cheesy and foul smelling curds were discharged by the stomach washing and colon flushing. Such children were very restless at night, owing to the fermentative changes produced by the milk, and their sleep became more natural on withdrawing the milk. These children bore well meat juice and soup made from meat and vegetables, and also the white of egg given with water and with tea. Occasionally one met with infants who did not tolerate even breast milk. Dr. Fischer reported excellent results from the use of what he called Keller's malt soup. It is made as follows: To about two ounces of wheat flour add eleven ounces of milk. The wheat flour should be thoroughly soaked and rubbed through a sieve or strainer. Into a second dish put twenty ounces of water, add three ounces of malt extract and dissolve at a temperature of 120° F. Then add about two drachms and a half of an 11 per cent. solution of potassium carbonate. Finally, mix all of the above ingredients and boil. The approximate composition of this food is, albuminoids 2 per cent., fat 1.2 per cent. and carbohydrates 12.1 per cent. The object of the wheat flour was to counteract the tendency of the malt to cause diarrhœa and the alkali was added to neutralize the large amount of acid generated in sick children. Beidert had emphasized the importance of giving fat rather than reducing its quantity in poorly nourished children, and had cited the assimalability of his cream mixture and of breast milk in underfed children as proof of the truth of this assertion. Dr. Fischer said that he had used this malt soup with great success in the treatment of cases of marasmus, and advocated its use as a temporary substitute when milk would not agree, and as a permanent substitute for milk when disagreeable symptoms were constantly encountered. The food should be prepared by a competent chemist in a laboratory. The author cautioned against making the mistake of rashly assuming that a child could not assimilate milk readily. To this end he advised that the physician should ascetrain the source of the milk, its age and the fact that it has an alkaline reaction. When the milk was found to disagree it should be diluted, and only after constant watching of every minute detail should the conclusion be reached that the little patient is really one of those presenting an idiosyncracy to milk.

Improvement of Breast Milk and Prolongation of Lactation.—Dr. Thomas S. Southworth of New York contributed this paper. He said that at times accurate chemical analysis of breast milk would prove of value, but there were simpler ways of judging of the quality of the milk. The improvement of breast milk was simple. The normal specific gravity of such milk was 1031, and a high fat content lowered the specific gravity; hence, a high specific gravity with a high fat percentage indicated an excess of proteids. If the breast milk were scanty or it disagreed with the infant, it was fair to assume that the mother was out of health, anæmic or constipated; that she got too little fresh air or exercise; that she took too little fluid of the right kind, or that she was not on a plain, sensible diet. A few well-directed questions, therefore, should put the physician in possession of the necessary facts for an intelligent and successful supervision of the nursing mother. It should be borne in mind that thirst was no guide to the quantity of fluid the nursing mother should take. Milk was the most important fluid for her to drink, and she should take a quart or more in the twenty-four hours. Thin corn-meal gruel, made of yellow meal cooked for a long time, and thin enough to be drunk freely was another useful and most important article of diet. It was infinitely superior to oatmeal gruel. The nursing mother required on an average at least three quarts of fluid daily. Cocoa, made by prolonged boiling of the cracked cocoanut, was an excellent beverage, and should be used as a substitute for tea and coffee. Tea should be prohibited, and the elimination of this from the diet was in itself often sufficient to correct the abnormality of the lacteal secretion. Beer had but little nutritive value and often disturbed the infant. With the diet already given, beer andtmalt extracts were rarely required, and were best avoided. Anæmia should receive careful consideration. It existed, as a rule, after childbirth, and was commonly neglected by the physician. This condition of the blood should be counteracted by the use of Blaud's pills and cascara. If with good, regular hours of nursing the infant vomited and had disturbed stools, the deduction was that the proteids of the breast milk were too high. Nothing was so effective for the correction of this as walking, the distance being increased each day. Such exercise should, of course, always fall short of actual fatigue, and when even a short walk caused fatigue riding could be substituted for a time to advantage. The author was convinced that in the majority of cases in which the breast milk gives out in the first few weeks this could be prevented by proper feeding and management of the mother. Where it was necessary to build up the mother by iron, fresh air and exercise, the failure of the infant to gain in weight for a time should not cause anxiety, provided the weight did not diminish. If the child lost weight steadily, supplementary feedings must be employed. Bad nursing habits and faulty maternal diet were the chief causes of trouble at the end of the third or fourth month. If the weight of the child corresponded fairly to the age, one might feel quite sanguine in overcoming the difficulty with proper coöperation on on the part of mother. Even if the baby vomited and had bad stools, regulation of the hours of nursing and attention to the diet and hygiene of the mother would usually correct the difficulty. If the child's condition were already poor, and it was losing weight, the child should be given a suitable quantity of properly modified cow's milk after each scanty nursing, or else the bottle substituted for certain nursings. The latter method was probably the better plan. If three or more bottles were required, the child should be given both breasts at each nursing, otherwise the supply of breast milk would rapidly diminish. We should steadfastly combat the old and erroneous notion that scanty breast milk is bad breast milk. The physician who, without serious consideration, ordered the withdrawal of breast milk and exclusive bottle feeding assumed a grave responsibility, because of the undoubtedly greater mortality among children artificially fed.

Infant Feeding.—Dr. Alexander McAlister of Camden, N. J., read this paper. He pointed out the significance of the fact that one-tenth of all children do not live a month and one-third do not reach the age of three months. We should not lose sight of the fact that cow casein is not human casein and cannot be made so by any known means available for general use. Much of the so-called modification of milk failed because it simply changed the relative proportions of the chief constituents without rendering them more digestible. The deplorable pseudo-scientific statements of the manufacturers of proprietary infant foods were largely responsible for the growing notion that the modern artificial feeding of infants is really an improvement upon the time-honored rearing of infants at the breast. It was well known among pediatricians that gastro-enteritis, scurvy, and rickets, are specially frequent in artificially-fed infants, but the people generally do not know or fully appreciate the portentous lesson taught by statistics, *i. e.*, that the percentage of deaths among artificially-fed infants is far greater than among those fed on breast milk.

Dr. Charles G. Kerley of New York said that true cases of milk idiosyncrasy were rare, and were often dependent upon faulty feeding at the beginning. He had found malt extracts excellent for improving the breast milk. The treatment of acute gastro-enteritis outlined by Dr. Shutt was to be commended.

Dr. J. Lovett Morse of Boston thought breast feeding should be continued so long as there was any milk in the breasts. He favored giving, in cases where the breast milk was scanty, some artificial food at the same feeding, because in this way one takes advantage of ferments found only in the mother's milk. The artificial supplemental feedings must be given on general principles and not on information gained from an analysis of the breast milk that the baby has been taking.

Dr. J. P. Crozer Griffith of Philadelphia advised physicians to be guided in the feeding of infants by the old motto: "Be sure you're right, then go ahead." The mistake was too often made, by physicians as well as the laity, of jumping from one mixture to another without allowing sufficient time to determine whether or not the food is proper.

Dr. A. C. Cotton of Chicago deplored the fertility of our resources in infant feeding, because were it not for this we should be driven to the necessity of *making* the maternal adequate to the demands upon it. If every mother could be convinced that her babe would inevitably perish if it were not fed from the breast, what an increase in the percentage of cases of successful lactation there would be!

Dr. Learned of Massachusetts boldly advocated the use of whole milk from the very beginning, giving it in small quantities at intervals of three hours.

Dr. Edwards of California expressed the opinion that in the first few days of life much mischief was often done by giving certain foods, thus setting up an infection.

Dr. Edwin Rosenthal of Philadelphia spoke of the difficulties encountered in the treatment of the poor children of the ignorant. In this class it was his rule in the summer season not to allow the mother to wean the child so long as there was any milk in the breast; this rule held good even when the mother was advanced in pregnancy as far as the eighth month. They are not allowed beer, because this makes the nursing infant colicky.

Dr. A. Jacobi of New York said that the chief information gained in the last ten or twenty years with regard to infant feeding, was that the cow's milk must be pure, fresh, and germ-free. The loss of weight observed during the first week of life could be largely avoided by feeding the infant principally on water until the milk secretion had been established.

Adenoids.—Dr. W. Freudenthal of New York presented this paper. He said that the main symptom of acute adenoiditis was earache. Frequently the child would fall upon the ear. In his cases of acute adenoiditis there had always been fever, often to a considerable degree. Chronic hypertrophy of the pharyngeal tonsil, generally spoken of as "adenoids," was found under all climatic conditions. Catarrhal conditions, tuberculosis, and rheumatism were important etiological factors. The youngest child upon which he had operated for the removal of adenoids was seven months old, but ordinarily he did not care to do this operation upon children under two years of age. Slight hypertrophy did not call for removal. No amount of antisepsis would do good in such operations, and it often did harm. Syringing the nose before the operation was dangerous. He preferred to operate with the child flat upon the back, chloroform being given cautiously and not pushed to the extent of abolishing the cough reflex. It was not necessary to operate so radically as to remove even the normal adenoid tissue.

The Treatment of Acute Earache, Otitis Media, in Young Children.—Dr. George L. Richards of Fall River, Mass., presented this paper. He said that he was fully persuaded that absorption of medicaments could take place through the tympanic membrane. When the inflammation had lasted for a considerable time, probably nothing but paracentesis would suffice, but in the early stages of many cases very great relief would follow the introduction into the external auditory canal of the gelatin and glycerin bougies recommended by the late Professor Joseph Gruber. The bougie should melt at or a little below the body temperature. Dr. Richards said that he had modified the formula of Woods, and, with the aid of his apothecary, had constructed a working formula. He had now used these ear bougies for four years and, as a rule, with very gratifying results. They were very useful in acute otitis media, and particularly in acute otitis externa, or furuncle of the external auditory canal. The bougie is kept in lycopodium, or is wrapped in tin foil, the latter being preferable. The powder should be washed off or the tin foil removed before use, and the bougie introduced into the ear after having been dipped in hot water. The ear is then stopped with absorbent cotton and a hot-water bottle placed over the ear. Even after paracentesis these bougies were often very grateful, and they exerted a distinctly curative action. Many cases of severe earache would subside without going on to acute inflammation. The following was his working formula: carbolic acid, seven minims; fluid extract of opium, six minims; cocain and atropine sulphate, of each three minims; water fifty minims; gelatin, eighteen grains; *dehydrated* glycerin 158 grains. This quantity is made up into forty-two bougies. Some apothecaries experienced a difficulty in securing a proper mixture of the glycerin and gelatin, but this was usually due to the failure to use dehydrated glycerin.

A Case of Angiosarcoma of the Kidney.—Dr. A. C. Cook of Chicago reported this case, and presented both gross and microscopical specimens.

The Unappreciated Causes of Some of the Anæmias of Childhood.—Dr. W. C. Hollopeter of Philadelphia read this paper. He asserted that the most important cause of anæmia in childhood, and the one best recognized, is dental decay. As a result of such neglect, the numerous miniature abscesses discharge their contents into the mouth, and this in time leads to gastrointestinal catarrh, and eventually to anæmias. It was of the utmost importance to prevent the acute catarrh from becoming chronic, and hence well nigh incurable. Another unrecognized factor in the production of anæmia in childhood was mouth-breathing, and still another was eye-strain.

Retropharyngeal Abscess in Infancy.—Dr. John Lovett Morse of Boston presented this paper. He said that the greatest number of retropharyngeal abscesses occur between the ages of four months and one year. These abscesses were almost always secondary to the cavities drained by the lymph nodes. Koplik had found streptococci in all his cases. Suppuration usually developed in five or six days, originating in a single node in the lateral wall. The symptoms of abscess were usually preceded by those of retropharyngeal adenitis. The character of the cry and of the respiration depended upon whether the abscess was situated high or low. In the acute cases, the neck was extended and the head turned to one side. Swelling of the lymph nodes on the affected side of the jaw was very marked. Inspection of the throat was often not enough; hence in doubtful cases palpation should be employed. In untreated cases the termination was usually in death, the abscess rarely opening spontaneously. The pus may burrow in various directions and may open externally, even into the ear. The mortality in the cases treated by early incision was only about 5 per cent. As the drainage is fair, and infection rarely occurs by the simpler method of internal incision, this should be preferred to the delicate and more dangerous external operation. A mouth gag should not be used, because its use sometimes leads to sudden death.

Dr. J. A. Abt of Chicago commented upon the much greater frequency of this affection in Europe.

Dr. C. G. Kerley reported a case in which the child suddenly ceased breathing upon the introduction of the finger and making downward pressure.

Dr. J. P. C. Griffith emphasized the frequency with which retropharyngeal abscess was overlooked, and this despite the peculiar position of the head and the sputtering respiration.

Dr. Frank X. Walls of Chicago suggested that it was not improbable that many children having retropharyngeal abscess were also victims of the lymphatic constitution, and that the reported sudden deaths might be explained in this way.

Report of a Case of Bulbar Paralysis.—Dr. H. C. Cotton of Chicago presented a further report on a case of this very rare disease of childhood.

Dr. W. S. Gottheil of New York and Dr. G. Wende of Buffalo gave a lantern demonstration of skin diseases.

Third Day—Thursday, June 12.

Synostosis of the Skull with Universal Calcification of the Arteries in a Boy, Three Years of Age.—Dr. David Riesman of Philadelphia reported this case, which had excited considerable interest because of the remarkable evidences of malnutrition and the impossibility of improving the nutrition by any of the usual measures. At the autopsy it was found that the temporal arteries were remarkably tortuous and the mucous membranes and ears of a waxy pallor. The hypogastric arteries were well marked up to within two inches of the umbilicus, and were distinctly calcareous. The heart muscle was pale, and the first portion of the aorta showed beginning sclerosis. The sutures of the skull were invisible, and the bone sawed through like ivory. The convexity of the skull was five or six millimeters in thickness and free from diploæ. The skull presented the same features at the base as at the convexity. The capillaries of the lungs were found to be infiltrated with lime salts. The kidneys were the seat of both acute and chronic nephritis, and the calcification in the kidneys was more extreme than anything seen in adult life. There was no disease of the arteries of the brain. The question arose as to whether the synostosis was the cause or the consequence of the arrested brain development. The child had always been an idiot. Gross and microscopical specimens from this case were exhibited.

Spontaneous Hemorrhage in New-Born Children.—Dr. I. A. Abt of Chicago read this paper. He said that the hemorrhage might occur underneath the skin into the serous cavities or into the mucous membranes. A series of ten cases was reported, one of which was directly traceable to hereditary syphilis. The old hypothesis of Landau was that these cases were the result of embolism, but this theory seemed no longer tenable. Congenital syphilis had long been held to be an important etiological factor, and the occurrence of these hemorrhages in premature and poorly nourished infants afforded some support to this view. Numerous microorganisms had been found associated with these cases. Two of his own cases had presented plain evidence of pus infection, and in several others there was plainly a colon infection. In the opinion of the author it was not probable that a specific organism would ever be discovered, the hemorrhage being probably a symptom of several infections. No changes in the chemistry or morphology of the blood had been detected. In the obstetric clinics in this country the frequency of these cases of hemorrhage varied from one in 500 to one in 750 cases. In most instances the hemorrhage was a slow oozing, though exceptionally there was a profuse bleeding at intervals. In several instances ecchymotic spots were observed upon the soft palate. Hemorrhage from the umbilicus occurred in three cases, hemorrhage under the skin in six, from the nose in four, from the mouth in seven, from the stomach in two, from the vagina in two, from the bowel in five, from the ear in one case. The blood from the stomach was bright red, while that from the bowel was dark and sometimes clotted. The temperature varied considerably, being in one instance as high as 104° F., but the rule was for it to remain elevated throughout the entire course of the disease. In one case, however, it remained subnormal. Cyanosis had been a late manifestation in two cases. In a few icterus and in one, convulsions and muscular twitchings were observed. It was worthy of note that the evacuations of the bowel were very offensive before the commencement of the hemorrhage. Apparently no internal remedy, not even suprarenal extract, exerted any influence upon the disease, and the local use of styptics and of suprarenal was without permanent benefit. The external use of gelatin in one case had given some encouragement, and had led him to make some experiments in this direction. Three normal children were injected subcutaneously with a sterile two-per-cent.

gelatin solution. These injections were followed by a rapid pulse, chills, elevation of temperature and generally alarming symptoms. After this experience he had turned to experiments on rabbits. It was ascertained in this way that the blood removed twenty-four hours after the injection of the gelatin would coagulate in one-quarter of the time required for the blood taken before the injection. When large quantities of gelatin solution were injected under the skin of the abdomen of a rabbit they were uniformly fatal. The toxæmia produced by the injection of gelatin was not remarkable when one considered the source of gelatin and its uncertain composition, and it was probable that the toxic symptoms were dependent upon the presence of cadaveric poisons in the gelatin. The acidity of the gelatin was said to be due to the bleaching agents used in its manufacture, but this apparently exerted no influence on the results above detailed. The local use of gelatin, and its administration by the mouth, were warmly recommended by the author.

Dr. Holmes of Chicago said that one of the first persons to suggest the use of gelatin injections had seen fit to strongly condemn their intravenous administration because of the great tendency to produce clots. The speaker said that he had used it in this way in cases of post-partum hemorrhage without observing any special reaction.

Dr. A. Jacobi of New York said that years ago, when puerperal sepsis was comparatively common, he had frequently observed these hemorrhages in the newly born.

Dr. Frank X. Walls of Chicago thought he had seen a case in which the hemorrhage had been dependent upon malaria, and another case in which the underlying cause had been jaundice.

Sporadic Cretinism.—Dr. Rosa Engleman of Chicago reported a case of this kind, and exhibited a series of photographs together with a skiagraph of the child and another of a normal child of about the same size in order to show the departures from the normal bone development. She said that the first case of sporadic cretinism had been reported by Dr. A. Jacobi. The terms sporadic cretinism and myxœdematous disease should be restricted to the adult or neglected cases. It was certainly not an infrequent disease in infancy. Heredity seemed to be a factor in the adult form, but its influence in the infantile variety had not yet been determined. There was a growing belief as to the infectious nature of this disorder, but proof of this was still lacking. The parathyroids were known to develop in advance of the thyroid lobes, and to be concerned in the development of the nervous system. Anomalous innervation seemed to be the mainspring of the vicious circle. Obstinate constipation, abdominal distention, rudimentary detention, the dwarfism due to asymmetrical delay of ossification, and great prominence of the pisiform bone of the wrist, were marked features of sporadic cretinism. These children have a hoarse, peculiar cry and a sluggish gait. There seemed to be good reason for believing that there was an inter-relation of the thymus, thyroid and pituitary glands. In her own case, thyroid feeding had not been begun until the age of seven years. As an experiment, the thyroid feeding was omitted for a time, and the administration of the pituitary gland substituted, with the result that the condition of the child retrograded during the continuance of the experiment.

Dr. Shelly of Kansas spoke of a case which had been treated by thyroid for the last seven years, it being now twelve years old. At first he had given about three grains three times a day, but this producing disagreeable symptoms he had given about half this dose, and latterly had given the thyroid only once a day.

Dr. A. Jacobi thought better results would be obtained in some cases by the use of thyroid combined with pituitary or thymus gland. In one case, although a good preparation of thyroid was used, it was necessary to give as much as 24 grains, three times a day for some time, and then to continue half this quantity.

Chlorosis.—Dr. C. F. Wahrer of Fort Madison, Ia., read this paper. He said that chlorosis could almost be predicted in girls who begin to menstruate early. Chlorosis was never due to menstrual troubles, nor did it ever give rise to tuberculosis, though the reverse was true. Anæmia, overwork, unsanitary surroundings and gastroptosis, usually brought on by tight lacing, were prominent etiological factors. In difficult cases the percentage of hæmoglobin should be estimated, as it was always markedly reduced—indeed, all of the symptoms were dependent upon this deficiency. One must differentiate it from nephritis by urinary analysis, both conditions often being associated with œdema. The author spoke emphatically against the erroneous popular notion that chlorosis is the cause of tuberculosis, and against the popular demand for the restoration of the suppressed menses. A common-sense hygienic treatment and the administration of iron were indicated.

Dr. Wells of Chicago said that it seemed to have been proved conclusively that the fundamental difficulty in chlorosis was a failure in the absorption of iron The physician should not neglect to examine stained specimens of the blood, using a preparation that would stain the granules of the nuclei of the white corpuscles. He made an earnest plea for routine and thorough blood examinations, and perseverance in a rational treatment. Often these cases of chlorosis would show little or no change under good treatment for six or seven weeks, and then would suddenly improve very noticeably. Rest in bed was often desirable, and all such patients should be cautioned against cold bathing or anything which might give them cold.

Dr. Darnall of Atlantic City said he had been impressed with the important part played by intestinal toxæmia in the production of chlorosis, and cited a case in illustration.

Recognition and Prompt Removal of Post-Nasal Adenoids in Children.—Dr. Louis J. Lautenbach of Philadelphia read this paper. Touching upon its frequency, he said that he felt sure that he met with adenoids in fully 10 per cent. of all of the cases he saw in private practice, though he could not say that he met with this condition in children appearing to be in perfect health. The countenance, the mouth-breathing and the general lack of vitality usually pointed clearly to the nature of the trouble, and the diagnosis could be readily confirmed by exploration with the right index finger. These children were liable to the acute infections, and to such nervous disorders as enuresis, chorea and asthma. These children are apt to bolt their food because of the obstruction to breathing in the nasopharynx. Attention was called to the fact that the posterior and upper walls of the nasopharyngeal space were by no means always regularly and smoothly arched, and that sometimes vertical ridges were present on the posterior and upper pharyngeal wall He was of the opinion that if full and reliable statistics regarding the use of anæsthetics in adenoid operations were available there would be few who would have the hardihood to recommend general anæsthesia. He favored digital examination and operation with the finger-nail, natural or artificial, all at one operation. This method was quick, simple and thorough, and after it recurrences were rare. Albolene or mentholized oil should be used locally after this operation. There was usually little bleeding. The use of tonics and of other constitutional measures was important after operation.

Dr. W. C. Hollopeter of Philadelphia thought the majority of workers in this field preferred to operate in this manner and without anæsthesia.

Dr. S. W. Kelley of Cleveland also commended the method, and added the caution that as the artificial finger-nail sometimes slips off, it is prudent to secure it firmly by a turn of bandage around its lower ring and several turns about the operator's finger. This also prevented the child from biting the finger.

Dr. Shaw of Albany said that he was in favor of employing general anæsthesia and opposed to the use of the finger-nail, believing that more thorough work could be done with the curette.

Dermoid Tumors in Children.—Dr. S. W. Kelley of Cleveland reported in this paper a case of dermoid tumor of the testicle in a boy of two years and a half, and one of dermoid of the ovary in a girl of eight years. The tumor of the testicle contained bone, hair and sebaceous matter. The boy is now alive and well, seven years and a half after the operation. The other case was first seen about two years ago. The tumor had only been discovered about two months before, attention having been directed to it by attacks of intestinal obstruction. Recovery after the operation was uneventful.

Report of Three Cases of Sudden Death in Infants with Lymphatic Constitution.—Dr. Frank X. Walls of Chicago reported these cases. He expressed the belief that many cases of sudden death, supposed to be due to the mother's overlying the child, to negligence or criminality on the part of the nurse, or to "a cat having sucked the child's breath," were in reality examples of so-called thymic sudden death occurring in infants of the lymphatic constitution. Gross pathological specimens were also presented, and they showed very clearly the enlargement of the thymus gland and the lymphoid hyperplasia at the base of the tongue, in the nasopharynx, and in the intestine. Modern opinion, the speaker said, seemed to indicate that laryngismus stridulus was dependent upon meningeal and intracephalic irritation or hyperæmia. There could be no doubt, from the histories of reported cases, that many sudden deaths in children were associated with enlargement of the thymus gland, and it was probable that in some instances the mechanical pressure of this gland was the cause. In many other cases, however, death was not due to asphyxia but to syncope, possibly from pressure on the nerves controlling the heart. The lymphatic constitution was very closely allied to, and, indeed, was probably part of, rickets. It was claimed that deaths under chloroform occurred chiefly in those presenting this lymphatic constitution, and this might explain also the danger of chloroform in adenoid operations.

Dr. Shaw of Albany reported three cases of sudden death in children, in all of which the thymus had been distinctly enlarged, but careful search had failed to show any evidence of pressure on the trachea.

Officers Elected.—*President*, Dr. John C. Cook of Chicago; *Secretary*, Dr. Thomas S. Southworth of New York.

Choice of a Motor-Car for a Country Medical Man.—The Badminton Library has recently published a work on motor-cars by various writers. The section dealing with choice of motors is written by Mr. Harmsworth, and ultimately concerns medical men. The *Lancet*, alluding to Mr. Harmsworth's portion of the book, says: "Possibly the most important section to readers of the *Lancet* is that dealing with the 'Choice of a motor'; and Mr. Harmsworth commences by saying that 'of the three or four hundred types and varieties now in existence, many are of no practical use. Some are extremely complicated, not a few dangerous, and many more or less faulty in construction'—a premise to start from with which we entirely agree. Nothing could be more utterly useless to the country practitioner than a small under-powered car not capable of dealing with the hills in his neighborhood. Those that are too complicated may be ruled out of court at once, even if the buyer resides quite near the manufactory. Amidst the 'dangerous' we should certainly be inclined to class, for professional, daily and possibly rough use, all cars depending on tube ignition, though, perhaps, it may be passed as a dernier ressort in the event of the accumulator giving out. We would recommend the purchase of no car in which really heavy (relative) weights have to be carried and the 'drive' borne by balls such as are ordinarily used in bicycle construction; and, until vast improvement in their manufacture have been made, we cannot—and we speak from personal experience—advise any practitioner to purchase any car running on pneumatic tires. The annoyance and delay of a 'puncture are hardly to be regarded with equanimity. No matter how seldom it may occur, when it does occur it will upset the day's work and cause endless worry, confusion and expense, for it will probably mean hurried hiring, getting on as fast and as best one can, and telegraphing to the nearest motor works or cycle agents to send out to repair the tire. Furthermore, the use of pneumatic tires entirely prohibits the independence which is one of the charms of the motor. To be alone on a lonely road with a collapsed tire on a heavy car with night coming on, and perhaps, in bad weather, is an experience which makes the unhappy owner think a motor-car not worth having. The frequency of punctures may be judged by the fact that at the 'reliability' trials at Glasgow last year it was decided that stops for punctured tires should 'not count' though the original intention was an 'absolute non-stop trial and deductions of marks made for every stop. This may be taken as an ex-cathedra announcement of the Automobile Club of Great Britain and Ireland that punctures are inevitable and 'do not count.' We may be thought to labor this point, but it is about the most important that the medical practitioner has to consider in the purchase of a car. Perhaps the 'New York' or some similar type may obviate the difficulty. The ordinary pneumatic tire with the ordinary outer cover is anathema. With reference to the question of petrol, electricity or steam, Mr. Harmsworth gives it as his opinion that 'a good petrol engine is infinitely the best for all-round work.' A view with which we are in accordance. The electric car can obviously only be of use in localities which have facilities for prompt re-charging, while our experience of steam cars is that, though very pleasant vehicles by daylight and while all goes well, they require too much watching and are rather too delicate for use after dark. Those that require a hot 'torch' as a preliminary to starting we can hardly recommend for the every-day work of medical practice, and those that are not entirely trustworthy in a high wind must be ruled out of court for the same reason, and, perhaps, also on the ground of safety."

The Martinique Volcano.—Some of the phenomena attending the destruction of St. Pierre have been difficult to explain, especially the sheet of flame that seems to have accompanied or closely followed the violent explosion of gas. Professor Verrill of Yale states his view to be that the heat is sufficient to cause the dissociation of hydrogen and oxygen from water coming suddenly into contact with the lava in the crater, and that in the case of sea water, chlorine would be dissociated from sodium. These gases suddenly ejected with great violence and exploding in the air above the crater would produce the effects manifested on so great a scale at Martinique. The people were killed by the sudden explosion of a vast volume of hydrogen and oxygen; and this accounts for the sudden burning of flesh and clothes, as well as of buildings and of vessels in the roadstead. The chlorine combining with some of the hydrogen would produce hydrochloric acid, which is poisonous and suffocating, and would quickly kill all those not destroyed by the first explosion.—*New York Sun.*

German Government Condemns the Use of Boric Acid.—The *North German Gazette*, in a semi-officially inspired article, says the German Government now speaks the last word regarding the use of boric acids for the preservation of meat. After giving an exhaustive description of the technical investigation and experiments on this subject the paper says:

"The sanitary department and the medical authorities are unanimously agreed that the use of boric preparatives to the extent necessary for the preservation of meat should not be permitted."

Book Reviews.

NURSING, GENERAL, MEDICAL AND SURGICAL, WITH APPENDIX ON SICK-ROOM COOKERY. By WILFRED J. HADLEY, M.D., Physician and Pathologist, and Lecturer to the Nurses, London Hospital. 326 pages. Philadelphia: P. Blakiston's Son & Co., 1902.

THIS handy little volume is written in a clear and concise style, and the teaching is sound and practical, but we cannot help thinking that it is unnecessary and undesirable to encourage even the modern trained nurse to try and grasp the whole domain of medicine and surgery. The author has succeeded admirably in compressing a vast amount of information into a form available for ready reference, but such highly concentrated mental pabulum is difficult of assimilation, and, in our opinion, the nurse needs no extended instruction in diagnosis, prognosis and treatment.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING. By CHARLES JEWETT, A.M., M.D., Sc.D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth edition, revised and enlarged. Pp. 84. New York: E. B. Treat & Co., 1902.

THIS little book is especially commendable from its great clearness and preciseness of expression. It would seem to be impossible even for a layman of less than average intelligence to misunderstand any of its directions. The concise, dogmatic statements are calculated to impress upon the reader the essential facts which need to be kept in mind at the bedside.

One can readily understand the popularity of this manual and will desire to see it in the hands of every pregnant woman, as well as in those of the obstetric nurse.

The chapter on the care of the child is quite comprehensive. Artificial feeding, a subject which has assumed such prominence in recent years, is carefully described. The objection may be raised that formulæ are multiplied, to the possible confession of the lay reader. It would be unfair to criticise such an elementary work from a theoretical standpoint. We could wish, however, that in the section on hand-disinfection some reference had been made to alcohol, and that the lime and soda method had been given the preference over the permanganate and oxalic acid, which has been generally abandoned by surgeons.

ETUDES ANATOMIQUES SUR LES GROSSESSES TUBAIRES. POR LE DR. A. CONNELAIRE, Ancient Interne des Hôpitaux, Chef de Clinique Obstitricale à la Faculté de Médicine de Paris. Pp. 160. Paris: G. Steinheil, Editeur, 1901.

THIS excellent monograph is enriched by twenty-one beautiful plates, which, although not of equal excellence, serve to illustrate the text in the fullest manner.

Chapter I deals with classification, and includes the different varieties of tubal pregnancy during the first three months of its development.

Chapter II is devoted to anatomy, a considerable portion of it dealing with the changes of the tubal mucous membrane under the influence of normal pregnancy, which the author regards as only slight as compared with those in tubal gestation.

In Chapter III the anatomy of the impregnated ovum is studied, and in Chapter IV the development of the placenta. In the concluding chapter (VI) there is a brief consideration of the causes and anatomy of rupture. Reports of fifteen cases are appended.

MENTAL GROWTH AND CONTROL. By NATHAN OPPENHEIM, M.D. New York: The Macmillan Co.

THIS small volume is one of the "Personal Problem Series," published by the Macmillan Co., books of counsel, whose object it is to teach young men and women how best to shape their ideals and their lives. The subjects treated on in this volume are: The growth of character, the mind as a machine, the power of attention, what association means, the uses of instinct, memory and its development, the bonds of habit, hypnotism and suggestion, imagination, education of the emotions, reasoning and will. It will be seen from this enumeration that the writer is given plenty of latitude. Whether or not he has succeeded satisfactorily will depend upon the reader's point of view.

The book is evidently designed to help very young people and as such may be said to have attained its end. The subjects are treated in a commonplace manner, and after reading a number of the chapters one is left with a feeling of disappointment that such subjects were not thought worthy of better treatment. There is nothing in the book to enlighten an adult of average intelligence and experience. The style of the writer, one may truthfully say, is somewhat condescending. The author seems to have been convinced that he must write down to the level of his readers.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF MICROSCOPICAL AND CHEMICAL METHODS, FOR STUDENTS, HOSPITAL PHYSICIANS AND PRACTITIONERS. By CHARLES E. SIMON, M.D.,, of Baltimore, Fourth edition, thoroughly revised. Illustrated with 130 engravings and 19 plates in colors. Philadelphia and New York: Lea Brothers & Co., 1902.

THE mere fact that the third edition of this work was exhausted in but little over a year's time vouches for its practical usefulness. In this issue we find a worthy successor to the preceding editions, the author having incorporated into his work all the recent advances in laboratory methods which he deemed of value. The lack of references to the literature in the older editions has been corrected, and we find a very satisfactory though concise bibliography in the present volume, such as would be helpful to those seeking more exhaustive information on particular subjects. We note with pleasure the endorsement of Jenner's stain for routine blood-work, and the addition of a few engravings and a colored plate to the already valuable and excellent set of illustrations.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A PRACTICAL EXPOSITION OF THE METHODS OTHER THAN DRUG-GIVING USEFUL IN THE PREVENTION OF DISEASE AND IN THE TREATMENT OF THE SICK. Edited by SOLOMON SOLIS COHEN, M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College. Vol. VI., Dietotherapy and Food in Health and Disease. By NATHAN S. DAVIS, Jr., A.M., M.D., Professor of the Principles and Practice of Medicine in Northwestern University Medical School. Philadelphia: P. Blackiston's Son & Co., 1902.

IN practical treatment of the subject, from a truly American standpoint, this volume equals, if it does not excel, all the preceding ones. There is a genuine Western directness in the pithy style of the author, which will satisfy the active practitioner by its conciseness and thoroughness. Complete diet lists for the healthy are given from the most recent investigations of American authorities. An interesting table is furnished from abstracts of the reports of the U. S. Agricultural Department, showing "American and European Dietary Standards." Here we find an instructive comparison of the nutritive value of foods consumed by all classes, including negroes and Mexicans. The chapter on milk deals with every phase of this and of all other articles of diet. All foods are discussed fully. The author is, like his father, an authority on alcohol. He insists justly that "Alcohol is unnecessary in health; that alcoholic beverages do so much harm that their utility has been denied under any circumstances." A bedside observation of forty years has convinced this reviewer that the author states correctly the stimulating properties of alcohol to the failing heart to be ephemeral, and that there are other medicaments capable of producing similar results without the depression incident to the frequent repetition of alcohol. The chapter on infant feeding is clear and instructive. Part II. is devoted to "Diet in disease." After some general considerations the diet adapted to the most common diseases is separately considered. Among these emaciation and obesity properly receive attention.

Absence of pedantry and limitation of theoretic discussion are striking characteristics of this book. The busy practitioner will appreciate these qualities.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERX. A yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, etc. Collected and arranged with critical editorial comments by J. M. BALDY, M.D.; CHARLES H. BURNETT, M.D.; J. CHALMERS DA COSTA, M.D.; W. A. N. DORLAND, M.D., J. H. GIBBON, M.D.; V. P. GIBNEY, M.D.; C. A. HAMANN, M.D.; H. F. HANSELL, M.D.; BARTON C. HIRST, M.D.; E. F. INGALS, M.D.; HENRY G. OHLS, M.D.; WENDELL REBER, M.D., and J. H. WATERMAN, M.D. Under the editorial charge of GEO. M. GOULD, M.D. Surgery. Philadelphia and London: W. B. Saunders & Co., 1902.

THIS painstaking and comprehensive epitome of surgical literature and progress is again before us. Its editors have done an enormous amount of work in sifting and collating material, and they deserve our thanks. Articles for criticism have been judiciously selected, and the volume, therefore, possesses considerable value as a work of reference, for the busy man who finds it impossible to give time to a multitude of medical journals. The book is offered in attractive form.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending June 14, 1902:

	Cases.	Deaths.
Measles	430	12
Diphtheria and croup	291	48
Scarlet fever	291	20
Smallpox	32	13
Varicella	46	..
Tuberculosis	258	154
Typhoid fever	39	13
Cerebro-spinal meningitis	..	5

Overcrowding in Chicago.—As predicted by Jacob Riis, the New York social reformer, Chicago is confronted with a serious crowding of its population, which will give rise to conditions similar to those in New York. According to the report of the Special Parks Commission of the City Council, there are large sections of the city in which the people "have no room to live," and in which the conditions of morality and health are such as to demand immediate steps looking to their betterment. The most thickly congested districts of the city are on the west side, where a large part of the foreign population of the city has settled. In ten blocks in one of these sections the commission found 2,600 people living in alleys. In the same district 3,125 people are living in basements, and the mortality record runs up to thirty-seven in a thousand, nearly three times the average of the city. Of the ninth ward, or the ghetto, which is the most populous school district in Chicago, if not in the world, the report says: "There are 14,300 boys and girls living in about one square mile of territory who have no park or playground within ordinary walking distance. The people suffer intensely from overcrowding, almost every available foot of ground being occupied with tenements. One block has a population of one thousand persons. Cellars, basements, outhouses, all are used for living purposes." The report concludes by saying that persons living in such conditions can never acquire that standard of citizenship which this city must secure for all its law-abiding and law-making people.

As a means of decreasing the frightful death rate in these sections and relieving the congested conditions, the commission has submitted nine sites for small parks, of which five or six will be immediately selected by the West Park Board. In addition to the West Side, small parks are to be established on the North and South sides, but as the West Park Commissioners have the money available for that purpose, those in that section of the city will be established first. The Park Commissioners have $1,000,000, raised by special bond issue, to spend for the parks, and the authority to levy a one mill tax for their improvement and maintenance. One of the parks will probably be named for Miss Jane Addams of Hull House, who has long been identified with the movement for the betterment of the social conditions in the crowded sections of Chicago.—*New York Tribune.*

Count Tolstoy.—A St. Petersburg correspondent reports that the restoration of Count Tolstoy to health is a very slow process. The inflammation of the left lung is not yet healed, and gives him such pain as to deprive him of the sleep he sorely needs. For a considerable time Count Tolstoy felt so much stronger that he could stand continuous reading and working, and answered much of his correspondence himself. During this period he composed a long preface for the new edition of his earlier works that is to appear. After a slight setback in the middle of April the count had to give up all work and again take to his bed. At present he feels again somewhat better, and, contrary to the strictest directions of his physician, has left his bed and begun his literary work again. Since the spring in the Crimea has been very raw and cold, his friends and attendants have a justifiable fear of his again catching cold, as the count insists on having fresh air continually.

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended June 14, 1902:

SMALLPOX—UNITED STATES.		CASES.	DEATHS.
California, San Francisco	May 18–25	6	
Colorado, Denver	May 24–31	1	
Florida, Oakhill	June 4	4	
Palmetto	June 4	1	
Illinois, Belleville	May 31–June 7	1	
Chicago	May 31–June 7	21	
Freeport	May 24–31	2	
Indiana, Indianapolis	May 24–31	8	
Muncie	May 1–31	9	
South Bend	May 24–31	2	
Terre Haute	May 24–31	1	
Iowa, Ottumwa	May 3–31	7	
Kansas, Wichita	May 24–31	4	
Kentucky, Covington	May 31–June 7	16	
Maryland, Baltimore	May 31–June 7		1
Cumberland	May 1–31	1	
Massachusetts, Boston	May 31–June 7	16	5
Cambridge	May 31–June 7	3	1
Chelsea	May 31–June 7	1	
Everett	May 31–June 7	2	
Lowell	May 31–June 7	5	
Malden	May 31–June 7	1	1
Somerville	May 31–June 7	4	
Michigan, Detroit	May 31–June 7	9	1
Grand Rapids	May 24–June 7	2	
Ludington	May 17–June 8	28	
Nebraska, Omaha	June 1–8	23	
South Omaha	May 25–June 1	33	
New Hampshire, Nashua	May 31–June 7	7	
New Jersey, Hudson County, Jersey City included	May 25–June 1	38	6
Newark	May 31–June 7	33	13
Passaic	May 25–June 7	1	
New York, New York	May 31–June 7	63	19
Yonkers	May 30–June 6	1	
Ohio, Hamilton	May 31–June 7	5	
Cincinnati	May 30–June 6	12	1
Cleveland	May 31–June 7	61	1
Toledo	May 25–31	3	1
Pennsylvania, Johnstown	May 31–June 7	2	
McKeesport	May 31–June 7	1	
Philadelphia	May 31–June 7	16	2
Pittsburg	May 24–June 7	48	3
Rhode Island, Providence	Mar. 31–June 7	1	
South Dakota, Sioux Falls	May 24–31	1	
Utah, Ogden	May 1–31	8	
Salt Lake City	May 25–31	3	
Wisconsin, Green Bay	June 1–8	3	
Janesville	May 25–June 7	3	
Milwaukee	May 31–June 7	4	
SMALLPOX—INSULAR.			
Philippines, Manila	Apr. 19–26	4	2
SMALLPOX—FOREIGN.			
Belgium, Antwerp	May 17–24	7	3
Brazil, Rio de Janeiro	Apr. 20–May 4		8
Canada, Quebec	May 24–June 7	19	
Vancouver	May 1–31	1	
Winnipeg	May 31–June 7	1	
China, Hongkong	Apr. 12–26	7	3
Colombia, Bocos del Toro	May 12–19		1
France, Rheims	May 18–25	1	
Great Britain, Birmingham	May 19–24	6	1
Glasgow	May 22–29	1	1
Liverpool	May 19–24	1	
London	May 17–24	307	24
India, Bombay	Apr. 29–May 13		16
Calcutta	Apr. 26–May 10		8
Karachi	Apr. 20–May 11	8	5
Madras	Apr. 26–May 2		2
Italy, Palermo	May 10–24	24	9
Japan, Formosa	Feb. 1–28	78	
"	Mar. 1–31	91	
Mexico, Vera Cruz	May 24–31	2	1
Russia, Moscow	May 10–17	25	1
Odessa	May 17–24	13	3
St. Petersburg	May 3–17	21	3
Warsaw	Apr. 19–May 3		4
YELLOW FEVER.			
Brazil, Rio de Janeiro	Apr. 19–May 4		93
Mexico, Vera Cruz	May 24–31	35	14
CHOLERA—INSULAR.			
Philippines, Manila	Mar. 20–Apr. 27	496	400
Albay Province	Mar. 30–Apr. 27	3	
Bataan Providence,	Mar. 30–Apr. 27	694	555
Bulacan Province	Mar. 30–Apr. 27	216	231
Camarines Province	Mar. 30–Apr. 27	696	488
Cavite Province	Mar. 30–Apr. 27	10	8
Ilocos Norte Prov.	Mar. 30–Apr. 27	2	2
Laguna Province	Mar. 30–Apr. 27	2	2
Pampanga Province	Mar. 30–Apr. 27	292	202
Pangasinan Prov.	Mar. 30–Apr. 27	3	3
Rizal Province	Mar. 30–Apr. 27	163	112
CHOLERA—FOREIGN.			
China, Hongkong	Apr. 12–26	49	45
India, Bombay	Apr. 29–May 13		3
Calcutta	Apr. 26–May 10		156
Straits Settlements, Singapore	Apr. 19–26		52
PLAGUE.			
China, Hongkong	Apr. 12–26	12	11
India, Bombay	Apr. 26–May 13		791
Calcutta	Apr. 26–May 10		721
Karachi	Apr. 20–May 11	393	342
Japan, Formosa	Feb. 1–28	142	113
"	Mar. 1–31	233	164
Nagasaki	May 14	1	1

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Original Articles.

THE DIFFERENTIAL DIAGNOSIS OF TYPHOID AND MALARIAL FEVERS, WITH ESPECIAL REFERENCE TO THE OCCURRENCE OF BOTH DISEASES IN THE SAME PATIENT: WITH REPORT OF CASES.*

By ISAAC IVAN LEMANN, M.D.,
NEW ORLEANS.

In this section of the country there are two chief forms of continued fevers prevailing, namely, typhoid and malaria. The diagnosis of the one from the other is of the utmost importance, for their treatment is radically different, and the life of the patient often, his rapid cure always, depends on the prompt institution of the proper line of treatment. Yet, in many instances, the diagnosis is made with the greatest difficulty and only after every diagnostic measure has been employed.

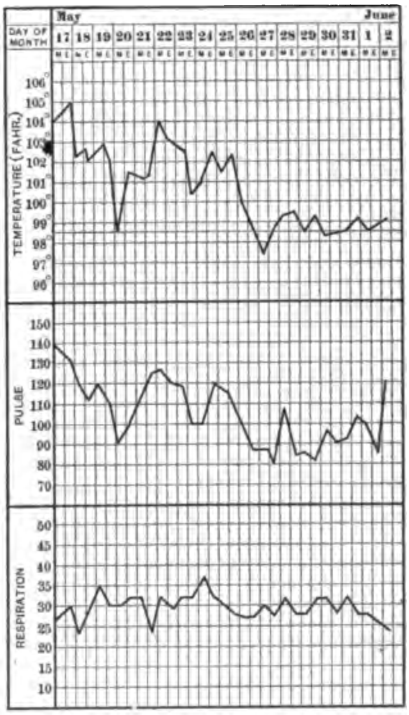
It is not the purpose of this paper to consider in detail the relative value, from a diagnostic standpoint, of the various symptoms of these diseases and of the data derived from laboratory methods, but rather to point out wherein the difficulty of diagnosis lies, and to show the necessity of proceeding with caution in cases of doubtful character. Secondly, its purpose is to consider cases where the two infections—malaria and typhoid—occur in the same patient.

A diagnosis cannot be made by machine; you cannot put in two or three or a group of what you may consider classical symptoms at one end of the mill and take out a diagnosis at the other. In a discussion of typhoid fever, Dr. William Osler states (*New York Medical Journal*, November 4, 1899) that there are no two or three symptoms characteristic of the disease. The hard-worked practitioners of country districts must rely in great measure on experience and common sense.

How closely malaria may simulate typhoid, and how it may exhibit in marked degree nearly every one of the classical symptoms that are supposed to be characteristic of typhoid and to set it off as a disease apart, is well illustrated by the following case:

CASE I.—Lillie L., twenty years old, white, single. Admitted to Ward 51, Charity Hospital, May 17, 1899. Said she had been feeling ill since Sunday, May 8, but had not gone to bed until the Friday following. Bowels were normal, one stool daily. She had had frontal headache all along, and on the morning of admission had had epistaxis. On admission—face expressionless and languid. Tongue pointed, very red on edges and coated in middle. Temperature, 105°; pulse, 140; respiration, 28. Examination showed heart and lungs normal. Liver normal. Spleen not enlarged nor tender. No tympanites. Some gurgling in right iliac fossa and a few rose-colored spots on the chest and abdomen. Patient six months pregnant. A few hours after admission epistaxis returned, and was so severe that the anterior nares had to be packed with iodoform gauze, soaked in 10 per cent. antipyrin solution.

From the patient's typical history, the tongue, the severe epistaxis, the rose-colored spots, the depressed condition not often seen in malaria, from the iliac gurgling, a diagnosis of typhoid fever was made, and the treatment proceeded with on this assumption. An intestinal antiseptic—salol at first and guaiacol carbonate in essence of pepsin afterward—was administered, and hydrotherapy, in the form principally of baths (from 80° to 90°) for a temperature of 102.5°, was used for control of temperature. The temperature the first day went as high as 105.6°, but after that ranged from 100° to 103° until May 20, when it fell to normal of its own accord. However, it immediately rose again and ran the same course. The pulse was rather irregular when the temperature had fallen, and the patient's general condition seemed so depressed and serious that the fall of the temperature did not rouse suspicions of the true state of affairs as did the blood examinations. Blood analysis of May 18, 19 and 20 each time showed Widal's reaction negative, but plasmodia malariæ present. The pregnancy caused some timidity in the free use of quinine at first and cinchonidia sulphate was used in 2½-grain doses, in conjunction with guaiacol carbonate 2½ grains and salol 1 grain, beginning May 22. May 23, quinine sulphate 2½ grains was added to the powder. Hydrotherapy was continued. The temperature still continuing 102° to 103°, all timidity was cast aside and full doses of quinine were instituted on May 25 (five grains every four hours). The effect



CASE I.

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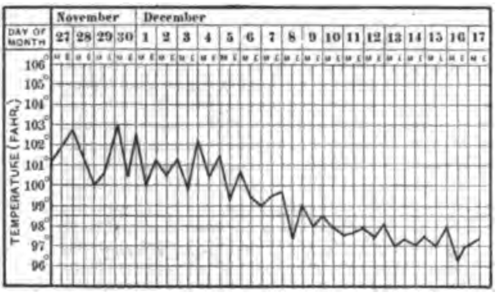
* Read before the Orleans Parish Medical Society, March 8, 1902.

was immediate. Temperature reached normal within thirty-six hours and remained so. Convalescence was without feature of interest. This case pointed a moral in the matter of snap-shot diagnosis. Here the original strong points of the diagnosis were afterwards backed up by the reappearance of the epistaxis, the appearance of albumin ½ per cent. and granular casts in the urine, the development of a splenitis, as evidenced by a moderate enlargement and tenderness, and finally by the occurrence of a bronchitis, induced, probably, by the hydrotherapeutic measures. And yet it was all knocked into a cocked hat by the spontaneous fall of the temperature and the blood examinations. The chart would indicate that the attack was nothing more than an intermittent malaria of the quartan type.

Still it were better, if a mistake is to be made at all, to err on the safe side and to treat an attack of this sort as presumably typhoid, and to meet all hyperpyrexia with measures not calculated to depress the patient. Professor Osler, in the article already quoted, says: "Learn to suspect typhoid and not malaria in every case of fever of six or seven days' duration, particularly if it resists the action of quinine. For too long you have employed the Anglo-Saxon method of procedure, and in a given case have assumed innocence of anything so serious as typhoid until in the onset of some serious symptom the guilt was only too evident. It is high time now that you adopt the Gallic usage and regard every case of continued fever as guilty, that is, as typhoid, until the contrary be clearly demonstrated." The soundness of this advice may be shown by the following:

CASE II.—Luke E., twenty years old, white, single, strong, healthy-looking young man, about five feet ten inches, and weighing about 170 pounds. Admitted to ward 17, on morning of November 27, 1899. Said he had been sick about four days, during which time he had chilly sensations, general malaise, lassitude and frontal headache. Bowels were costive. Patient had been drinking spring and cistern water. Had never had any attacks of continued fever, but had chills and fever during the summer of 1898. On admission temperature was 103⅗° F. Pulse, 70; respiration, 20 to 25. Physical examination was negative. All thoracic organs normal. Liver and spleen normal absolutely. No abdominal tenderness, and no eruption. Tongue broad, red on edges, brown coated, no indentation. Patient was put to bed, on liquid diet, and was given phenacetin, 2½ grains, caffein citrat, 1 grain, and Epsom salts ℥ ss. Quinine 5 grains was administered every four hours. November 28, morning: temperature, 102⅗°. Bowels had not moved. Salts repeated. Quinine 5 grains every three hours. Afternoon, temperature was 100⅘°. Blood examination: no plasmodia, Widal negative. The quinine had apparently had some effect on temperature and the absence of plasmodia was attributed to its use. November 29, quinine continued. Morning temperature, 101°. Afternoon temperature, 103⅗° (this in spite of quinine). Bowels moved once. November 30, quinine continued. Morning temperature, 101°; afternoon temperature, 103°. Widal's reaction negative. Bowels had not moved for thirty-six hours. Calomel and soda, each 5 grains, were given, followed by Epsom salts. An enema had to be given finally to move bowels. December 1, morning temperature 100⅗°. Patient has had quinine (5 grains every three hours) for over seventy-two hours, without influencing temperature; hence it was discontinued. Patient complained (for the first time) of sore throat. Gargle prescribed of salol grs. x, menthol grs. v, alcohol ℥ iv ʒ i to a cupful of water. Afternoon temperature, 101⅘°. December 2, morning temperature, 101⅕°; afternoon temperature 101⅘°. About the same as when the patient was taking quinine. Blood examination; no plasmodia, twenty-four hours after cessation of quinine. Widal negative. December 3–4, temperature, 101--103°. Bowels very costive. Throat better. No plasmodia December 5, temperature, 101–101½°. Widal *positive*. December 5 to 10, temperature gradually defervesced, in a typically typhoid manner. Widal's reaction was positive again on December 6, and on December 9 it was positive at a dilution of 1–100. It will be noticed that the bowels were exceedingly costive throughout the attack. There was absolutely no depression and not a single typhoid system. There was no time at which patient did not feel perfectly able to get up had he been allowed. As it was, he amused himself reading the newspapers and studying the bed-chart. Still here was a temperature that persisted after every probable cause other than typhoid had been eliminated—malaria (both by the use of quinine and by blood analysis), apharyngitis, utoinfection from constipation, any local suppuration or inflammation—all those had been eliminated. Here, too, we had the Widal test positive at the great dilution of 1–100, and this after it had been negative for several examinations. This last fact corroborates the patient's statement that he never had typhoid previously, for if he had had it before the test would have been positive at the beginning as well as at or near the end of the attack.

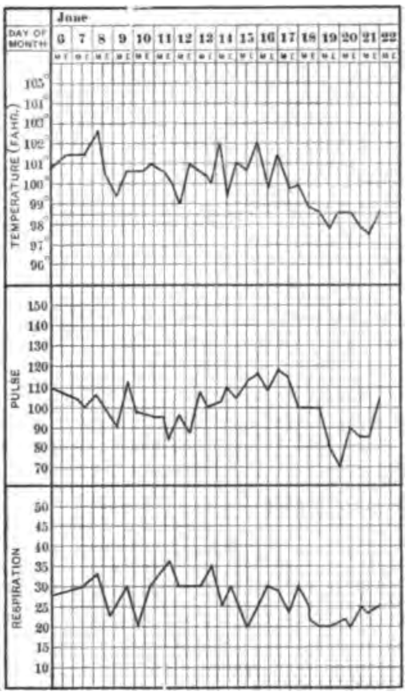


CASE 2.

In view of these strong proofs, it was easy to arrive at the conclusion that this man had an atypical case of typhoid—one that might be classed with the ambulatory cases. But the conclusion was reached only when the patient was nearly convalescent, the case having been all along looked upon as being suspicious of typhoid and been treated accordingly. Armed with the determination to treat with suspicion all doubtful cases of continued fever, we are protected against doing our patients much unintentional harm that would fall to their lot did we not follow Professor Osler's rule.

But the problem is further complicated by the fact that both typhoid fever and malaria sometimes occur in the same patient at the same time. Such cases require the same cautious handling and the same close observation until their true nature is disclosed, and their rapid cure, as the histories to be cited will show, is dependent upon the recognition of the double infection. In this class the treatment of each individual case is more or less a rule unto itself. It is true these cases are comparatively rare. Says Thayer: "Malarial fever is occasionally complicated with typhoid fever. A person suffering with a chronic or relatively latent malarial infection may develop typhoid fever, or at some time during the course of the convalescence from typhoid fever a relapse from a preceding material attack may occur; in some instances, the two infections may be coincident in time. A fresh malarial infection during typhoid is rare. It is unusual for well-marked symptoms of the two diseases to be present at the same time. More commonly the malarial paroxysms appear during convalescence from typhoid fever. Even these instances are not common." The following cases seem to illustrate the coincident infection of the same patient with both diseases:

CASE III.—Mary C., twenty-seven years old, admitted to ward 51, June 26, 1899. She had had fever continuously since May 28. Illness was sudden in onset. Bowels were normal. On admission the clinical aspect was that of malaria. Tongue was thick and indented. No depression. No abdominal symptoms, beyond a diarrhœa that developed within a day or two. Spleen slightly enlarged. Temperature 101.8° F; pulse, 104; respirations, 32. Quinine, 5 grains every four hours, was begun on the morning of June 7 with acid hydrobromic dilute ℥ ss every six hours. Fowler's sol. gtts. vii t.i.d. was also given. June 7, A.M., temperature, 101°; pulse, 100; respiration, 32. June 7, P.M., temperature, 103°; pulse, 104; respiration, 34. June 8, A.M., temperature, 100°; pulse, 96; respiration 32.



CASE 3.

Temperature fell to normal about 2 P.M., on the 8th, but rose to 100° at 4.30 P.M. Quinine was kept up until June 12, during which time bowels were moving five or six times during twenty-four hours. Temperature ranged usually circa 101°, but touched normal once more on the 10th—only to immediately rise again. This falling of the temperature twice to normal tended to confirm the diagnosis of malaria, while the blood analysis also backed it up, for, on June 7, plasmodia were found and Widal's reaction was negative. On June 11 patient developed a considerable amount of tympanites—rather an unusual symptom in malaria. June 12 the blood report was: No plasmodia. Widal's test positive—at the usual dilution (1-50). Since the 10th the temperature was showing no tendency whatever to yield to the continued use of quinine. In simple malarial cases of the acute remittent type the temperature, once having yielded to quinine, will remain normal if the quinine be continued. Physical examination of the patient on June 11 revealed a slight bronchitis and a certain enlargement of the spleen. There was also some gurgling and tenderness in the right iliac fossa, which had hitherto not been present. Further blood examinations showed: June 13, Widal positive, 1 to 80. No plasmodia. June 14, Widal positive, 1 to 100, bacilli immotile, but not clumped. June 15, Widal positive, 1 to 100. June 12, the quinine and Fowler's solution were discontinued. Patient had been taking strychnine sulphate gr. 1-30 since the day before. A powder of Bismuth B. Naphtol grs. v, salol and guaiacol āā grs. 2½ every four hours was ordered.

Under this the tympanites decreased and disappeared and the diarrhœa was corrected. Hydrotherapy was used to combat pyrexia (sponging and ice-water enema alternately for 102.5; ice cap continuously for 100°). Patient nourished well throughout and was not depressed. June 13-14: The temperature continued to rise, the maximum being 102.8°. Antipyretic measures had to be used but four times. June 15 and 16, maximum temperature 103°. June 16 to 18, temperature fell gradually, reaching normal morning of June 18. At this time every symptom had subsided and patient looked as if she had never been sick.

How are we to interpret the facts in this case. Did she have remittent malaria alone? Did she have typhoid alone? Or did she have both? I think she had both. In the first place, let us notice that the course of the disease was a most anomalous one for typhoid, and if the patient had typhoid at all it was of an abortive type. Still I believe we are justified in arriving at the diagnosis of aborted typhoid, because of the striking typhoid symptoms presented, and more especially of the Widal's reaction, which has proved of the utmost value in the diagnosis of fevers in this hospital. It may be said that the presence of the reaction might be due to a previous attack of typhoid at a distant date. But this could not be, for the reaction was not obtained when the patient first entered the ward, and if she had had a previous attack of typhoid, the reaction would have been positive on the first examination, as well as on the second and third, etc. Moreover, the reaction was later obtained at the great dilution of 1 part of blood serum to 100 parts of typhoid culture, and after twenty minutes only. Such a striking reaction is not usually obtained in a patient not actually suffering from the disease and merely immunized by a previous attack. Moreover, we have the negative evidence that the patient gave no history of a previous typhoid fever.

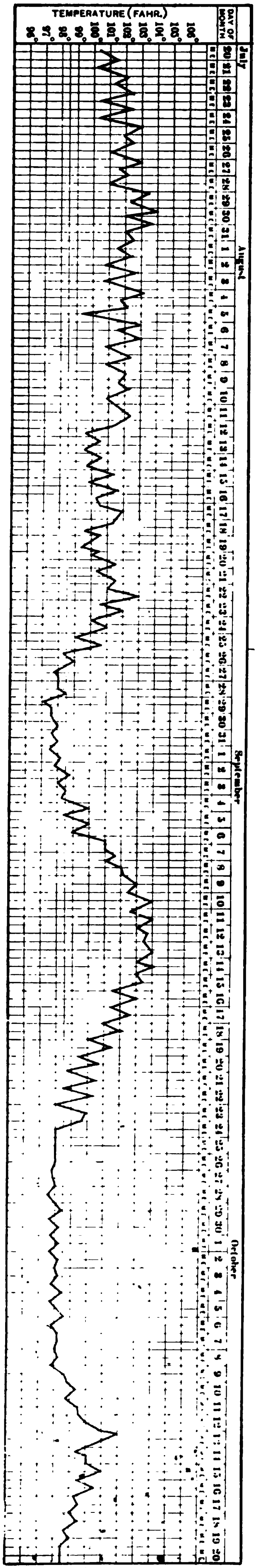
Did she have malaria also? The finding of the plasmodia would so indicate, for they are not found save in the blood of persons suffering from malaria in some form. The patient did not have the anæmic and cachectic appearance of one suffering from chronic malarial toxæmia, and she gave no history of having been sick for a long period. The disease was sudden in its onset, resembling in this malaria rather than typhoid. The influence of quinine was decided, for the plasmodia disappeared and the temperature fell to normal. I conclude, therefore, that this woman was suffering from an acute malarial infection. The temperature rose again when the typhoid element asserted itself and resisted the antipyretic action of the quinine; but the typhoid, too, in its turn, was aborted by the use of intestinal antiseptics and astringents.

CASE IV.—Miss R., a probationer in the Training School for Nurses, had been in the hospital but three weeks when she began to complain. During these weeks she was assigned to a service in which there were a half dozen typhoid cases. Her previous history follows: She had been living in Virginia and came direct from there. In the summer of 1898 she had an attack of continued fever, which lasted several weeks. However, she was not confined to bed during the whole of this period, but was able to creep down stairs nearly every day. She could hardly have had typhoid fever at this time; it was more probably an attack of malaria.

For several days she complained of headache and malaise, but, nevertheless, continued at her work. Her temperature, when first taken, was about 102°. She was kept in the nurses' apartments for two days, during which time her temperature ranged 100 to 103°. July 20, 1899, she was admitted to ward 52, with temperature 103.5°; pulse, 100; respiration, 27. She was not depressed. Bowels were moving two or three times in twenty-four hours. No abdominal tenderness, but some few spots on abdomen. Heart and lungs normal. Spleen and liver normal. She was given salol, 5 grs. every four hours, and was sponged for temperature of 103°.

July 21 to 23, temperature ranged 100.5° to 101° in the morning, to 103° in the evening. Patient had to be sponged about twice in twenty-four hours. Bowels costive. Blood analysis shows no plasmodia. Widal negative (July 21). On July 21 the patient was given quinine sulphate, 5 gr. every six hours, for twenty-four hours, but this was discontinued next day, as the diagnosis of typhoid was thought positive by those then treating her.

July 23, the temperature ran a little higher, reaching each evening a point above that of the preceding evening. On July 26 it was 104°. It remitted to 102° in the morning and patient had to be sponged four times in twenty-four hours. Bowels were very costive and had to be opened by enemata or salines. Temperature ran a little lower on the 27th. Blood examination: July 25, Widal negative. July 31, no plasmodia, Widal positive. There had been no depression and patient was well nourished. Pulse, 80 to 90, full, and of good quality; respirations, 20 to 30. Patient took strychnine sulphate gr. 1-30 and salol grs. v. every four hours.



Case .

August 5, the temperature, which was 104° in the evening of the 4th, remitted to 99.5° on the morning of the 5th, whereas its usual remission was only to 101.5° to 102°. Blood analysis: Widal negative. August 6 to 11, temperature rose to circa 103° in P.M., and remitted to 101°. There were no more sudden falls. Bowels are slightly loose (one to four stools in twenty-four hours). August 7, clots of blood in stool. August 8, abdomen slightly distended. August 11, malarial infection suspected, in spite of blood analysis, so salol is discontinued and quinine hydrobromate grs. v. every four hours was given in conjunction with the strychnine. The next day (morning of 12th) the temperature fell to 99⅛°. Note that this was just one week since the last marked remission. The quinine was continued through the week, and showed its influence in so far that the temperature ranged a whole degree lower than it did the week previous, never going above 102°. Bowels continued costive. Blood examination: Widal negative. No plasmodia (August 15). On the morning of the 19th patient was given 10 grs. of the quinine at 6 and 10 A.M., instead of 5 grs. The temperature reached 98° that morning, but rose to 101.5° in the evening. Plasmodia were found in the blood for the first time—and this in spite of the long-continued and large doses of quinine. The quinine was now discontinued, and its withdrawal had the effect that from August 20 to 28 the temperature rose again to 103° and ran a degree higher than it had the week during which the quinine was administered. Blood analysis during the week showed: August 20, no plasmodia, Widal negative. August 23, no plasmodia. August 28, plasmodia found.

On August 25 and 26 the quinine was given 5 grains every three hours in afternoon of 25th, and 15 grains at 5 A.M. and 8 A.M. of the 26th, and again every three hours in afternoon of the 26th. Temperature reached normal on the 26th, just a week from last remission and two weeks from the first remission. Temperature now remained normal until September 4, during which time she was taking a tonic of 5 grains of quinine and 5 drops of Fowler's solution, three times daily. Light diet was permitted August 31. Patient had a good appetite and declared she felt fine. On September 4 she took a very short walk (one block) without permission. That night the temperature was 100⅕° instead of 98.8°; pulse, 100 instead of 80; respiration, 32 instead of 22. And now began a second attack, which ran a typical typhoid curve with regard to the temperature, and which resisted quinine in the heaviest doses.

September 4 to 10: temperature mounted steadily higher, reaching 104° the afternoon of the 10th. Quinine hydrobromate 5 grains every three hours and Fowler's solution 5 drops t. i. d. were given, but without influencing the temperature whatever. On September 9, which was the usual seventh day, the quinine was massed in 15 gr. doses, but this also failed. Widal's reaction on this day was negative. Patient had to be sponged four to six times in twenty-four hours. Spleen was large and tender.

September 10, quinine discontinued. Fowler's solution 5 drops, and Batley's cinchona 10 drops every four hours tried, but discontinued at once. A capsule of phenacetin 2½ grains, calomel 1/12 grain, pulv. ipecac ¼ grain every four hours had no effect on temperature, and was discontinued after twenty-four hours. September 10 to 15, temperature ranged around 104° continuously and did not remit. Patient had to be tubbed every three hours. She stood tubbing splendidly and nourished well, but was considerably depressed. Strychnine gr. 1-30, Tr. digitalis mx. were administered hypodermatically every four hours. Bowels moved two or three times every twenty-four hours, stools being loose occasionally, but generally constipated. Pulse, 120 to 130. By the 12th the tenderness over spleen had disappeared. Blood examinations showed: September 12, no plasmodia, Widal negative. September 15, plasmodia present, Widal negative. September 16, no plasmodia, Widal positive. September 22, *plasmodia present and Widal positive*. On September 15 the salol was replaced by Ac. nitrohydrochloric dil xv every four hours. On September 16 there occurred the first distinct remission, and from this day there was a gradual descent until September 28, when the temperature reached normal. Patient now entered on convalescence for the second time. On October 5 she was given a tonic pill of quinine, iron, arsenic and strychnine. Temperature remained normal until October 10, when it began gradually to rise again. Meanwhile she had been feeling well, except for some slight abdominal pain. due to constipation and relieved by drachm doses of soda phosphate night and morning. Temperature reached 102.3° the afternoon of October 13. Twenty-five grains of quinine were given, each morning, in 10 and 5-grain doses, at one hour intervals for two successive mornings. Temperature immediately fell and ranged 100 to 101°. After October 26 temperature never went above 99°.

The study of this case is interesting for several reasons. An every 2-hour chart of the first attack shows beautifully a marked periodicity of the temperature, and a glance at the morning and evening chart will reveal a like periodicity in the run of temperature during the week. There was a well-marked tendency, to which attention has already been called, for the temperature to fall on the morning of the seventh day and to immediately rise again and run the same course. Periodicity is the characteristic of malaria, and some authorities describe as the typical remittent malarial fever prevalent in the Southern States, a fever which exhibits invariably the temperature curve shown in the first attack of this patient. According to these authorities, the temperature in remittent malarial fever shows at the end of each week a well-marked disposition to defervesce abruptly at the end of each week but will, unless quinine be administered in heavy doses on the seventh day, immediately rise and run another week without intermisson.

But if the first attack, with its characteristic periodicity and unmistakable yielding to quinine, has the malarial element more prominently in the foreground and the typhoid in the background, the second attack, with its great depression, acute splenitis, and resistance to quinine, is typically typhoid and has little or none of the malarial in it.

It is impossible to pass over without comment the queer antics evident in the results of the blood analyses. That we should get at first neither Widal nor plasmodia, then Widal, then neither for a stretch, then plasmodia alone, again neither for quite a long a time, and finally both together, is strange. The technique of blood taking and blood examination was the same throughout and all the examinations were the work of one man. One fact worthy of note is that in the first attack plasmodia were never found when the blood was taken in the early part of the week, even when no quinine had been taken, whereas they were always found when the blood was taken at the end of the week, and this sometimes after the heaviest doses of quinine.

The recrudescences after the second attack I look upon as purely malarial, and the results of the administration of heavy doses of quinine bear witness in favor of this view.

The case was such a long-drawn-out one that it has been impossible to make the history concise without making it totally inadequate for the purposes of this paper. A better idea may possibly be obtained from the bird's-eye view afforded by the accompanying morning and evening chart.

COMBINED TRANSVERSE AND LONGITUDINAL INCISION IN MEDIAN LAPAROTOMY, WITH THE OBJECT OF PREVENTING VENTRAL HERNIA.

By LEWIS A. STIMSON, M.D.,
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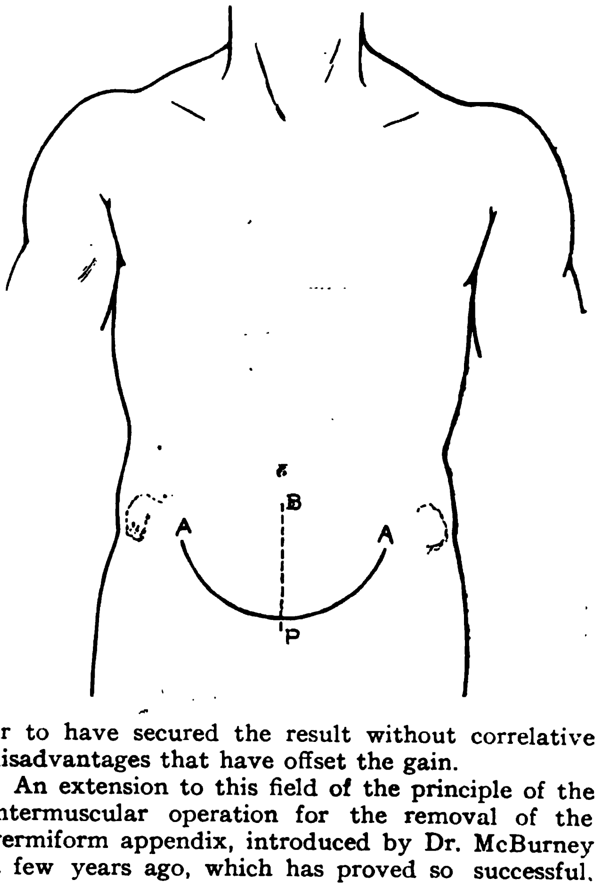
Relaxation of the cicatrix after median laparotomy, amounting occasionally to actual and large hernia, is a not infrequent sequel of the operation, and causes enough discomfort to the patient to make its avoidance a worthy object of the surgeon's attention.

Many methods of operating, with a view to this avoidance, have been employed and recommended, but none seems to have won general acceptance, or to have secured the result without correlative disadvantages that have offset the gain.



An extension to this field of the principle of the intermuscular operation for the removal of the vermiform appendix, introduced by Dr. McBurney a few years ago, which has proved so successful, and which has been employed at some other points of the abdomen, seemed to me so logical and so well calculated to secure the desired result that I began to employ it two years ago, and having now used it in more than fifty cases, I desire to make the results of my experience known.*

The operation consists of a curved transverse incision through the skin, aponeurosis and sheath of the recti, followed by the usual longitudinal separation of those muscles and division of the peritoneum.

The incision crosses the median line, about four centimeters above the upper margin of the symphysis pubis, and extends on each side toward the anterior superior spine of the ilium to a distance varying with the amount of the subcutaneous fat. It is then carried through the aponeurosis and sheath of the rectus on each side, its outer portion following the direction of the fibers of the aponeurosis, and the deeper portion not extending beyond the outer edge of the rectus, and the upper flap thus outlined is raised from the muscles by division of its attachment to the septum constituting, the linea alba. The sheath below the incision is similarly freed toward the symphysis; a few vessels connecting the sheath and the recti will need to be ligated. The recti are then separated and the peritoneum divided in the median line in the usual manner.

At the termination of the operation the peritoneum is sutured, and the flap replaced and secured by catgut sutures. I have generally sutured the sheath and the aponeurosis separately in the outer part of the incision. The skin is sutured with silk; if drainage is necessary, the drain is placed at the center of the incision in the median line, and if the wound has been contaminated by contact with pus a small rubber tissue drain is placed between the flap and the rectus on each side, emerging near the end of the incision.

The longitudinal portion of the incision can easily be extended in this manner from the symphysis two-thirds of the distance to the umbilicus, and as the division of the sheath and aponeurosis permits easy separation of the recti, the available space thus acquired for intraabdominal manipulation is greater than it is with the same length of longitudinal incision directly through the parieties in the usual manner.

As a result, the central transverse portion of the incision is protected from a separating strain by the uninjured recti beneath it, and the longitudinal portion by the overlying fascia, which is uninterrupted longitudinally except at the ends where the separation is oblique in the direction of and not across its fibers.

If more space is needed, the flap can be split longitudinally in the median line and the incision prolonged upward as far as may be necessary.

The operations in which I have employed the method have been for salpingitis, tuboovarian abscess, cysts of the ovary, hysterectomy, resection of intestine, and enterorrhaphy, and in only three or four have I found it desirable to make the supplementary longitudinal incision through the flap for extension upward. Those were among the earlier cases.

No case has shown any resultant laxity of the abdominal wall; and in one in which the operation was repeated for a second salpingitis a year later, the cicatrix between the recti was thicker than the original union, and was firmly attached to the overlying fascia.

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*The idea is so natural an extension of a well-known principle that it may well have been suggested or employed by others; but I have found no report of it. Küstner (*Ctlblatt. für Chirurgie*, 1897, p. 231) recommended a curved incision along the edge of the pubic hair, *through the skin alone*, with the sole purpose of obtaining an inconspicuous scar. The principle and the details were as different as the object.

EMPYEMA OF THE ANTRUM OF HIGHMORE, WITH PTOSIS AND DIPLOPIA. UNDERSTUDY OF THE EFFECT OF TREATMENT ON THE OCULAR DISTURBANCES.*

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THIS history is presented for its unusual features and for the understudy which it furnishes. The patient was a tall, strongly-built young man of twenty-one years, in good health of body and mind. He was referred to me by Dr. Peter Scott for double ptosis and diplopia of one week's duration. The wrinkle was gone from both upper lids. To look up he had to tilt the head backward. Confusion of lines and blurring of images almost disabled him for his work as draughtsman. At times he was obliged to close one eye to get temporary relief. There was photophobia and there was also greatly impaired vision. The onset of these phenomena was marked by a severe nosebleed and cold in the nose. He had been subject to nosebleed for four or five years. sometimes as often as twice a week. Four years ago he had an attack of vertigo in which he could not raise his head from the pillow without dizziness. Two months after that he was put to bed of a pleurisy with effusion on his left side. He had not been a mouth-breather and had had no tinnitus, ear discharge, nor earache since childhood. His foreskin was free. He had a small varicocele. Some years ago he had a stricture of the urethra, caused by a kick, and was relieved by urethrotomy. His eyes had given no trouble till now. They had a normal appearance. The throat was normal also. He heard the watch at four feet with the right ear, and at ten feet with the left. The right drum membrane had no light-reflex; it was scarred, but otherwise clear. The left drum-membrane was clear and had normal light-reflex. The nasal septum was bent posteriorly to the right, greatly compressing the right middle turbinate. Inferiorly and anteriorly it was bent to the left, and gave off an obstructive ecchondrosis of considerable length, which crowded the left inferior turbinate outward against the outer wall of the inferior meatus. The right inferior turbinate was hypertrophied. The left middle turbinate was hypertrophied, cystic and bulbous anteriorly and adherent to the outer wall of the middle meatus. It also pressed against the septum. The vision was $^4/_{10}$ with each eye. It was raised to $^{10}/_{10}$ with each eye by a half-diopter correction for astigmatism 15° away from the vertical. There was torsion of parallel images by the Maddox double prism test. Right hyperphoria 3°. His diplopia was greatest when looking to the right. At ten inches, exophoria 9°, abduction 20°, adduction 12°. At twenty feet, exophoria 8°, abduction 10°, adduction 4°. Accommodation o.d. 40 cm., o.s. 28 cm., convergence 8 cm. The evidence was cumulative that there was here great disturbance of innervation of the ocular muscles. The correction for the refractive error was made. Some days later the tests were repeated, the patient wearing his correction, and the findings were worse. At ten inches exophoria 15°, abduction 30°, adduction 4°. At twenty feet, exophoria 22°, abduction 11°, adduction 6°. Accommodation o.d. 46 cm., o.s. 45 cm., convergence 13 cm.

The first operation removed the obstructing shelf, thus freeing from pressure the left inferior turbinate. Two weeks after that the ptosis and diplopia were no better, but the muscle tests were better. At ten inches, exophoria 8°, abduction 38°, adduction 8°. At twenty feet, exophoria 12°, abduction 12°, adduction 6°. Accommodation o.d. 30 cm., o.s. 27 cm., convergence 11 cm., and right hyperphoria 12°.

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*Read at a meeting of the Eastern Section of the American Laryngological, Rhinological and Otological Society at the New York Academy of Medicine, March 1, 1902.

The right middle turbinate, beihg greatly compressed, was removed as the second operative step. After one week the tests were still better than before. At ten inches, equilibrium, abduction 33°, adduction 10°. At twenty feet, exophoria 14°, abduction —, adduction 10°. Accommodation o.d. 29 cm., o.s. 27 cm., convergence 8 cm. Photophobia less. Ptosis was relieved so far as to allow the man to see the ceiling without tilting the head backward. After ten days the tests were the same. The patient was worried lest he should lose his place as draughtsman. His photophobia was now limited to the left eye.

The third operative step consisted in freeing the left middle turbinate from adhesion to the outer wall of the left middle meatus and crushing its bulbous anterior end. Three days later the photophobia had disappeared, and, for the first time, diplopia had lessened, so that the patient could sometimes look to the right without occasioning it. The ptosis also was less. Accommodation o.d. 27 cm., o.s. 19 cm., convergence 5 cm. Twelve days later vision had improved to $^{6}/_{10}$ with each eye. At ten inches, exophoria 5°, abduction 33°, adduction 19°. At twenty feet, exophoria 11°, abduction 11°, adduction 16°. Accommodation o.d. 18 cm., o.s. 22 cm., convergence 5 cm.

Five days after this, *i. e.* three weeks after the third operative step, the patient had profuse bleeding, and with it abundant purulent discharge from the left nostril. There had been no pus previous to this particular day. Now, however, where the middle turbinate had been freed from its adhesions, was seen for the first time an abundant flow of most foul-smelling pus. There had been no odor before this. Enough of the left middle turbinate was next removed to give free access to the ethmoid cells and maxillary sinus. A loose tampon of cotton, moistened in carbolic solution, was put in to remain two days. Its removal was accompanied by hemorrhage and free flow of pus. A similar tampon was again used. The left malar bone now, for the first time, manifested tenderness, also the two last upper left molars. With this second tampon *in situ* he was seized with alarming hemorrhage in his office, was plugged by a near-by physician and sent to my office. I found no bleeding point and sent him home without a tampon. The next morning I was called to see him at his house, where I found him blanched from bleeding that had been more or less continuous during the night. I found no bleeding point, but again put in a loose tampon, feeling certain this hemorrhage was from the antrum. No further bleeding took place afterward, but pus continued to flow from that nostril for many days. At the end of two weeks diplopia and all other eye-symptoms were gone; the discharge of pus had lessened and become thick and crusty. The tests were, at ten inches, exophoria 8°, abduction 29°, adduction 25°. At twenty feet, equilibrium, abduction 6°, adduction 33°. Accommodation o.d. 17 cm., o.s. 18 cm., convergence 4 cm. No hyperphoria. The patient was informed that the antrum might have to be curetted, yet eleven days afterward the discharge of pus had ceased, and the tenderness of the teeth and malar bone had gone. The vision was then $^{8}/_{10}$ with each eye. At ten inches, exophoria 4°, abduction 25°, adduction 30°. At twenty feet, equilibrium, abduction 7°, adduction 35°. Accommodation with each eye 12 cm., convergence 4 cm.

The patient returned for examination about a month later, when I found his vision, which had been $^{4}/_{10}$ at the beginning, was now $^{10}/_{10}$ with each eye, and it was comfortable even at close work without his correcting glasses.

It is noteworthy that this patient gave no history of headache until after the discharge of pus had set in with hemorrhages. We may suppose that pus and granulations had been bottled up under pressure in the antrum.

Not less remarkable is the fact that this trouble, so unmistakably chronic, so quickly and spontaneously cleared up without treatment addressed to the antrum. It suggests that the free discharge of pus and the free bleeding with it, so completely emptied the granulation tissue as to produce its immediate and complete atrophy and restoration of the lining membrane of the antrum to normal condition and behavior.

The hemorrhages which the patient had had during the previous four years, which were frequent and profuse, were doubtless from this same antrum.

Finally, the disturbance of the ocular muscles disappeared during the treatment before the antrum trouble was reached, showing that the latter was but partially and incidentally causative of their misbehavior.

Since making the above notes another case of antrum trouble has presented itself, equally interesting in points of similarity and difference. In this second case the disturbance was in the nature of great unrest, sleeplessness, twitchings of the limbs in sleep, headaches and invalidism, and but little eye disturbance, chiefly ciliary.

The anatomical difference was striking. At first glance this nose seemed faultless; the septum was straight, the nares were free, the middle turbinates did not touch the septum, and there seemed nothing in evidence to inculpate it except a bad odor. On closer inspection, however, both middle turbinates were found to be adherent to the outer wall of the middle meatus.

Following removal of the anterior end of the left middle turbinate, there was the same history of hemorrhages with free flow of very bad-smelling pus. Here, also, tenderness over the malar bone was manifest only after the discharge and hemorrhage. The discharge of pus subsided as rapidly as in the first case, and with it disappeared the bad odor. It was unexpected and gratifying in these cases to have prompt cessation of the antrum trouble without other treatment addressed to this cavity.

253 GATES AVENUE.

A Disease of Cattle in the Northwest.—The *St. Paul Pioneer Press* says that the Minnesota State Veterinary Department is about to begin a systematic investigation of one of the most dangerous diseases that has affected the cattle of that State. The disease affects the cattle much the same as blood poisoning, and is caused by the *Bacillus bovisepticus*, a germ discovered by Minnesota bacteriologists. The investigations of the Department of Veterinarians have already discovered the existence of an acute and a chronic form of the disease. From an acute attack of the disease the cattle die within a few hours, as the germ attacks the spinal cord. When the disease occurs in chronic form life may be prolonged for three or four weeks.

A WORD ABOUT AMERICAN MINERAL WATERS AND MINERAL SPRING RESORTS.*

By JAMES K. CROOK, A.M., M.D.,
NEW YORK.

THE practitioner who will take the trouble to inquire will find that the mineral waters of the United States do not suffer by comparison with the best that the old world can afford. In the appended table, which comprises in each class half a dozen examples of the most potent as well as the most famous European springs, it will be observed that in every class, save one, the waters of our own country are richer in mineral ingredients than those of Europe.

A further search will show that not merely in potency of a few individual springs, but in general variety of mineral ingredients and in all the elements which go to make up an attractive analysis and a useful medicinal water, we have within our own borders, with the single exception of the sulphated salines, better waters and more of them than are shown by any European work on this subject. It cannot be denied that in the saline purgative group our native waters do not equal in mineral richness those to be found in Europe. We have no analogies of the Hunyadi János, the Carabaña, the Apenta or the Rubinat group. There are nu-

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*Read before the section on General Medicine of the New York Academy of Medicine May 20, 1902.

TABLE SHOWING COMPARATIVE POTENCY OF REPRESENTATIVE AMERICAN AND EUROPEAN SPRINGS.*

I. ALKALINE WATERS.

AMERICAN.	GRS. PER U. S. GAL.	EUROPEAN.	GRS. PER U. S. GAL.
Saratoga Vichy	367.32	Vichy, France (Grande Grille)	311.92
Ukiah Vichy, Calif	268.45	Fachingen, Nassau, Ger	223.51
St. Louis Spring, Mich	227.14	Ems (Kessel-Brünnen)	169.75
Manitou, Colo. (Navajo)	182.23	Apollinaris, Rhenish, Prus	157.76
California Seltzer	187.15	Weilbach, Hesse, Ger	165.27
		Wildungen, Ger (Stadt-Brünnen)	67.44

II. ALKALINE-SALINE.

AMERICAN.		EUROPEAN.	
Ballston Spa, N. Y. (Artesian Lithia)	1123.35	Vals, France (Desirée Sp.)	535.88
Waconda Spring, Kansas	1120.65	Bourbonne (Haute Marne, Fr.)	483.47
Saratoga, N.Y., Hathorn	888.40	Luhatschowitz, Moravia	438.04
Americanus Well, Mich	503.90	Bilin, Bohemia (Joseph's-Quelle)	304.49
Borland Mineral Well, W. Va	432.28	Selters, Nassau, Ger	228.14
Dixie Spring, Tenn	313.74	Obersalz-Brünnen, Silesia	138.08

III. MURIATED-SALINE.

AMERICAN.		EUROPEAN.	
Glen Springs N. Y. (Neptune) (Used for Schott-Nauheim treatment)	10503.08	Springs of Nauheim, Ger (Friedrich-Wilhelm's Quelle)	2148.07
Geuda Springs, Kansas	1314.78	Kreuznach (Oranien-Quelle)	1084.32
Eureka Springs, Calif	1800.27	Homburg, Ger. (Eliz. Brünnen)	870.96
Sweet Springs, Mo. (Akesion Spr.)	1061.94	Harrowgate, Eng	864.43
Lodi Artesian Well, Ind	672.45	Cheltenham, Eng	644.00
Upper Blue Lick, Ky	660.14	Wiesbaden, Ger. (Koch. Brünnen)	507.70

The strongest waters of this class on the globe are found in the United States. Notable examples are the Byron "Surprise" Spring of California, containing 18,773.73 grains, Clark's Red Cross Mineral Well of Michigan, 17,825.27 grains, and the St. Clair Mineral Spring of Michigan, 17,904.60 grains per U. S. gallon.

IV. SULPHATED-SALINE.

AMERICAN.		EUROPEAN.	
Clark's Riverside Springs, Mich	7318.97	Carabaña, Spain	7391.23
Castalian Springs, Calif	4422.25	Rubinat (Serre), Spain	5266.64
Blue Lick Springs, Mo	610.30	Apenta, Hungary	2541.09
Crab Orchard, Ky., Epsom Sp	401.43	Püllna, Bohemia	2010.45
Gibson Mineral Well, Texas	329.65	Friedrichs-Hall, Ger	1559.92
American Carlsbad, Ill	259.99	Seidlitz, Bohemia	897.59

V. CHALYBEATE.

AMERICAN.		EUROPEAN.	
Matchless Mineral Wells, Ala	167.91	Brighton, Eng	14.40
Overall Wells, Texas, No. 2	144.90	Spa (Pouhon) Liége, Belgium	5.42
Brown's Wells, Miss., No. 1	36.52	Schwalbach, Nassau, Ger. (Stahlbrünnen)	3.74
Gaylord & Gulick's Springs, Va	31.63	Tunbridge Wells, England	2.22
Oak Orchard, N. Y	28.62	Pyrmont, Waldeck, Ger. (Trink-Brünnen)	2.48
Bath Alum, Va	26.78	St. Moritz (Grande Source), Switzerland	1.38

The figures refer to the amounts of ferruginous salts per U. S. gallon. The U. S. possesses innumerable chalybeates of the milder grades.

VI. THERMAL WATERS.

AMERICAN.		EUROPEAN.	
California Geysers	150° to 214° F.	Wiesbaden, Ger. (Koch-Brünnen.)	155° F.
Hunter Springs, Mon	148° to 168° F.	Baden-Baden, Ger. (Haupt-Quelle)	155° F.
Arkansas Hot Springs	76° to 157° F.	Gastein, Salsburg, Austria	87° to 160° F.
Glenwood Springs, Col	124° to 126° F.	Bagnères-de-Luchon, France	131° F.
Virginia Hot Springs (Boiler)	108° F.	Nauheim, Ger	98.5° F.
North Carolina Hot Springs	96° to 104° F.	Wildbad, Ger	94° F.

Some of the undeveloped thermals of the Rocky Mountain States and California issue from the earth at a boiling temperature.

*Tabulated in accordance with the author's classification in "The Mineral Waters of the United States," Philadephia and New York, 1899, and in "Hare's System of Practical Therapeutics," 1901.

merous excellent waters of this class in the United States, however, and with the possible disadvantage of requiring somewhat larger liquid dosage, they possess a therapeutic efficiency not exceeded by any of the foreign waters. It is interesting to note in this connection that one of the most celebrated of the European springs, and undoubtedly the one most largely visited by Americans, owes most of its virtue to the presence of about 2½ drachms of sulphate of soda, or Glauber's salt to the gallon. Nor can it be maintained that numerous of our mineral spring resorts are inferior to those of the old world with respect to diversity and salubrity of climate, to beauty of scenery, or to any of the attractive features which Dame Nature supplies. Furthermore, not a few of the American spas are fully supplied with spacious and elegant hotels, luxurious bathing pavilions, and all the facilities for recreation and creature comfort to be found at the best equipped European watering places. But notwithstanding these unquestionable facts, and the added advantage of nearness and easy accessibility of our home resorts, the mineral waters in America do not occupy the high plane of therapeutic utility which, for many generations, they have held in Germany, France, England, and other countries of the old world. With each recurring season we behold the hegira of increasing numbers of our valetudinarian fellow-citizens, who are willing to undertake the expense, the fatigue and the hazards of a long trans-Atlantic and overland journey in order to secure the advantages of mineral waters no more potent for medicinal purposes than those within our own borders. The reason for this undesirable state of affairs lies very largely at the doors of the medical profession. It is scarcely a misstatement to say that this subject is not taken seriously by most practitioners in the United States. It is apt to be ignored or scoffed at by many. In Europe, on the other hand, balneotherapy as well as climatotherapy is a recognized branch of medical education, and these subjects are embraced in the curricula of all the leading universities. Some knowledge of the use of mineral waters in the treatment of disease is made essential to receiving a diploma of graduation. As far as the author can learn, not a medical institution in the United States either teaches balneotherapy or requires any knowledge of it from its graduates. The young physician begins his career in ignorance, and unless he is led by fortuitous circumstances to make some study of the subject, his chief knowledge of mineral waters is apt to be derived from advertising circulars, many of which are decidedly quackish and better calculated to sour and prejudice the mind of the practitioner than to gain his respectful consideration. This state of affairs is greatly to be deplored.

These natural therapeutic aids are cheap and abundant in the United States. Almost every State possesses one or more valuable water or attractive mineral spring resorts. With every allowance for the gross exaggerations of those in interest regarding the value of some individual spring, it cannot be denied that certain diseased states, especially those of a chronic nature, are greatly benefited by a systematic course of properly-selected waters, and there is not a practitioner in our broad land who may not occasionally avail himself with advantage of their aid. At a well-regulated European spa a great majority of the persons one finds drinking the waters are acting under the advice of a practitioner at home, and while at the spring are directed by the resident physician. The best of discipline prevails. There are certain specified hours for rising, for drinking the water, for exercise, for meals, for bathing, and for recreation. The quantity of water consumed, the temperature of the bath and its duration, the character of the dietary, etc., are all looked after by the local physician. How does this compare with the régime at our American spas?

It might almost be said that no régime exists on this side of the ocean. At most of our watering places the observer will find that 80 or 90 per cent. of the visitors are acting entirely under their own guidance. If the consumer be a robust person, or the water of mild or feeble character, no harm is done, but in far too many instances one finds a diseased or debilitated individual, whose condition merits thoughtful consideration, drinking the waters of a powerfully-mineralized spring with no other rule of action than that provided by his own whims or ill-founded notions. The drinker rises when he pleases, eats what and when he likes, goes to bed when it suits him, and is ready to accept random suggestions from any casual individual he happens to become acquainted with. In many cases he throws pills, powders, and potions to the winds while at the spa, and appears to consider it his chief object in life to keep himself as full as possible of the water, which, perhaps, is exactly the kind of medication that will do him the most harm. The results achieved here cannot, of course, compare with those they get at Carslbad, Baden-Baden or Homburg.

The obvious remedy lies with the medical profession. Let the practitioner give a little serious thought to the matter. He will certainly come across occasional cases which will derive more benefit at a summer resting place, possessing a suitable mineral water, than at one not so supplied. I need not in this place urge the advantages of a change of scenery and surroundings during the summer months. The escape from the dust and smoke and turmoil of the busy city, with the thousand and one cares and worries and anxieties of home and business, to a cool rural retreat with fresh and fragrant country air or invigorating mountain breezes and pleasing scenery, is attended by results well known to all. Most persons experience a speedy improvement, quite regardless of the character of the water they drink. At many of our spas all of these desirable features are supplemented by the further advantage of one or several varieties of highly-mineralized springs.

It seems to be a plain proposition that an obstinate case of chlorosis will improve more rapidly at a summer resort possessing a potable bicarbonated iron water than at one not so supplied. Chronic dyspeptics thrive wonderfully on the muriated alkaline salines, while the influence of a potent alkaline spring will soon become manifest in an old rheumatic or gouty case. Without going into therapeutic details, it may be said that these waters always act better at the spring than in the city. It is the combination of getting away from home and worry, sweet country air and surroundings, and a good water, which does the work.

It is the province of the physician to set the people aright in these matters. He should select the cases which require, or would be likely to receive, benefit from spa treatment. He should be able to direct his patient regarding the routes of travel, and he ought to possess some information pertaining to the climatic and scenic conditions, the heighth above the sea level and nature of the accommodations, the facilities for recreation and amusement, etc. It must be confessed that there are so-called resorts in America as well as in Europe where life would be a burden to a visitor from a locality possessing the adjuncts of modern civilization. Above all, the practitioner should have accurate knowledge as to the chemical analysis of the fluid he proposes to have his patient drink.

At nearly all of our better American spas competent resident physicians will be found who are prepared to give proper advice to persons wishing to take a course of the waters. A letter from the family doctor at home to the local physician of the springs, with some details of the case, is a valuable possession to every person visiting a spa with the intention of securing the largest measure of benefit, and he should, after arrival, submit to at least one examination by the resident physician before beginning the use of the waters or baths.

It is only by measures of this kind that a helpful branch of therapeutics will ever be rescued from the hands of ignorant and unscrupulous charlatans, or attain to anything like the dignity and usefulness which it has for centuries occupied in Europe.

THE CHARACTERISTICS AND TENDENCIES OF MODERN MEDICAL PROGRESS IN AMERICA.

By JONATHAN WRIGHT, M.D.,
BROOKLYN, N. Y.

Amidst the general congratulatory plaudits which accompany the announcement in the lay and secular press of large sums of money donated to the advancement of science, any doubt expressed as to the ultimate results which are expected to be of such immense service to humanity would seem a little discordant. Nevertheless a free and unprejudiced criticism, especially if well founded in the records of the past experience of the world, cannot fail to have in the end a beneficial effect upon the conditions which usually and which often are necessarily attached to such expenditure. The musty records of many a charitable and educational institution in Europe display evidence that public-spirited men of bygone ages believed the objects to which they devoted their bequests would continue to be worthy of the regard of succeeding generations. Many of these charters of gifts are now mere curiosities for the antiquary. But in this country in the last thirty years the number and dimensions these donations have attained is a new phenomenon, at least in the domain of science, and a parallel can only be found in history in the profusion with which gold in the early pre-Renaissance period was poured out for the salvation of the donor's soul. This lavish expenditure of wealth, suddenly acquired, is easily explained when we realize that its selfish and sordid sequestration, or its equally sordid expenditure for personal gratification, means to some extent social ostracism in the preponderating class to which the donor necessarily belongs—that of self-made men. This generosity is still further stimulated by the consideration that this country, practically, lacks that protection to hoarded wealth which is necessary to prevent its dissipation by the incapacity of the succeeding generation. However that may be, the sudden devotion of this wealth to the aims of science is a subject which is a legitimate topic for dispassionate discussion, uncolored by any enthusiasm we may naturally feel for a country or an age where the phenomenon is manifested. We have every reason to believe that, properly utilized, this tendency is an augury of great future good to the development of civilization, but if blindly dealt with or selfishly appropriated to the temporal advantage of a narrow hierarchy of science, for which the history of civilization was a precedent in theology, it may disappoint our roseate expectations, and even act as a curse rather than as a blessing to the advance of science. The responsibility now rests with science to see to it that a better use is made of the power which money wields than did the Church in the period which elapsed between Gregory the Great and Luther. History, though constantly repeating itself, is always presenting a different face. We are no longer in the age either of Gregory or of Luther. We are in the age of widespread democracy, the age of monotony. This train of thought reminds us of the pessimistic prognostications of Mill and Buckle forty years ago as to the evil tendencies of modern democracies. To a certain extent they have been verified. No thoughtful observer of modern social life can fail to observe the increasing prestige attached to mediocrity of thought and action. It is the era of mediocrities. There never was a time when mediocrity by industry, complacency and subserviency so easily achieved distinction. There never was a time when the world travelled forward so *en masse*, so without leaders as before. There never was a time when departure from ordinary thought and action was so liable to be regarded not as the eccentricity of genius, nor accepted as the proof of a superior understanding, but as the vagaries of an individual, whose proper abode is a sanitarium for the mildly insane. Such an individual, if he obtrudes his personality, is sure to become the object of aversion and dislike. The word crank is a modern term which has entered our lexicons for frequent application to the human being who thinks a little differently from the tyrannous majority. It is sure to be applied, in an undeniable spirit of resentment and hostility, to him who entertains ideas which the common run of men are unable to comprehend or unwilling to examine, no matter how full of truth they may be.

There is no more striking evidence of this, certainly none more familiar to the reader of current medical literature, than the observation of the readiness with which the reporter or rather the abstracter of a medical discussion seizes upon the platitudes and commonplaces of the speaker, and invariably misses any spark of originality which may fall from his lips. For this, instead of being crucified, he is commended, and his admiring clientèle accept as the whole truth his boast that he has crammed into his paragraph the gist of thoughts that he is incapable of understanding.

Another observation, familiar enough to the medical man, is the melancholy contemplation of the abundant deadwood which has drifted into medical faculties, hospital staffs, and exclusive medical societies, carried there, not by the strong currents of laborious human endeavor in the streams of original research or of sturdy service in the ranks, but by the numerous eddies, of subserviency and self-effacement, family influence and personal geniality, persistent plodding and skilful diplomacy. This, of course, must always have been so to some extent, but never has it assumed the proportions which may now be observed everywhere. The day of stimulating contrasts is no more. We cannot but believe that this suppression of original and unwonted tendencies of thought and action in the world at large has robbed life of much of its highest charm and interest, while we rejoice that it has, at the same time, expelled from life still more of its miseries and degradation. One can run a very much better chance of dispelling ennui in the hut of the rustic and the boor, in the tenement of the beggar and the thief, than in the tiresome club and somnolent drawing-room of social respectability.

Now I am not wandering from my subject in the least. This is not only strikingly true of the social, the political, and the purely literary world, but it is so true of the artistic world that it has all but destroyed the highest order of poetry, painting, and plastic art. Not less true is it of the world of science. It is not solely because of the fact that we are a generation devoted to the microscope, the test tube and the stethoscope in medicine, that the didactic lecture room is thought to be waste space (and it frequently is) in a modern college building; it is because, to paraphrase a witticism of De Amicis, while a thousand students may enter it daily, an original idea only intrudes once in ten years. There has scarcely been a time in medicine when those who stand foremost among its devotees have been so hostile to new ideas which appear on their horizon. The explanation of this is to be sought in the preceding remarks as to the characteristics exhibited by modern democracy—the intellectual tyranny of the majorities. Nothwithstanding these regrettable evidences of a new order of things, there is a bright side to the picture, and there can be no denying the fact that the sum total of the happiness of civilized mankind has been enormously increased by it.

The expenditure of gifts for scientific progress is usually intrusted to men who have long since attained eminence in the lines of work to which aid is to be extended. They have, as a rule, done their life work with formulæ which are soon to be discarded. They naturally believe that their way is the proper one in which to achieve the success in the future which they have attained in the past. It is possible that there may be directions of human endeavor, where this belief may be well grounded. This is not the case in science. Many centuries ago the world was already old enough for Aristotle to declare that in science authority is the worst foe of progress. Our laboratories, our schools, our clinical instruction are, as they should be, for the most part in the hands of those best adapted to teach the coming generation the wisdom of the departing one, but as for original research, as for the discovery of the men who are to solve in the future the mysteries of the present, we cannot rest so assured.

A board of supervisors for progress in medicine would be very apt to become a board of supervisors for the perpetuation of error. The unfolding of any great innovation in scientific principles must necessarily be accompanied, even to some extent preceded by the undermining of those bases upon which the middle aged and elderly men, who are sure to be the supervisors, have erected their own superstructure. They are sure to regard any further prying into the foundation of things a useless attempt to approach nearer to a knowledge of the first Great Cause, an almost impious, at least a foolhardy, attempt to know the unknowable.

Let us imagine, if we can, members having been selected from the notabilities of the universities of sixteenth-century Europe to guide, at the dawn of the seventeenth, the youthful Harvey in his investigations of the circulation of the blood. Let us fancy, if possible, a committee appointed from the schools of Vienna and Berlin to see to it that Schwann and Schleiden were guided in the path which led to the foundation of cellular histology. It is, in view of the facts, a severe strain on the agility of one's imagination, but let us try to think of the schoolmen to Oxford and Cambridge formed into a coterie to judge and direct the work of Darwin and Spencer in their young days. Let us think of the University of Paris supervising the preliminary work of Pasteur and Tyndall. Could human ingenuity devise a better way of smothering the genius of these men than to impose upon them the advice of their predecessors as to which way led the path towards the Truth?

All this seems incongruous and highly ridiculous, because we realize that the great work which these men have done has been accomplished almost invariably in the face of unsympathetic skepticism, or even the active discouragement and opposition, of men trained in other lines of thought. We might almost believe that if this had been the way depended on in the past for the propagation of original research, the blood might still be surging back and forth through the arteries for us, and the mutability of species might still be imperfectly apprehended. We are not, therefore, to expect that a new basis for pathology will be found in the well-trodden paths of the present; we can not hope that men trained in these paths are going to be able to point out to the youthful investigator where he is to blaze a new one. Such a phenomenon would be absolutely contradictory to the normal trend of human events.

Now the valid defense and the proper answer to the critical remarks which I have ventured upon is that no one would suppose that man, had he even the fabled wisdom of the serpent, can devise a way to avoid results springing from his own imperfections. The propensity to err, the certainty that any man or any coterie of men will err in their judgment, has become a mere platitude familiar to every schoolboy. Unfortunately, obstinate persistence in error, and, still worse, the selfish grudging of merited aid to those who shake our cherished beliefs and theories by the demonstration of new facts, are not, by any means, apt to be absent from the springs of action which govern the men who are nearly always selected to guide human endeavor toward its goal—the Truth. This is unavoidable, and such endowments as we have been considering cannot pretend to the task to uncloaking genius, no matter how apt they may be to recognize talent. In this sense of the word we may and must admit that devices for the encouragement of original research are misnomers. The poet, Virgil, exclaimed of old:

> "Felix qui potuit rerum cognoscere causas."

Doubtless this answer is true enough. Little can be done to alter human nature, but something can be done to alter its manifestations, which indirectly will have a powerful influence for the good on the progress of science in America. That something is the raising of the ideals for which we strive. The indications are that this is being done, and in all circles of life the realization is spreading that it is the substance and not the name which is worth striving for, that work itself is the reward, and not simply the means, of life.

What institutions endowed with such unprecedented wealth can do, and what they are doing with enormous energy and moderate success, is filling out the details of schemes forecasted by men who have, for the most part, worked in more untrammelled ways. This is not to be undervalued. It supplies tools to the workman who comes later. It opens up new vistas to the eye of genius. We need not regret the advent of conditions which are preparing to make the work of the future architect more effective, even though we understand it makes the recognition of his work more difficult.

While, therefore, it would be captious folly to deny the utility, even to the highest ends, of endowments for so-called original research, judging from the past, it is not from such influences as they supply that we are to expect radical advance in the principles on which pathology and etiology are based. And yet this is what we need more than anything else, more than ever before in the history of medicine since the overthrow of the Galenic pathology. Never before in the history of the world has there been in scientific medicine such an enormous accumulation of unclassified facts awaiting correlation. Never before has the knowledge of these facts been so generally diffused with other knowledge throughout the civilized world. And yet no one man can hope, in the time at his disposal, to grasp all the isolated facts which may be gathered in any one of the special fields of medicine, however contracted that field may be. This is not so much due to their abundance as to the lack of the proper basis of classification which should simplify our comprehension of them. The fewer facts a man has in his head for which he knows no reason, the better.

Conjectures as to the direction in which that radical forward step is to be taken, possibly has already been taken unrecognized, would be a mere loss of time, a *jeu d'esprit*, were it not that such exercise must naturally tend to keep our minds and our sympathies in a receptive state. Now that they are beginning, with how trustworthy evidence I do not know, to tell us the size and shape of molecules, and to even surmise the existence of smaller particles of matter than atoms, but especially now that the realization is dawning on us that there is a world of intracellular life, and that the cell is not necessarily the unit of life in the animal organism, we may hope that the advancing knowledge of the law of physics, as well as of biological activities, will carry us beyond the bacterial conception of the origin of disease. To those who have studied the changes in intracellular life under varying conditions, it seems evident, as I have said, that the cell is no longer the microcosm, but the macrocosm within which a world of vital activities is at work beyond our ken, armed as we are with objectives of enormous resolving power. To those who have studied the objects which Sansfelice, Gaylord, and Schüller believe to be the organisms of cancer, and much of the rest of the world believe to be cellular degenerations, it is apparent that the bits of protoplasm which grow within a cell may also have an extracellular vital existence. They may be seen, usually within the cell body, but sometimes without it, varying in size from the merest visible speck, under the highest magnification, apparently looming up from the invisible world, up to a size easily detected by low objectives, presenting every evidence that they are in a process of growth, structureless so far as we know, growing like a crystal by the mysterious accretion of matter from their environment. Whether we call these bits of protoplasm degeneration or microphytes, and whatever their etiological significance may be, it is evident that they are not cells, in the definition of the word as we have hitherto accepted it, but matter, the mystery of whose vitality we cannot now fathom. Evidently, also, they are not such microorganisms as we are accustomed to see multiply and grow in and out of the body.

As I write I read in the editorial of a world-wide circulating journal that "the pathologist of to-day can no more conceive of organized structure exhibiting vital phenomena, whether the simplest or the most complex, without reference to the cell, than we can conceive of the sun apart from light and heat." If this were so, it would only prove the limitation of the conceiving powers of the pathologist. The extension of those is what we need. Hæckel and his school have long since conceived of such life, and though we may be unwilling to follow the visionary theories of Monism, we can not escape the conviction that the cell is a comparatively complex, though as yet an unresolved organization of protoplasm. "Omnis cellula e cellula" has been a priceless formula by the aid of which all the problems, which have been solved in the last forty years, have been worked out in the animal and vegetable organism, but this is no proof that the formula has any application to the problems of life itself. Indeed, we can have no conception of the beginning of life, as we understand it, in the animal and vegetable kingdom without an admission of the heretical and well-damned doctrine of spontaneous generation; for, certainly, if evolutionary doctrine—if the fact of the mutability of the forms of life means anything—they mean there has not only been a time, as the theologians tell us, but there is every instant a time when matter is becoming endowed with vital energy which has the power to propagate its kind.

I have gone thus far, not even in the way of venturing a hypothesis, which would be presumptuous in me, but in advancing an illustration that for further advance in biology fierce resistance is to be expected from two generations, whose knowledge is based on doctrines which must give way before the onslaughts of progress, just as in the past all doctrines have been demolished by continued revelations of the truth.

73 Remsen Street

Bacteria on Mont Blanc.—In the Comptes Rendus of the Paris Academy of Sciences, M. Jean Binot prints an account of his researches in the observatory on the summit of Mont Blanc, where he has been conducting bacteriological investigations at the highest altitude yet explored. As was to be expected, the air on the summit, away from the observatory contains scarcely any bacteria whatever, only from four to eleven being detected in as much as a thousand litres, while in somewhat smaller volumes none whatever was found. As a rule, at lower altitudes, the number of bacteria increased, as, for instance, at the Plan de l'Aiguille fourteen, and at the Montanvert forty-nine were found in a thousand liters. Inside the observatory, in which M. Binot spent five days, from 260 to 540 microbes were found in the same volume of air, these being probably introduced by M. Binot and his companions during their temporary invasion of the building.

The investigations were not, however, confined to the air on the top of the mountain, but included also bacterial examinations of freshly-fallen snow, old snow, ice on the surface and below, glacier water, and mountain streams. Freshly-fallen snow, even when sampled in large quantities, frequently contained no bacteria whatever, while in snow which had lain for some time usually only from one to two individuals were discoverable per cubic centimeter; at the foot of the glaciers the surface snow contained rather more, the number varying from six to sixty-five per cubic centimeter, at the Mer de Glace. Glacier water is usually very pure, and, like the glacier ice from which it is derived, was found to contain a number of yeasts and some streptothrix; but while high up such water contained but from three to eight bacteria per cubic centimeter, a stream at the foot of the glacier des Bossons contained ninety-five, while the water of the River Arve, at Chamonix, was found to have as many as 7,550 per cubic centimeter. Altogether, M. Binot examined 121 samples of air, ice, snow, and water, and isolated no less than 300 different varieties of microbes, one-third of which number he was able to identify as having been already studied and described, and the residue are being carefully investigated by him at the present time. Even the alluring and beautifully clear and crystalline spring water on the Montanvert Road was condemned by being found to contain a dozen virulent colon bacilli in a cubic centimeter. Doubtless, this pollution was due to the herds of cattle which graze on the mountain pastures.—*New York Evening Post.*

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE AILMENT OF THE KING.

THE latest reports from Buckingham Palace, up to the time of going press, are to the effect that His Majesty, King Edward VII, is in a fair way toward recovery from his recent attack of so-called perityphlitis.

With all due allowance toward our English brethren for their persistence in the use of an otherwise obsolete term, it is fair to assume that the malady in question was an ordinary appendical abscess, taking its usual course, and was treated in the customary way by simple incision.

Although it may be admitted that perityphlitis as an independent disease may exist, but its manifestation as such is so rare that practically we leave it out of consideration in diagnosticating the most common of all the phlegmons occurring in the right groin.

From the American point of view, which is certainly the advanced one regarding the pathology of appendicitis, the infection of the vermiform process is the starting point of all suppurative conditions involving neighboring parts. The only disproof of this assumption in the King's case would be the demonstration that at the time of the operation the appendix itself was free from disease. The great probability, however, is that the appendix could not be found, having been previously destroyed by the sloughing process associated with the formation of the abscess. This would explain the reason why no mention has been made of the removal of the offending organ and why the operation itself consisted in a mere incision for the evacuation of accumulated pus. Evidently that was the only thing to do under the circumstances as giving the patient the best chance for a safe and easy recovery. In a word, it was following the surgical rule in such cases to leave the remains of the appendix alone when they cannot be easily reached, but more especially when, as is most commonly the case, they form a part of the wall of the cavity.

If we may judge from accounts in the British medical journals, the actual diagnosis of an abscess was not made until a few hours before the operation, notwithstanding the fact that the patient must have suffered from the usual symptoms of such a condition for several days.

In analyzing the clinical symptoms from the time of the review at Aldershot on June 14, it seems quite evident that the ailment declared itself at that time with chill, colicky pain, nausea, and faintness. In vew of subsequent events, many risks were taken in allowing the patient to be moved from one place to another during the formation of the adhesions which were to constitute the protecting walls of the forming abscess.

It is hardly conceivable that the abscess formed itself within the few hours preceding the operation, as intimated in the cable dispatch to the MEDICAL RECORD. Certainly, as a rule, large abscesses of this kind form rather slowly and give early local evidences of their existence in the shape of rigidity of overlying abdominal muscles, circumscribed tumescence, and distinct localized pain on pressure. It is not at all likely that these significant symptoms escaped the notice of the distinguished medical advisers, but they were evidently powerless in preventing their royal patient from taking the risks indicated.

Inasmuch as Lord Lister is reported as intimating that a secondary operation may be necessary in the case, it seems probable that the appendix itself was not removed. If so, it was certainly good surgery. Those who have had the largest experience in appendicitis are almost unanimously in favor of such practice, and it is only in exceptional instances, in which there is continuous and distressing pain from old and faulty adhesions, or persistently recurring suppuration, that any attempts are made to interfere with nature's usual method of repair. It might almost be considered a discourtesy to the founder of modern asepsis to compare the old-time method of drainage by tubes with that of the American plan of packing the wound with sterilized gauze, but the good results of the latter are so manifestly overwhelming as to afford us the excuse for making apparently invidious comparisons.

The wound being in good condition, and there being no fear at present of septic peritonitis, the prospects for ultimate recovery must be mainly based on the integrity of the heart and the normal action of the kidneys. Hence an accelerated pulse-beat or loss of consciousness from coma would be indications of most ominous import.

THE OUTLOOK FOR THE YOUNG PRACTITIONER.

To the thousands of young men who have graduated from our medical colleges the great problem presents itself as to how a proper start is to be made in practice.

It must be admitted that with the number already in the field eagerly striving to the same end the difficulties in the way are proportionately great, and brilliant success must necessarily be limited to comparatively few of the eager aspirants. It is equally plain that many avenues heretofore opened are closed to them and old-timed methods must take the place of new ones.

In a large city with a growing population it was sufficient to settle in some of the poorer districts and trust to the casual calls to accidents and the sudden attacks of sickness which should in a natural way introduce them to their future patrons. Now, with dispensaries everywhere, hospitals and ambulances ready for all emergency cases, health board doctors with free vaccination, and million-dollar maternities eager for so-called charity to the middle classes, he finds himself restricted to such bare chances are then left for him. It is not that he expects a large income, but that he should be insured a decent livelihood.

For the great credit of the men who succeed in spite of these handicaps, it must be said that they have abundance of patience and a laudable endeavor to work against heavy odds. A very few may become famous and gain the topmost round of success, but the vast majority must be content with the mere reward of work for the work's sake.

Still the gaining of a living by the simple practice of his profession should be the legitimate aim of every one who expects to be a physician in the broader and truer sense. Thus it is better to face trials in the beginning than to shirk them by the ordinary makeshifts of outside occupations. The proper and independent way is to live by legitimate professional work and be contented with nothing short of it. What is easy at the start, in obtaining salaries for pseudo-professional services, is hardest in the end when the incumbent finds himself a mere medical clerk for a life insurance company or hanging to a similar salaried official position.

When such positions must be taken to tide over pecuniary difficulties it is best that they be merely temporary, having the main end of practice in ultimate view, otherwise there is little hope for self-advancement, inasmuch as promotion is very slow in the army or navy, and health boards, as a rule, are merely political machines in which favoritism and pull rule against service and merit. The best that can be obtained is the position of chief of a department, the highest salary for which can never equal the income of an ordinarily successful practitioner.

Everything bearing on final success depends on the ability to work and wait during the early years of struggle. If the young man has sufficient capital to live for the first few years independently of his practice, he has the better chance as compared with him who starts with nothing. In fact, it has been often advised that no man nowadays should make up his mind to study medicine with any idea of meeting his immediate expenses by any practice he can obtain during that period of hard working. The disappointments from an opposite course are too numerous to mention and many, by force of circumstances, have been compelled to seek work in other channels and thus waste the time spent in hard study and useless preparation. Fortunately, the fascination of professional work holds many to their original purpose, in spite of early difficulties and comparatively small pecuniary returns in the end. The valiant workers in city and country attest this fact, and to them the medium of to-day owes its dignified position, its widespread influence and its true progressive spirit. The very fact that medicine is a grand profession makes it a very poor trade from a purely commercial standpoint. Fortunately, the physician is satisfied with little, but if he works hard for it, especially in his earlier career he is apt to gain it. The main point of all, however, is to stick to his business pure and simple from beginning to end and then to vindicate his right to be one who depends solely upon his profession for a living and will be content in nothing short of it.

The greatest mistake of all is to start in a specialty without being thoroughly grounded in general practice. There are too many such young men, who, lured by the hope of quick gains and relatively large incomes, are waiting in vain for office patients while their classmates are taking anything that comes and laying the broader foundations of really successful work in the future.

The question is often asked, where shall I settle? This never can be answered in a general way. Each one must find his place for himself, whether in city or country. The only difference is that in the former place, if he is willing to wait longer, he can, in the end, earn more. Curiously enough, however, with the ordinary all-round man the gains, considering relative expenses, are about equal in both places. In either case the acknowledged leaders are the only ones that command the largest fees and the top of any profession has comparatively small standing place. The history of these men is the same regarding the moderate sums earned when commencing practice, and the lesson thus taught is obvious enough. The young man more than ever must compete for comparatively cheap service until age, more experience and more business place him on the higher level of worth to himself and his patient. It would require but few such calls daily to pay his office rent and board and even among the poorer classes there are some self-respecting persons who would gladly patronize him on such a basis than receive the ordinary machine treatment of most of the dispensaries. And even if he should do some missionary work in cultivating an independent spirit among his clients he would only be using legitimate means in protecting himself against many of the grosser and more flagrant abuses of medical charity that tend so surely and directly to ruin him at every turn. So much then for the ordinary opportunities of the medical youngster.

THE PRESENT CONDITION OF KING EDWARD VII.

(Special Cable to the MEDICAL RECORD.)

LONDON, June 26, 1902.

TO THE EDITOR OF THE MEDICAL RECORD:

SIR:—From the most trustworthy sources it is learned that the operation on His Majesty King Edward VII. has been successful in all respects, and that no complications have declared themselves,

The general medical opinion now is to the effect that ultimate recovery will be assured unless there be some unforeseen turn in present symptoms. There is no foundation for the rumor that malignant disease caused the intestinal trouble. The latter is designated here as perityphilitis—a term in general use to express the condition known as appendicitis in America.

No definite statement has yet been made regarding any actual disease in the appendix.

The recent illness of the King was at first attributed to an attack of rheumatism, and the usual treatment for that affection was instituted. During the early progress of the illness, the pain became localized in the right side of the abdominal region and was attended with slight elevation of temperature and increased rapidity of pulse.

On the journey to London the pain became very much aggravated with sudden rise in temperature, and the diagnosis of localized suppurating process was made. Sir Joseph Lister and Sir Frederic Treves were then called in consultation and the operation was decided upon.

The wound is in a healthy and quiescent condition and there are no indications of septic peritonitis. The abscess was of large size and was opened in the usual manner by direct incision through abdominal walls. The inflammation is reported to have been limited to the site of the abscess.

The reports that the King is on verge of collapse have no possible foundation. At no time since the operation has he been in special danger.

Cholera in the Philippines.

Cholera for a considerable time has been reported prevalent in the Philippines, although its ravages have been reported as almost entirely confined to the native and eastern population.

According to the *New York Herald* of June 22, a report just received from General Chaffee by the War Department at Washington shows that the army in the Philippines is seriously affected by the cholera raging there. The report referred to states that twenty-two enlisted men died of cholera in the two weeks between April 23 and May 6.

Despatches sent out from Manila on June 21 stated that cholera was spreading in the islands. Thirty-five cases were reported in Manila on June 19 and twenty-eight deaths. The totals up to June 21 were 1,490 cases, and 1,197 deaths in Manila, and 6,959 cases and 5,098 deaths in the provinces.

This news is of a very grave nature, for if cholera of the type common in the far east gains a foothold among the American troops the probability is that it will spread with great celerity and cause a large mortality.

Asiatic cholera is one of the most dreaded diseases of the East, and shares with the plague the undesirable notoriety of claiming more victims than any other malady of that region. However, the United States Military Medical Department of the Philippines may be relied upon to take every step known to sanitary science to stamp out and to curtail the spread of the disease.

Protection of Wild Birds.

In the editorial pages of the Medical Record reference has been made on several occasions to the need of protecting the wild birds of this country and to the efforts of the American Ornithologist's Union to compass this object. The Union in question has recently issued its report for 1901, which shows that eleven States prevent by law the killing of birds for the sake of their plumage.

Up to 1901 there were only five States which had protective laws for birds otherwise than game, which were of a sufficiently stringent nature. During 1901 the following States placed laws on their statute books or added amendments to existing laws: Maine, New Hampshire, Vermont, Massachusetts, Connecticut, New York, New Jersey, Delaware, Florida, Wisconsin, Wyoming, and, in addition to these, the District of Columbia.

The law in the State of New York now covers all birds not game birds. Ten wardens are employed on the Maine coast, two in Massachusetts, one at Long Island Sound, while New Jersey, Maryland and Louisiana have wardens now.

Most of the wholesale houses, many of which belong to the wholesale Millinery Protective Association, will not deal in the plumage of any wild North-American birds.

If women would all coöperate in this good work by refusing to wear birds' feathers as trimming to dress or hats, a long step would be taken toward preventing the extermination of many species of wild birds.

More Public Baths for New York.

A sum of $105,000 has been appropriated by the City of New York for the construction of three public bath-houses, and it is said that the contracts for these buildings should be advertised for in August. It is planned that the baths shall be opened in July, 1903. A year should be ample time in which to finish the construction of the baths, although those in Rivington street took three years and seven months to complete.

The *Evening Post*, June 12, says that the projected baths in general will follow the plans suggested in the communication of the Association for Improving the Condition of the Poor. The buildings will occupy lots 50 by 100 feet. The basement will be devoted to boilers and machinery.

The main floor has waiting-rooms for men and women next the entrance, each opening into a passage on which two rows of bath compartments face. On the second floor is a reserve section of bathing compartments which can be thrown open when needed in times of exceptional heat, or on holidays.

Floating-baths, of which there have been fourteen in New York, are to be decreased in number to seven, the Board of Health having condemned the others for sanitary reasons. Many physicians have declared at one time or another that these baths have been an important factor in spreading various contagious diseases, and Mr. Tucker made a report to this effect to the Tenement House Commission.

Unfortunately, too, there seem to be no more sites available for floating-baths, so that the necessity for permanent establishments for bathing purposes is greatly emphasized.

The Medical Record has always been an earnest advocate of plenteous bathing facilities for the poorer population of the city, and has seldom missed an opportunity to point out how far behind New York is in this respect to most cities of Europe.

Of course, however, the chief credit for bringing home to the inhabitants of New York their criminal carelessness in neglecting to provide an efficient bathing system is due to Dr. Simon Baruch. The erection of a number of fine bath-houses will be a monument to his persistent advocacy of the scheme.

The Mission of the Association of Military Surgeons.

The mission of the Association of Military Surgeons, aside from the consideration of purely professional subjects, was clearly outlined in the able address of the retiring president of the society, Lieut.-Col. J. V. R. Hoff, during its recent convention in the city of Washington. Col. Hoff urged that the organization, equipment and control of the medical departments of the State troops be made identical with those of the national forces, and that the influence of the society be directed to that end. He called attention to a mission of the Association in relation to the personnel and equipment of the national forces, in maintaining them in the highest possible state of efficiency. He showed the desirability, through the medical schools of the country, of providing for the dissemination of knowledge of military sanitation in the profession at large, so that every physician may be better prepared, in emergency, to undertake the work of a medical officer. A point emphasized by Col. Hoff was the necessity for the establishment of a national medical school for the education of those entering the medical services of the army and navy, and the Marine Hospital service. Such a school should be organized in Washington, in connection with a great military hospital and training schools for hospital corps men and female nurses. To this medical school medical officers of the National Guard should also be sent for instruction. Finally he urged the preparation of plans by which private aid may be made to supplement, not supersede, the public services in time of war or other stress.

That there are vast opportunities for work by the Association along the lines indicated by Col. Hoff is apparent even to those not directly interested in medico-military affairs. The carrying out of the scheme proposed would greatly raise the standard of military medicine in this country, and do much to mitigate the horrors of future wars, and the enthusiasm with which these suggestions were received by the members of the Association augurs well for their execution in the early future. We particularly commend to the profession the suggestion that military hygiene be taught in the medical schools of the country, the need for such instruction having been abundantly demonstrated by the experiences of the Spanish-American war. For the teaching of this subject the services of army surgeons, on the active and retired lists, could in many cases be secured, and many surgeons of the National Guard would be glad to undertake work of this character. We believe that it will not be long before the leading medical colleges will appreciate the value of such a course of instruction and include it in their curriculums.

LOUIS PASTEUR.

In *McClure's Magazine*, June, is a well written appreciation of the late Louis Pasteur by Ida M. Tarbell. There is little doubt but that Pasteur was one of the greatest scientists who ever lived, and perhaps the greatest who has appeared within the past hundred years. All his discoveries were of direct use to the human race, either for the prevention or control of diseases or for the benefit of commerce.

Miss Tarbell recounts the three great truths he established.

Each fermentation is produced by the development of a special microbe.

Each infectious disease is produced by the development within the organism of a special microbe.

The microbe of an infectious disease, cultivated under certain detrimental conditions, is attenuated in its pathogenic activity; from a virus it has become a vaccine.

In 1883 the result of these discoveries were reported to the French Chamber of Deputies in the following words: "As a practical consequence of the first discovery, M. Pasteur has given rules for the manufacture of beer and of vinegar, and shown how beer and wine may be preserved against secondary fermentations which would turn them sour, bitter or slimy, and which render difficult their transport and even their preservation on the spot.

"As a practical consequence of the second discovery, M. Pasteur has given rules to be followed to preserve cattle from splenic fever contamination and silk worms from the diseases which decimated them. Surgeons, on the other hand, have succeeded, by means of the guidance it afforded, in effecting almost completely the disappearance of erysipelas and of the purulent infections which formerly brought about the death of so many patients after operations.

"As a practical consequence of the third discovery, M. Pasteur has given rules for, and, indeed, has effected, the preservation of horses, oxen, and sheep from the anthrax disease which every year kills in France about 20,000,000 franc's worth. Swine will also be preserved from the rouget disease which decimates them, and poultry from the cholera, which makes such terrible havoc among them. Everything leads us to hope that rabies will also soon be conquered."

Rabies was conquered a few years later.

No more magnificent monument has ever been erected to any man than these marvelous discoveries are to the memory of Pasteur. His name is imperishable. In private life Pasteur was a modest, simple-minded man, who never thought of his own aggrandizement, but was well content if he could do some good to his fellow men and to his country. In these days of self-advertisement such a type of man is rare and refreshing.

DEATHS BY POISON IN GREAT BRITAIN IN 1900.

The total number of deaths by poison in Great Britain in 1900, as shown by the sixty-third annual report of the registrar-general, exhibited an increase, being 1,193 as against 1,159 during 1899, or a net increase of 34.

The cause of death is classified in the following table: Accident and negligence, males, 472; females, 266; suicide, males, 276; females, 178; murder, 1, female.

The *British Pharmaceutical Journal*, commenting upon these figures, says that, while the accidental cases show a large increase, suicide by poison appears to have fallen somewhat into disfavor in 1900.

The 738 deaths due to accident and negligence, in 1900, as against 636 in 1899, were mainly caused by substances which are not scheduled as poisons, only 160 appearing to have been caused by scheduled poisons.

Carbolic acid, which was not included in the schedule of poisons until September, 1900, was responsible during that year for 35 accidental deaths, 20 males and 15 females—a considerable reduction on the figures for 1899, when there were 45 accidental deaths due to carbolic acid. Mineral acids were accountable for 24 cases; accidental lead poisoning caused the death of 115 persons, while anesthetics used for operations, caused death in 116 cases.

Ptomaines, unripe fruit, etc., were the cause of 71 accidental deaths. With regard to suicidal cases, scheduled poisons caused 202 deaths, as against 252 by other toxic substances.

Carbolic acid was again the principal agent in cuasing death, being used in 134 suicidal cases; mineral and other acids were used in 51 cases.

It seems clear, says the writer in the *Pharmaceutical Journal*, that the inclusion of a poison in the schedule continues to prevent cases of accidental poisoning to a very large extent, and that the tendency to suicide is also checked in some degree. Thus scheduled poisons were the fatal agents in less than 22 per cent. of the accidental deaths during 1900, and in less than 44 per cent. of the total accidental cases and suicides.

News of the Week.

The Charles Rice Memorial Committee.—The Board of Trustees of the College of Pharmacy, in conjunction with the Committee of Revision of the U. S. Pharmacopœia, have appointed a committee to solicit funds for the purpose of placing a suitable monument over the unmarked grave of the late Dr. Charles Rice, and to defray the expenses of preparing a memorial volume, to contain his portrait and a sketch of his life and labors. Subscriptions to this fund are invited from all who appreciate the great work done by Dr. Rice, who sacrificed so much in the cause of medicine and pharmacy, and directed three decennial revisions of the U. S. Pharmacopœia. All contributions should be sent to Virgil Coblentz, 115 West Sixty-eighth street, New York City, or S. A. D. Sheppard, 1129 Washington street, Boston, Mass.

The Fight against Tuberculosis.—The Charity Organization Society of this City appointed, a few days ago, a committee consisting of eleven physicians and thirteen laymen to institute a crusade against consumption. The committee consists of the following: Drs. Herman M. Biggs, Joseph D. Bryant, J. H. Huddleston, E. G. Janeway, S. A. Knopf, T. Mitchell Prudden, Andrew H. Smith, E. L. Trudeau, Egbert Le Fevre, Henry Herbert, W. G. Thompson, and Ernst J. Lederle, Messrs. Homer Folks, F. H. Giddings, Charles F. Cox, Edward T. Devine, Eugene A. Philbin, Robert Hunter, Robert W. de Forest, Otto T. Barnard, and Herbert S. Brown, Mrs. James E. Newcomb, Mrs. Frederic S. Lee, Miss A. B. Jennings, Miss Ella Mabel Clark and Miss Lillian D. Wald. In addition to an investigation of the social aspects of tuberculosis the work of the committee has been outlined in part as follows: The promulgation of the doctrine that tuberculosis is a communicable, preventable and curable disease; the dissemination of knowledge concerning the means and methods to be adopted for the prevention of tuberculosis; the advancement of movements to provide special hospital, sanatorium and dispensary facilities for consumptive adults and scrofulous and tuberculous children among the poor; and the initiation and encouragement of measures which tend to prevent the development of scrofulous and other forms of tuberculous diseases.

Spreading Disease among British Army Mules.—A report is current in the sailor boarding-houses in New Orleans where the muleteers employed by the British during the South African war were recruited that some of the men who felt that they had been ill-treated by the British were employed by Boer agents to inoculate the horses, mules, and cattle with the virus of anthrax and glanders. If this report is true, but it probably is not, the Boer sympathizers have been hoist with their own petard, for the Boers in South Africa are now the greatest sufferers, as the diseases prevailing among the cattle and horses there will interfere very seriously with the restocking of farms in the Veldt by the British.

Association of American Medical Editors.—The annual meeting of this association was held at Saratoga on June 9 and 10, under the Presidency of Dr. Alexander J. Stone of St.Paul. Papers were read and addresses made by the president and by Drs. Charles H. Hughes, H. O. Marcy, Alonzo Garcelon, T. D. Crothers, Burnside Foster, D. J. McDonald, Jr., and I. N. Love, Dr. G. Frank Lydston sent a metrical contribution entitled "The Man behind the Knife."

New Public Baths.—It is announced that a large free bath-house will be built on Thirty-eighth street, near the east river, as soon as the buildings now on the land can be removed. The baths will be the gift of Mrs. A. A. Anderson, and will cost, with the land, about $100,000. They will probably be presented to the Society for Improving the Condition of the Poor.

Boycotting the Sick.—Among the news items relating to the strike of coal miners in Pennsylvania, published in the daily papers, is one stating that a band of fifty masked men, preceded by a drum corps, who were marching through the towns near Hazleton making demonstrations before the houses of non-union workmen, visited Dr. Stearns of Beaver Meadow and warned him under pain of severe punishment not to attend any of the sick or injured among the men at work in the mines.

Coronation Honors for Medical Men.—Among those upon whom coronation honors have been bestowed are Sir Francis Henry Laking, physician-in-ordinary to the King, and Sir Frederick Treves, sergeant-surgeon to the King, who performed the operation upon him, who have been created Baronets. Among those upon whom Knighthood has been conferred are Dr. Arthur Conan Doyle, the author, and Dr. William Selby Church, president of the Royal College of Physicians.

New French Hospital.—Plans have been filed with the Building Bureau for the new hospital which is to be erected for the French Benevolent Society on West Thirty-fourth street. It is to be of brick and Indiana limestone, 103.7½ feet front and 88.9 feet deep, seven stories front and six stories rear, and will cost $180,000.

New Hospital for the Aged of the Little Sisters of the Poor.—Plans have been filed with the Building Bureau in The Bronx for a new four-story and attic hospital and annexes to be built for the Little Sisters of the Poor on the plot covering the entire block bounded by Brook and St. Ann's avenues and 142d and 143d streets, opposite St. Joseph's Hospital for Consumptives. The hospital will be 318 feet long with two wings and will face 142d street. A chapel will occupy the 143d street wing, and a morgue, stable, laundry and other buildings will be provided, all connected by covered passageways with the main building. The buildings are to cost half a million dollars.

University of Pennsylvania.—A gift of $100,000 has been made as a memorial by an anonymous donor for the purposes of the building fund for the new medical laboratories. This sum is to be devoted to the pathological department.

Philadelphia Polyclinic.—Dr. Hilary M. Christian, surgeon in charge of the genitourinary dispensary of the University of Pennsylvania, has been elected Professor of Genitourniary Diseases at the Philadelphia Polyclinic.

Wills' Eye Hospital, Philadelphia.—Dr. Wm. Thomson has resigned as attending surgeon and has been elected consulting surgeon. Dr. Wm. Campbell Posey has been elected to fill the vacancy.

Training Ship "Dixie."—The Navy Department has decided to outfit the training ship *Dixie*, which recently carried the army relief expedition to Martinique, as a hospital ship and transport. In view of the contemplated mobilization into one great fleet, during the coming winter, of all the naval vessels on the Atlantic, South American and European stations, the presence of a hospital ship to care for the sick will be absolutely necessary. Many of the smaller vessels have absolutely no accommodations for the sick, and even on the largest battle ships and cruisers these are very limited and quite insufficient to meet any special demands upon them.

Changes in the Medical Faculty of the University of Maryland.—Dr. L. McLane Tiffany, having resigned the chair of surgery in the University of Maryland faculty of physic, Dr. Randolph Winslow was, on Friday, elected Professor of Surgery. Dr. John Holmes Smith was elected Professor of Anatomy, Dr. D. M. R. Culbreth, Professor of Materia Medica; Dr. Frank Martin and Dr. St. Clair Spruill, Clinical Professors of Surgery, and Dr. Joseph W. Holland Demonstrator of Anatomy.

Smallpox in San Francisco.—In addition to the precautions taken at San Francisco against the embarkation on transports of troops unprotected against smallpox, orders have been issued at Manila that no troops from the United States will be allowed to land until vaccinated. The medical department will send a supply of vaccine virus on board each vessel as soon as it arrives, and, if necessary, with medical officers to do the vaccinating.

Sick Troops in Manila.—During the month ending April 15 the percentage of sick to the total troops serving in the Philippines was 6.24 per cent. In the large Manila and department hospitals the percentage of total admissions was greatest for venereal diseases, 21.60 per cent.; malarial fevers were 9.41 per cent., and dysentery was 9.94 per cent. Typhoid fever was 1.71 per cent. Out of a total of 36 deaths from disease during the month 18 were due to dysentery. There are at present 410 medical officers, 2,063 non-commissioned officers and privates of the Hospital Corps, and 56 female nurses on duty in the Philippines, having the medical care of 35,154 officers and men.

Major Walter Reed Honored.—At its recent commencement exercises, the degree of LL.D. was conferred by Harvard University upon Major Walter Reed, Surgeon, U. S. Army, for his investigations resulting in an accurate knowledge of the way in which yellow fever is transmitted, and the methods by which it can be prevented or stamped out in a community. With General Wood, Major Reed was the guest of honor at a dinner given by a number of the prominent men of Boston to the army officers who were most concerned in bringing about the admirable results which characterized the reconstruction period of Cuban affairs while that island was under American control.

The Venice Incident.—The case of Surgeon Ledbetter, U. S. N., who, with other officers, was arrested and placed in confinement by the Italian officials for a disturbance which took place in Venice, while the U. S. S. *Chicago* was at that port, has been set aside by the admiral commanding the European station with the comment that, "while some or all of these actions may be considered indiscreet or lacking in dignity, none of them merit court martial, and none can be characterized as bringing scandal or disgrace on the naval service."

Cholera in the Philippines.—Reports from the Philippines state that the cholera problem there is great and very vexatious. With the exception of the small American and foreign population in Manila, the inhabitants are, to a man, antagonistic to the efforts of the Board of Health to eradicate the disease. This is particularly the case with the clergy and the merchant class. The business interests of Manila are consequently very much embarrassed, and a good deal of the shipping trade has been brought to a standstill.

The Martinique Relief Expedition—The Army medical officers sent with the relif expedition to the islands of Martinique and St. Vincent found little need for their professional services, as at Martinique nearly all those within the sphere of volcanic activity were killed outright, and the relief party did not reach St. Vincent from Martinique until after the injured had been well provided for by the local authorities. At Georgetown, St. Vincent, an improvised hospital contained about 400 patients who were suffering chiefly from burns. The medical supplies carried with the expedition were turned over to the French and English hospitals, upon whose resources the sudden emergency had caused a severe drain.

Vacancies in the Army Medical Corps.—Eighteen candidates have been found qualified by the Army Medical Examining Board, recently in session in Washington, out of the total of 129 authorized to appear for examination. The number of approved candidates is slightly in excess of the proportion usually found qualified by previous boards. The appointment of these candidates will leave forty-eight vacancies in the Army Medical Corps, with several additional vacancies in sight, by reason of retirements for age, in the early future.

Cholera in Philippines.—To assist in coping with the cholera situation in the Philippines, fifty army surgeons have been detailed to serve on the board of health in Manila alone. The southern end of the island of Luzon is well infected. All army surgeons under orders to return to the United States are being held to special duty in the islands until their places can be filled under the Civil Government by civil surgeons.

Obituary Notes.—Dr. WYATT JOHNSTON of Montreal died on June 19. He was a graduate of the Medical Department of McGill University in the class of 1884, and had recently been appointed Professor of Hygiene there.

Dr. OBED LATHAM LUSK, deputy health inspector for the Borough of Queens under the former city administration, died at his home at Rockaway Beach on June 20, aged 42 years. Dr. Lusk was prominent in Democratic politics in Queens county, and for years previous to consolidation he served as health officer at Rockaway Beach and Far Rockaway. He was a graduate of the Chicago Medical College in 1882, and for some time served as surgeon in the United States Army. He was a nephew of the late Dr. Henry Palmer, founder of the Palmer Memorial Hospital in Chicago.

Dr. FREDERICK HORNER of Marshall, Va., died on June 15 as the result of a runaway accident. He was a graduate of the Medical Department of the University of Pennsylvania in 1851 and entered the navy that same year. He was retired with the rank of assistant surgeon in May, 1861, on account of incapacity for sea duty, and, with one exception, had been on the retired list of the navy longer than any other officer.

Dr. GEORGE F. CAREY died at his home in this city on June 16, at the age of sixty-six years. He was born in Ireland, and when about sixteen years old came to this country and has resided ever since in this city. He was a graduate of the College of Physicians and Surgeons in the class of 1874.

Dr. J. F. MEYER of Buffalo was accidentally shot and killed on June 20. He was a graduate of the Medical Department of Niagara University in the class of 1891.

Dr. AGNES B. ROBINSON MESSNER, a daughter of the late Dr. Chas. M. Robinson, died at Philadelphia on June 5. She was graduated from the Woman's Medical College in 1894, and was Assistant Demonstrator of Anatomy in the college.

Correspondence.

OUR LONDON LETTER.

(From Our Special Correspondent.)

MEDICAL COUNCIL—SAMARITAN HOSPITAL—ADDISON'S PERNICIOUS ANÆMIA—HANOTS' CIRRHOSIS—SOCIETIES.

LONDON, May 30, 1902.

THE General Medical Council met on Tuesday, when Sir Wm. Turner, K.C.B., opened the proceedings with his usual presidential address. He said no progress had been made in Parliament with the bill prepared by the council. He regretted that the business of a penal and disciplinary character to be settled was more than usually heavy, chiefly on account of convictions in the criminal courts which had been reported. Two new cases in which serious breaks of professional conduct were alleged to have been committed must also be investigated. It was gratifying that no charges of covering, nor of association with "medical aid societies," were to be considered. The council has been requested by the Privy Council to send a delegate to the Brussels Congress on the subject of an international pharmacopœia of limited extent.

A communication from the British Medical Association asking the council to receive a deputation on preliminary education was read. One or two members thought the proposal savored of a censure on the educational committee, but others did not see any intention of the kind, and after some conversation it was agreed that the deputation should be received by the Committee on Education. As to this, I may remark that the deputation will have to submit the report of the association, which is to the effect that every practitioner should receive such a preliminary education as should entitle him to be regarded as a member of a liberal profession.

With regard to the penal cases, it seems more desirable that the council should get their powers amended so as to be able to deal with them more expeditiously, as well as more economically. Surely it is a *reductio ad absurdum* for distinguished representatives of universities and colleges to be brought together, at great expense, to solemnly judge whether a man convicted of felony should remain on the roll. One would suppose that such conviction should automatically exclude him. Even if an appeal on the point be considered advisable, it is a wicked waste of brains and money to gather thirty of the most distinguished men to decide whether a criminal conviction renders an individual unworthy of a place on the register of the profession. A court-martial *ad hoc* can decide if a military man has been "guilty of conduct unbecoming an officer and a gentleman." Some such court-medical might be entrusted to decide on professional matters.

There is just now an unprecedented scandal as to hospital government which might well be submitted to such a tribunal. As it is exciting much attention, and yet its true inwardness has not been exposed by our journals, I will give you details which will suggest, I think, that though the committee is taking the blame so far as to offer a feeble apology, the action of the staff calls for enquiry as to whether it has been becoming to doctors and gentlemen.

This extraordinary case is one of an election to and subsequent removal from a hospital post. In September, 1900, a vacancy in the post of physician to out-patients at the Samaritan Free Hospital for Women and Children was advertised, without any sort of notification that the appointment, when made, would be subject to confirmation a month afterward. Dr. J. A. Shaw-Mackenzie applied for the post, with others. The committee proceeded to elect him, notified him and the medical directory of his election, and accepted his services for some weeks without telling him the appointment was provisional. A month later the secretary of the hospital wrote that the minute referring to his election was not confirmed, and the medical secretary wrote that, as the appointment was not confirmed, it would be unnecessary for Dr. Shaw-Mackenzie to attend in the out-patient department or at operations. Subsequently, the secretary of the hospital wrote that the post was vacant; that the committee had resolved to take up the election again at the point of the reception of the medical committee's report on October 23, 1900, and, to cut the matter short, another candidate was appointed. The committee then allowed more than a year to go by before making the tardy explanation that there was no shortcoming on Dr. Shaw-Mackenzie's part. As now admitted in a letter published in the *Lancet*, May 10, from the secretary of the hospital to Dr. Shaw-Mackenzie, the committee state that his non-election permanently was not attributable to any fault or shortcoming on his part; that he gave his valuable service to the hospital for some weeks, and the committee had no reason whatever for dissatisfaction, and they go on to express regret that the letters notifying his appointment to him and the medical directory omitted to state that it was provisional only. As far as can be ascertained, it seems that the medical committee recommended another candidate, and did not recommend or vote for Dr. Shaw-Mackenzie. The committee, however, recognizing his claims, added his name, and the voting proved equal. Under these circumstances the chairman did not give a casting vote; the election was postponed for the purpose of making further enquiries respecting the candidates, and at the next meeting Dr. Shaw-Mackenzie was elected, two of the consulting staff voting for him. A month later the medical committee met and passed a resolution protesting against their recommendation for the post being ignored by the committee of management. Dr. Shaw-Mackenzie was present at this meeting as an acknowledged member of the staff, and did not vote for this resolution. The following date the procedure of the election was questioned, and the appointment not confirmed. Finally, Dr. Shaw-Mackenzie felt compelled to bring an action against the committee, and ultimately accepted the letter of explanation and regret. It is an extraordinary thing that the committee did not from the first recognize the necessity of making it perfectly clear that no blame attached to Dr. Shaw-Mackenzie. Apart from the merely personal aspect of the case, no hospital ought to have a rule under which physicians are asked to give their services for a month on approval, and if they have such a rule, the least they can do is to publish it when advertising for candidates. It is outrageous that a man's good name and reputation should be exposed to the accident of a vote, or to the rallying of supporters of another candidate, and that he should be involved in litigation through a mistake of the committee, or the claim of a staff to control the elections. The case is, fortunately, unparalleled in the annals of hospital government.

Dr. Wm. Hunter has brought his view of pernicious anæmia before the Pathological Society in a paper illustrated by lantern slides, specimens, and cultures. This paper may be described as a development of his former contributions to the subject; it was based on twenty-five cases observed during the last two years, with seven necropsies.

The thoroughness of the investigation may be seen by one or two points. Thus, in the seven necropsies histological examination was made of the whole digestive tract from the tongue downward, and control observations of the same tract in twelve other diseases characterized by oral sepsis. In this work 100 pieces of tissue were cut, and the number of sections stained and examined for organisms, 1,145, besides which 250 cultures were made. In all the twenty-five cases the peculiar form of glossitis previously described by Dr. Hunter had been found. There was great thinning of the mucosa, which, in some places, was quite wanting, so that the lymphatics of the tongue were in continuity with the buccal cavity. From these lymphatics he obtained pure cultures of streptococcus longus, which killed mice in six or seven days. The same organism was obtained from the mucoid vomit which occurs in the disease. There is then, according to Dr. Hunter, a specific infection, of which the chief evidence during life is a glossitis, easily overlooked—a septic infection of the mouth and whole elementary canal. The vomit and other symptoms during life point to gastritis and further intestinal complication, and after death these are explained by the gastritis, gastric atrophy, intestinal atrophy, erosions or ulcers now and again found.

Clinically, all the twenty-five cases conformed closely to Addison's original account of anæmia "without discoverable cause," all might have been described in Addison's own words. Dr. Hunter therefore does not include many cases which Ehrlich and other German physicians group with pernicious anæmia, but separates those in which oral sepsis is associated with the symptoms described by Addison, and which he has termed septic anæmia, and might also be called Addison's pernicious anæmia.

Sir T. Barlow and Dr. Batty Shaw showed two cases at the Clinical Society to illustrate the inheritance of recurrent attacks of jaundice and abdominal crises with hepatosplenomegaly, such as have been described by Dr. Claude Wilson as occurring in three generations, and by Dr. Finlayson, as affecting collaterals. The patients were a mother, aged forty-seven, and son aged nineteen and a half. The latter had been delicate from birth. At five he was jaundiced for the first time, and since then has had attacks of "semi-jaundice," with pain in the upper part of the abdomen. These attacks last three or four days. For the last six years he has had indolent ulcers about the ankles, which only heal after some days in bed. There is slight enlargement of the liver and much more of the spleen; a reduction of red corpuscles, and hæmoglobin, etc. Brothers and sisters are not affected, but one brother had one attack of jaundice in childhood. The mother's history is similar. Her first attack was at five. She had one when pregnant. Both patients have always lived in England.

The paper suggested that the mother's was a case of Hanot's cirrhosis of the liver, and the son's an earlier, incomplete stage of the same. Attention was called to the guarded prognosis to be held in such cases. The mother has grown up with the disease, had a large family, and, except for these attacks, has enjoyed her life. Two of the boys described by Dr. Wilson, having been lately seen by one of the authors of the paper, were found pretty well.

Dr. Rolleston regarded the cases as intermediate between splenic anæmia and Hannots' biliary cirrhosis in adults. He said the symptoms of both diseases had been observed in some families, and French observers had mentioned cases of Hannot's disease with splenic enlargement.

Dr. H. French insisted on the occurrence of hemorrhages as a chief feature of splenic anæmia.

The smallpox admissions this week have varied from thirty-two to fifty per day.

The Royal Society is sending a commission to Uganda to investigate sleeping sickness.

Lord Lister has been elected President of the Pathological Society, if, on his return, he is willing to accept the post. Mr. Howard March will continue President of the Clinical Society for another year. The Medical Society's conversazione was held on Monday, when Dr. S. Mackenzie delivered the annual oration.

The Medical Temperance Association's twenty-sixth annual meeting was held on the 20th ult. Professor Sims Woodhead presided.

THE INFLUENCE OF PROLAPSE OF THE KIDNEY ON THE PRODUCTION OF PELVIC DISEASES IN THE FEMALE.

To the Editor of the Medical Record.

Sir: Permit me to call attention to some inaccuracies that occur on page 1016 of the report of the proceedings of the section on Diseases of Women of the American Medical Association at Saratoga. I claimed that prolapse of the kidney by compressing the ovarian vein retards the return circulation from the pelvis and produces pelvic congestion with its attending evils, and is therefore a cause of pelvic disease; that even in the early stages of prolapse the lower pole of the kidney often overlaps the ovarian vein and ureter, and when the abdomen is compressed by corsets or clothing the kidney is crowded backward and compresses the ovarian vein and ureter between it and the solid structures of the back.

Prolapse of the kidney by traction on the vessels of the pedicle gives rise to congestion and by torsion or flexure of the ureter causes obstruction; hence it often leads to structural disease of the organ which is lost sight of in dealing with this condition.

Artificial supports, I considered objectionable in advanced degrees of prolapse, where they would be most needed, because they are a source of irritation to the kidney; but no contention was made that they caused increased flow of urine.

In closing the discussion that followed, I maintained that the constitutional disturbances were rather the result than a cause of prolapse of the kidney, and that I believed the failure to relieve symptoms by the operation for fixing the kidney was due to too late operation, or to the kidney being fixed too low, or to failure to secure permanent fixation.

A. H. Goelet, M.D.

LETTER FROM CONSTANTINOPLE.

THE WEATHER CONDITIONS—DR. RIEDER'S RESUMPTION OF WORK—QUARANTINE AGAINST MECCA PILGRIMS AND AGAINST EGYPT—SYPHILIS IN ASIA MINOR—ALLEGED MIRACULOUS CURES.

(From Our Regular Correspondent.)

Constantinople, May 24, 1902.

Constantinople has an atmosphere rather than a climate. Situated on a hill between two seas, it is at all times subjected to great variations of temperature. But this season is a record one in the way of temperature. The alternations of heat and cold have been very frequent and irregular, trying even to strong people. Consequently there have been many cases of bronchitis, pneumonia, catarrhal sore throats and gastric affections. There have however been fewer cases of pure typhoid, which may reasonably be attributed to a certain degree of improvement in the municipal health regulations, though there is yet much to be desired in these respects. Plague in Egypt and cholera at Mecca act as municipal stimulants.

The medical classes at the Gulhanè School of Medicine were opened at the ussual season. This clinic is directed by Dr. Rieder Pacha, who has completely recovered from the injuries he sustained last year. The German Ambassador and Ambassadress were present to express to Dr. Rieder Pacha the satisfaction of the Emperor William at his recovery, due to the intelligent care bestowed on him by the medical staff and four German sisters. His Excellency then bestowed various decorations of the Red-Eagle, and Crown of Prussia on Drs. Dycke Bey and Hoffmann and the Turkish doctors of the school. A special operator for the school and hospital has since been engaged—a Dr. Dieke of Hamburg.

Quarantine against Egypt is always more or less in force on account of the recurrence of plague cases. The presence of cholera at Mecca and the return of the pilgrims have necessarily added to the quarantine restrictions, but it is to the credit of the sanitary authorities that they have been made as little vexatious to commerce and travellers as possible. Up to April 27,336 pilgrims had quitted Djeddah to return to their countries. Of these 2,372 will arrive at Constantinople. Measures were taken to prevent overcrowding of haus and hotels by these pilgrims of Bokhara, and the Caucasus obliged to disembark. Russian pilgrims returning from the Hedjaz after having "purged" quarantine at Thor on the Red Sea will be required to pass through the Bosphorous in quarantine (*en contumace*), on their way to Russia. In case, however, of plague or cholera occurring on board, these ships and pilgrims will undergo the Kglementary quarantine at the lazaret of Classamene, and afterward pass through the Bosphorous *toujours en contumace*.

The latest regulations are of May 20: "From Egypt via Piræus, 48 hours' quarantine with disinfection of clothes and goods at the lazaret of Clasamèns, but ships from Piræus having a bill of health (*patente de Santé*) with the Turkish consular vise attesting that they came from Egypt, but have remained at Piræus five days before embarkment, will be received in free pratique." This may be changed to-morrow if further cases of plague occur. Plague is now endemic in Egypt, and sporadic cases will arise for a long time to come. This prospect, then, of a continuous and fluctuating quarantine against that country is considered with great anxiety by the shipping interests affected.

On the subject of quarantine there has been an interchange of views and opinions in the columns of the *Medico-Therapeutical Review* of Constantinople, in which several of the professed sanitarians have taken part. The old arguments pro and con have been again thrashed out, some advocating the entire suppression as a thing out of of date and having no scientific basis; others, the majority, being in favor of it, though in a modified form, and in accordance with the principles of advanced sanitation. Nearly all, however, declared land and frontier quarantine as being useless.

The CO_2 process of Mr. Pierre Apery for killing rats on board ship is still a fertile subject of discussion in the local press and scientific societies here, and has given occasion for various utterances, and not altogether polite recriminations. Microbes, rats, and the little things upon them, are responsible for a passage of arms between Prof. Remlinger of the Bacteriological Institute and Mr. Apery, which has extended to the Belgian medical journal, *Le Médecin*.

For some years past the attention of the Imperial Government has been directed to an important subject, *i.e.*, the spread of syphilis in many of the provinces of Asia Minor. Dr. von During Pacha was sent on a mission to these provinces to examine, report upon, and suggest measures to arrest the ravages of this malady. It would appear from his investigations that syphilis was spreading to an alarming extent, and, now local hospitals are being established in the districts most affected under the direction and supervision of Van During Pacha, who, needless to say, has a European reputation as a dermatological specialist.

How such increase of this disease in districts formerly known to be relatively free from it can be explained is an interesting question. It has been suggested that it was introduced in a more virulent form by returned troops after the Russo-Turkish war. This is a feasible explanation, and it is evident that the unsanitary state of the interior and surrounding unhygienic conditions would favor the development and increase the virulence of the disease once introduced. It will be no easy task to combat. So far as the male population is concerned, much can be accomplished by the measures already taken, but with the female it will not be so easy, as there are greater difficulties in the way—religious and social.

The saints of the Greek Church are competing against legitimate medical practice. The columns of two Greek journals are filled with the descripton of imiraculous cures performed by the image of the "Panagia," or Holy Virgin, in the Church of the Virgin at Alte-Memer. According to the papers, the wonderful cures are authenticated by certain persons of the Greek community, who announced to the Patriarchate the cure of a young girl dumb from her birth. This and other miraculous cures caused such an enormous affluence to the Orthodox Greek Church of Alte-Memer that the Grand Vicar was authorized by the Patriarchate to declare to faithful Christians that there was no foundation for those reports of the local press, and that the said person, or persons, had not made any such representations. In spite of this declaration the crowds still pressed daily at the church, as the reports of further miraculous cures spread in the city. Finally the Patriarchate issued a third declaration "that the Church was not convinced of the authenticity of what was stated to have occurred at Alte-Memer, and that the Alte-Memer Church would not be opened except at the usual hours of morning and evening prayers, and that these prayers would be followed by two adorations before the image of the Virgin, which would be maintained in its usual place, and no one permitted to touch it, and that collections of money were strictly forbidden." The "Eikon" is credited with certain muscular powers of conviction. The multitude, however, maintain there is something in it, as it cannot be all lies.

DENTISTS NEEDED IN HOSPITALS.

To the Editor of the Medical Record:

Sir: The need for the regular attachment of one or more qualified dentists to the staffs of every hospital and dispensary seeking to aid humanity by attention to the practices of preventive medicine cannot be overlooked.

In the rush to be the first to find the "knock-out drops" fitted to match with the latest discovered microbe, or lost in the brilliancy of an active operative surgical career, the physician of our day is too prone to forget that back of every disease which is presented to him is an individual, and nowhere is this oversight so manifest as in the wards of hospitals and in dispensaries. Owing to the press of numbers of patients coming before him the visiting physician easily engrafts a habit of superficiality or too great dependence upon his assistants, and many failures of success on the part of the average medical man may be traced to habits of negligence learned in an institution.

If an interne or a nurse dosed a patient under his or her charge with the contents of culture tubes from the laboratory, their stay in the house would be short, and, in the light of our times, a trial upon a criminal charge might be remotely possible, yet every day patients lying in the wards or receiving medical treatment in one form or another in the out-patient departments of our hospitals are allowed to swallow the diversified colonies of bacteria constantly present in their mouths without any attempt at prevention upon the part of their medical advisers. Aside from being centers of propagation for mouth contamination, decayed teeth, by interference with proper mastication of food and so affecting the nutritive processes, open the way to future ill-health. The late Dr. William Pepper was so impressed with the importance of this factor in disease that he made it his practice to refuse a patient, whether he was private or free, having bad teeth until the defect was remedied.

By a study of the oral cavity of the average walking dispensary patient an idea of the condition of the public mouth is readily gained, and the need for education in the use of a tooth-brush is demonstrated. The triumphs of American dentistry are known the world around. By appointing a sufficient number of dentists to attend to the needs of its patients the medical board of a hospital will demonstrate a spirit of progress befitting to our times.

Frederic Griffith, M.D.

805 Madison Avenue.

APPENDICITIS INCISIONS.

To the Editor of the Medical Record:

Sir: The interesting contribution on the subject of appendicitis incisions by Dr. Wyeth in the Medical Record for June 7, 1902, will probably meet with the approval of the majority of surgeons, and yet it seems to me that we can save more time for the patient, and at the same time avoid unnecessary scarring by employing shorter incisions than the one that he advocates. In interval cases, and in cases before the advent of abscess formation, an incision one inch and a half long, through skin, muscle and peritoneum, is sufficient, in routine work. I depend upon this length of incision, and make it a rule to allow the patients to get out of bed on the seventh day after operation, and to return to their ordinary occupations on the tenth day. I have employed the gridiron dissection advocated by McBurney ever since the publication of the first article upon the subject by that distinguished author, and this, in connection with the short incision, gives the patient a great advantage. One hears a good deal about the difficulty of separating adhesions through the short incision, but that belongs to beginners, and it is rarely, indeed, that one will find adhesions requiring work by sight. As to the dangers of the short incision, my patients are all alive, or were at the time of their discharge, and that ought to be sufficient answer. There have been only two hernias to my knowledge after the inch-and-a-half incision. One of these was in a case of tuberculosis of the appendix, and was repaired by Dr. Coley. The other one is in a case in Iowa, in which abscess of the abdominal wall formed after operation. It is a small fixed hernia, and the patient does not care to have anything done for it. If there are any other cases of hernia I shall be very glad to know about them, as I do not care to deceive myself nor any one else in this matter.

In cases with abscess, or widespread peritoneal infection, I use an incision about three inches long, and employ here also the gridiron dissection, rarely cutting across the belly of a muscle, and seldom finding it necessary to use retractors. The muscles fall together after operation, with the aid of a very little suturing, and there are no hernias to my knowledge in any of my cases since the gridiron incision was adopted. The long-incision patients remain in bed for an average length of seventeen days. None of my patients are advised to wear a supporter after abdominal operations of any sort. Sometimes their physicians like to put them on, and it may be that there are some cases in which the patient obtains comfort for a while from the use of a supporter, but my belief is that proper suturing, and the avoidance of the employment of gauze packing practically does away with the need for supporters. Experience in every day practice, and the result of experiments with rabbits (See page 129, "Lectures on Appendicitis") apparently give sufficient testimony bearing upon this point.

Robert T. Morris, M.D.

58 West Fifty-sixth Street, New York, June 7, 1902

CHLOROFORMING A SLEEPER.

To the Editor of the Medical Record:

Sir: I have noticed several remarks about it being impossible to administer chloroform to a patient without awakening the patient, especially a letter in the Medical Record of March 29. Any person who has at all administered chloroform often, will have been at times asked to do so to children that are asleep. It is quite possible to administer chloroform, not ether, to children when they are asleep, and I have given it that way myself many times without wakening the child, giving it in the bed and carrying the child to the table after being under the chloroform. It is easily accomplished by placing a drop or two to start with on an open wire mask with a layer of gauze over it. I think this question has come before the profession often enough to have been settled by this time.

H. A. Stevenson, M.D.

London, Ontario.

Professor McWeeney of Dublin on the Milk Question.—Professor McWeeney, at a recent meeting of the Royal Academy of Medicine in Ireland, said that codification of the sanitary laws was a necessity; as things were, a whole library of legal books was wanted to find out the law of sanitation. Sterilization of milk was out of the question; it made ordinary milk unsightly and unpalatable and spores resisted boiling for three hours under a pressure of two atmospheres. Pasteurization killed typhoid germs at a temperature of 140° F, and at 190° it killed the tubercle bacilli; no creamery should be allowed to vend milk until it had been properly pasteurized. As for the Dublin dairy-yards, he considered them to be a disgrace to civilization; they were kept in an intolerably filthy state, and, as for the attendants he thought that if they had the German sanitary law in force in Dublin, some 90 per cent. of the milkers would be arrested and forcibly washed. There could be no proper supervision of dairies without a bacteriologist; a veterinarian could not make an exhaustive microscopical examination of milk or perform the necessary biological experiments.

Progress of Medical Science.

The Boston Medical and Surgical Journal, June 19, 1902.

The Use of Suprarenal Extract in Hay Fever.—J. Payson Clark considers the following conclusions to be justified by his experience: (1) In simple vasomotor rhinitis, with no discoverable local abnormality and no general dyscrasia, suprarenal extract used locally appears to give favorable results in a large proportion of cases, either entirely preventing or much diminishing the severity of the symptoms; (2) In cases of hay fever in which there is some local abnormality in the nose, the suprarenal extract does not act favorably until such abnormal condition is remedied, and then it may be found to be unnecessary; (3) In cases in which there is a rheumatic or allied dyscrasia, the suprarenal is liable to cause some reaction at first, and in any event does not act so favorably as in uncomplicated cases.

Report of a Case of Chronic Continuous Hypersecretion with Hyperchlorhydria (Reichmann's Disease), with Especial Reference to Treatment.—R. F. Chase tried various remedies and methods of treatment in his case, but obtained the best effects from rectal feeding. It gave relief from pain and caused a diminution of the secretion and of acidity. Hypersecretion followed the resumption of food by the mouth, but the gastralgia was stopped by the rectal feeding, and is now prevented by lavage, attention to diet, and occasional fasts of from twenty-four to thirty hours. An absolute cure has not been obtained, but much has been done for the patient. He has had placed in his hands the means by which he can protect himself from the intolerable gastralgia. He has been enabled to follow his occupation continuously for the past ten months, whereas previously he was losing one-sixth to one-fourth of his time. The state of dejection and despair, in which he affirmed he did not care to live if he were always to have the pain, has been replaced by one of comparative comfort and happiness.

Journal of the American Medical Association, June 21, 1902.

Gangrene Following Thrombosis of the Abdominal Aorta and Its Branches.—The case is reported by R. E. Garrett, his patient being an insane woman, aged thirty-four years. Acute symptoms commenced with irritability and pain in the legs, with inability to stand and walk. Slight fever was present. The next day cardiac failure was noticed with profound syncope, quickly passing to a condition of semi-coma continuing for several hours, after which the general condition improved. A few days later dry gangrene appeared in one toe of the right foot, soon involving the entire member. Amputation was done at the junction of the upper and middle thirds of the right thigh. Healing was uneventful. The left foot was somewhat cold, but up to time of record, thirty-seven days after the onset of symptoms, remained intact. The dissection of the amputated part showed the femoral and popliteal arteries to be occluded by a firm, hard thrombus, extending in one continuous clot from the point of incision in the femoral down through the popliteal to within about an inch of where the anterior tibial is given off. The veins were normal. The author is unable to decide whether the case was a traumatic one due to some self-inflicted injury or accident, or whether it was due to spontaneous coagulation, such as has followed certain febrile conditions, including influenza.

Analysis of Ninety-six Operations for the Relief of Tuberculosis of the Testis.—The conclusions offered by Orville Horwitz, are as follows: (1) A primary tuberculous infection of either the epididymis or testicle may occur, the former being by far the more common; (2) A primary infection of the epididymis, secondarily that of the testicle, is more common than the descending one; (3) Primary involvement of either the epididymis or testicle usually takes place through the circulation, the soil being predisposed to the location of the tubercle bacillus, either by a slight traumatism or by some reflective condition which has given rise to inflammation of the organ, most commonly an attack of gonorrhœa; (4) Secondary tuberculous involvement of the epididymis or testicle sometimes follows a primary focus of the disease in other portions of the body, more commonly in those organs that are in a direct anatomic connection with the sexual glands, such as the seminal vesicles, prostate, urethra, bladder, ureter, or kidney; (5) The invasion of the testicle may be rapid, associated with acute inflammatory symptoms, an abscess soon developing; or the onset may be slow, the symptoms simulating those of either chronic syphilitic orchitis, or malignant disease of the organ; (6) The tuberculin test should always be employed in doubtful cases when only one focus of the disease is known to exist; (7) In doubtful cases associated with hydrocele, the fluid should be examined for the tubercle bacilli and inoculating experiments made; (8) The injections of either emulsions of iodoform or of sulphate of zinc into the diseased part are not to be recommended; (9) In all cases of encapsulated caseous nodules quiescent in the epididymis, epididymectomy should be performed; (10) Epididymectomy, together with resection of the vas deferens, is not attended by either atrophy of the testicle or sexual weakness; (11) The drainage of the tuberculous abscesses, followed by use of the curette, is only to be employed where radical treatment is not permissible, as it is attended with more or less danger, and is generally unsatisfactory in its results; (12) In instances in which the epididymis alone is involved, a resection of the diseased structure is all that is required; whether a partial or complete resection of the vas deferens is to be undertaken is still undetermined; (13) Double orchidectomy should be performed when both glands are diseased, provided there is not extensive coexisting tuberculous infection of other organs; (14) Whether infected seminal vesicles should always be removed at the time that the epididymis or testicle is resected is a question open for discussion. From the fact that in a large majority of cases the removal of the primary seat of the disease is followed by a subsidence of the tubercular involvement of the vesicles, it is deemed wiser, as a rule, to wait and remove the vesicles later, if necessary; (15) Hygienic and climatic influences play as important parts after operations in fortifying the constitution against further invasion as they do in other tubercular conditions.

New York Medical Journal, June 14, 1902.

Two Cases of Supposed Gastric Perforation in Which No Explanation of the Symptoms Was Found at Operation.—The cases are reported by Andrew H. Smith. The first case was that of a young woman, aged twenty-eight years. Her symptoms were gastric pain and tenderness, with great acceleration of the pulse and a grave condition of shock. The abdomen was opened, but the peritoneal cavity appeared normal. The exterior of the stomach showed no changes. It was, therefore, not opened. Death followed in twenty-four hours. No autopsy was allowed. The occurrence of hemorrhage was excluded by the absence of blood from the material last vomited and from the condition of the stomach at operation. The second case was that of a married woman, aged twenty-eight years, with the usual history obtainable in cases of gastric ulcer. Symptoms of perforation finally developed and a laporotomy was done. On opening the abdomen no free fluid or adhesions were found. The stomach was distended with gas, and contained a little brownish fluid, possibly disintegrated blood. The mucous membrane was greatly congested, and in the lesser curvature was found an ulcer of the size and shape of a melon seed, which, however, extended only through the epithelial layer, and showed no signs of recent hemorrhage. The edges of the ulcer were soft and not elevated. The ulcer was excised and the stomach well sutured to the wall of the abdomen. Saline infusion was resorted to, but death occurred in twenty-four hours. Autopsy showed fatty degeneration of the liver, otherwise no gross lesion of any organ other than stomach. Microscopical examination of the mucous membrane of the stomach showed tubercles, and two or three tubercle bacilli were found.

New York Medical Journal, June 21, 1902.

Difficulties in the Diagnosis of Certain Febrile Diseases.—Glentworth Butler gives the clinical histories of ten cases, with comments on each. By adding a number of similar cases of which some record has been kept and collating them with reference to their pathological character, he divides them into four groups, viz., those in which the febrile symptoms were due to (1) Concealed suppuration; (2) Tuberculous infection; (3) Irregular typhoid, and (4) Malignant endocarditis. All of these diseases should be borne in mind when we are in the presence of febrile symptoms of obscure origin.

Gastroptosis the Cause of Symptoms Erroneously Attributed to Nephroptosis.—According to Achilles Rose, gastroptosis and nephroptosis form part of enteroptosis. It is doubtful whether displacement of the stomach or kidney ever exists without the whole splanchnon being more or less relaxed. Gastroptosis is oftener overlooked than diagnosticated. Rose comments on the great confusion existing in literature as to the exact signification of the above terms and claims that the relief of the general enteroptosis will often remove the symptoms of floating kidney, the latter being but a part of the former general condition. He believes that many operations done for floating kidney are unnecessary. Enteroptosis marks certain symptoms which are relieved when the causal condition is relieved. Nephroptosis is included in enteroptosis and it is impossible to see how the displaced kidney can be accused of causing the symptoms attributed to it exclusively.

American Medicine, June 21, 1902.

The Evaporation Bath in Typhoid Fever.—J. Morgan Coffin describes the technic of this bath, as follows: The patient is first placed on a blanket, then a layer of one thickness of absorbent gauze is fitted closely to the body surface. This is sprinkled with water at a temperature of 100°–112°F. An electric fan, situated at the foot of the bed, on a level with the patient's body, furnishes the change of air necessary to dry the gauze. The average length of time required to evaporate one pint of water was thirty minutes. In all the cases of typhoid fever (100+) treated in the hospital by the writer during a period of three months, those treated by the evaporation bath method gave the least satisfactory results, as compared with tubs or sponges, and their course was almost identical with a series of cases in which no hydrotherapy was used. The baths were distasteful to the patients, and in addition the entire ward was disturbed by the constant buzzing of electric fans. There was practically no response except in temperature, the effect on the circulatory and nervous systems being nil. And, although the series is somewhat short for comparison, it may be noted that the mortality in the evaporation-bath series was 13$\frac{2}{3}$ per cent. as compared with 10$\frac{5}{7}$ per cent. in all other typhoid cases during the same period.

The Relation of the Caliber of the Urethra, and Especially of the Meatus Urinarius, to Vesical Tone.—G. Frank Lydston concludes that: (1) The normal vesical tonus depends upon a certain degree of physiologic obstruction to the urinary outflow; (2) The structural and functional integrity of the vesical walls depends upon this same resistance; (3) The resistance is normally most marked at the meatus, although the entire urethra is a factor in its production; (4) This resistance is both elastic and inelastic at different points in the urethra, and in varying conditions (5) An exaggeration of this resistance produces atony of the bladder in old subjects, hypertrophy and exaggerated power in the young. Exceptionally, it produces atony in the young, but, as a rule, only as a reflex neurosis; (6) A marked diminution of this resistance, such as results from urethrotomy, and especially meatotomy, produces vesical atony of greater or less degree; (7) The foregoing should be borne in mind by the surgeon, and, in certain cases, the resistance of the meatus preserved by careful operative technic; (8) In most cases the resulting atony is of little moment, but it is always worthy of consideration, and in some cases of sufficient prominence to be worthy of serious attention; (9) In cases in which a free urethrotomy has been performed, it is wise to instruct the patient to compress the meatus somewhat during micturition, so as to maintain the normal vesical tonus by offering sufficient resistance to the outflowing urine to properly exercise the vesical muscle.

Medical News, June 21, 1902.

Neurectomy for Facial Neuralgia.—E. M. Magruder says that facial neuralgia is probably one of the most obstinate of the non-fatal affections with which the physician has to deal. The pathology is doubtful, as parts of excised neuralgic nerves in certain cases appear to be perfectly normal, while in other cases they present pathological changes. As to the surgical treatment of this affection, the writer notes three methods: (1) Division of the nerve-trunk or branch that gives pain; the relief from this measure is very short, as function is soon reestablished; (2) Excision of the Gasserian ganglion; the writer has had no personal experience with this method; (3) Excision of a part of the offending nerve; the results with this method have been varied. The author gives the history of several cases. One of these was a man seventy-one years old, upon whom he operated eleven times in less than nine years. The right supraorbital region was the seat of operation four times, the right infraorbital region ten times, the right nasal nerve, once, and the right temporal region once. All these operations gave more or less temporary relief, varying from four to eighteen months—in the earlier ones perfect relief and in the later ones only an amelioration of symptoms. On several occasions directly after some of the later operations, the pain seemed to increase to an extreme degree, then it would diminish, but not entirely disappear. The disfigurement was very slight after the first two operations in any one place, but increased with each subsequent operation and finally became quite marked.

Philadelphia Medical Journal, June 21, 1902.

Report of Five Cases of Asthma Treated with Silver Nitrate Injections.—H. T. Bass describes this method of treatment, which he learned from Thomas J. Mays. Five drops of a 2$\frac{1}{2}$ per cent. solution of silver nitrate are injected in the neck under the skin over the vagus nerve, a little to the outer side of the carotid artery—about midway between the angle of the jaw and the clavicle. Two of the five cases which he has treated in this way are relieved up to this time; another case up to the first of December, and this case is now under treatment; while two others seemed to be relieved somewhat while under the active treatment. The writer states that Dr. Mays is very hopeful for the treatment in asthma, and is enthusiastic over silver nitrate injection in the neck in phthisis.

Fourteen Cases of Spastic Spinal Paralysis Occurring in One Family.—William G. Spiller makes this interesting report. He presents a table showing the occurrence of this disease in fourteen individuals in one family. He describes two of the cases. Both of these patients are very intelligent. In both of these cases the symptoms are merely spastic paresis of the lower limbs with contractures and exaggerated reflexes of these limbs. Of late years the disease is said to have commenced before or about the fifth year of life, and has always presented the same symptoms. It is almost as common in the female sex as in the male. The older of these two cases described began to show the symptoms at about five years of ago. The lower limbs are not atrophied. The left foot is in equinovarus position, while the right foot is much less contractured. The left foot is shorter than the right and the instep is high. There is little voluntary movement of the toes and feet, and the weakness is greater on the left side. Sensation for touch and pain is normal everywhere. The knee jerks are much exaggerated. Ankle clonus and the Babinski reflex are distinct on each side. The feet are tender in walking. The gait is very spastic. In walking, the right foot turns inward, but in sitting it is straight. The muscles all respond to the faradic current, but a strong current is required. The muscles of the upper limbs are well developed and the patient has a powerful grasp of the hand.

The Lancet, June 7, 1902.

Dilatation of the Heart and other Manifestations of Weakening of the Heart as Results of Rheumatism.—T. Fisher notes that the rheumatic poison often causes dilatation of the heart and passes over the valves. In most people the fibrous pericardium does not fit the heart so closely that there is not sufficient space for considerable dilatation of the heart and the dilatation that occurs during rheumatic pericarditis is not due simply to the weakening of the fibrous pericardium but to the direct influence of the disease toxins on the heart muscle. Dilatation may be followed by hypertrophy, independent of any adhesions or valvular defect. If a poison such as alcohol can produce enlargement of the heart it does not seem unreasonable to suppose that the toxins of rheumatism may do so also. This appears especially probable when it is remembered that rheumatism affects the heart most seriously while that organ is growing. Marked enlargement of the heart very rarely follows an attack of rheumatic pericarditis occurring after the age of twenty years. An altered nutrition due to poisoning of the cardiac muscle would explain also the weak nature of the hypertrophy. Another manifestation of rheumatism in children is tachycardia, which may be due to a weakening of the myocardium. The conclusions of the paper in general are: (1) That dilatation of the heart ending in death may occasionally occur without valvular disease or general adhesion of the pericardium being present; (2) That in rare instances hypertrophy of the heart may occur without valvular disease or general adhesion of the pericardium; (3) That there is evidence that myocarditis may exist in the absence of pericarditis; and (4) That slight weakening of the myocardium may be shown by loss of physical energy, by attacks of cardiac pain, or by tachycardia.

The Lancet, June 14, 1902.

A New Method of Local Anæsthesia for Surface Operations.—This method. claimed as a novelty by E. A. Smith, is nothing but the application of cataphoresis to a surface covered with lint dipped in a solution of cocaine and adrenalin. He uses a current of 15 to 30 milliamperes passed for from five to ten minutes.

The Relation of Mental Symptoms to Bodily Disease.—Nathan Raw states that, after a long experience in the care of the insane and the personal certification of over 2,000 patients to asylums, he is firmly convinced that a large number of persons are certified as lunatics who are simply suffering from temporary insanity, the result of, or associated with, some form of bodily disorder or toxic poisoning. These people are not really insane, and should not be associated with lunatics. They quickly recover under proper treatment, and the author maintains that, from every point of view, it would be to the public advantage for them to be treated in a hospital for mental diseases, with expert physicians in attendance and a clinic of students to study the acute phases of mental disorder, where the patient and his relatives might be spared the stigma of his having been detained in a public asylum as a certified lunatic.

Temporary Reminiscence of a Long-forgotten Language During the Delirium of a Bronchopneumonia.—Henry Freeborn reports the case of a woman of seventy years suffering from bronchopneumonia, which, though severe, ran a favorable course. During her delirium she began to talk in Hindustani, later in English, French, and German. The patient was born in India, which country she left at the age of three years and landed in England after five months' voyage, before she was four years old. Up to the time she landed she had been under the care of Indian servants and spoke no English at all, her only language being Hindustani. On her coming to England the ayah was sent back and she then began to learn English, and from that time had never spoken Hindustani. She apparently at first went back in her delirium to her very earliest days, when she spoke again the first language she ever heard. A poem which she repeated over and over again was found to be something which the ayahs are in the habit of reciting to their children, and the conversations were apparently with the native servants, one being recognized as a request that she might be taken to the bazaar to buy sweets. On the patient's recovery she was unable to remember more than a few words of Hindustani, nor had she any recollection of ever having been able to speak the language.

Early Peritonitis.—A group of cases is reported by W. H. Battle. They all presented abdominal symptoms of a mild type, varying but slightly. Each patient was seized with abdomnial pain and each vomited and had a moderate elevation of temperature—in no case was it registered as above 102° F. before operation. The pulse did not, except in one instance, exceed 110, nor was the expression of any patient indicative of serious abdominal trouble. Yet in each case there was purulent peritoneal exudation of considerable amount within a few hours of the commencement of the illness, and in three of them there was perforation of the appendix, and in the fourth acute inflammation of that structure with a purulent collection inside it. In all these cases the mildness of the symptoms, in spite of the serious condition of the appendix, is striking. Inflammation of the peritoneum had already commenced, and it is unlikely that it would have become localized. Cases of this naturer teach us that we should be on the early lookout for evidences of intraperitoneal effusion. This is the point of great importance in the early diagnosis of peritonitis. If it was more carefully considered, not so many cases would be brought to our hospitals in a moribund condition, or at least so far advanced that operative intervention is likely to be of little use.

British Medical Journal, June 7, 1902.

Gonorrhœal Synovitis in an Infant Suffering from Ophthalmia Neonatorum.—R. W. Innes Smith reports this case. Two days after the birth of the child a discharge from the eyes was noticed, The mother stated that for several months she had had a discharge from the vagina. The father admitted that he had had gonorrhœa six months previously. The ophthalmia was very severe. It was treated by syringing with 1 in 5,000 biniodide lotion every two hours night and day. When fifteen days old the child developed a well-marked synovitis of the right knee. The case was undoubtedly one of gonorrhœal rheumatism. This is a very rare affection in infants.

The Influence of Nasal Obstruction upon the Development of the Teeth and Palate.—Harry Campbell believes in the correctness of Whitehead's statement to the effect that nasal obstruction is capable of producing deformity of the maxilla. The resulting deformity constitutes a distinct pathological entity which the writer suggests should be called the mouth-breather's jaw. The narrowness of the hard palate in these cases gives it a false appearance of height. The writer refers to one etiological cause of this deformity—a reduction of atmospheric pressure in the nasal cavities, which induces a negative pressure within the antrum, and so prevents ample expansion of it, which is essential to the proper development of the maxilla. In the many hundreds of skulls which Campbell has examined in the museums he has not found one unmistakable instance of the mouth-breather's jaw, while there are hundreds of thousands of such jaws among the present inhabitants of London.

Widal's Reaction in a Case with Uric-Acid Calculus.—Arthur Maude states that there is no doubt as to the negative value of Widal's reaction. But it is certain that other conditions than typhoid fever will produce agglutinative reaction in typhoid cultures. The writer then reports a case which shows the difficulty of distinguishing between appendicitis and right-sided renal colic. A middle-aged woman passed a small stone from the bladder fifteen years ago. About 1889 she began to have typical attacks of recurrent appendicitis. At the third attack operation was performed, and there were found three concretions, which had escaped from an ulcerated appendix. This had sloughed into an abscess cavity, which had probably previously been evacuated into the bowel. She made a good recovery. Three years later she had a return of symptoms which might have been renal colic, appendicitis, or possibly mild typhoid fever. The blood gave a slight Widal reaction. Ehrlich's reaction could not be obtained. Two days later the temperature fell and she became apparently well. Five days later she passed a large uric-acid stone, a month later another, and a month later, a third. There is no history to show that she ever had typhoid fever.

British Medical Journal, June 14, 1902.

Malarial and Filarial Diseases in Barbadoes.—George C. Low states that in Barbadoes the medical men declare that indigenous malarial fever does not exist in the island. Cases are often seen in the General Hospital, but they have all come from some of the neighboring islands, where malaria is very common. No one could point to a case which had originated in the island itself. The writer has tried to find if any mosquitos of the genus Anopheles are found in Barbadoes or not. There is one swamp which appears like a suitable breeding place for these insects. On investigation, however, although larvæ of a species of Culex and those of dragon flies and other aquatic insects are always found in abundance, no Anopheles larvæ could be discovered. People in the vicinity never suffer from fever, but enjoy remarkably good health. It is probable from the close similarity of this place to Anopheles-infested swamps, in the neighboring islands, that such larvæ could live here perfectly well, whether they have ever lived here and died out, or whether they have never existed, is a matter of speculation. The large amount of filarial disease in Barbadoes is in marked contrast to the absence of malaria. This is due to the extraordinary abundance of the common domestic mosquito, Culex fatigans, which acts as an efficient host for the spread of the diease. There should be a system of sanitary inspection, and mosquito nets should always be used.

Remarks on a Case of Hereditary Localized Œdema Proving Fatal by Laryngeal Obstruction.—T. Wardrop Griffith reports a most interesting case. The patient was a woman, aged eighteen years, when she first came under the writer's observation, in 1886. From this time till her death in 1902, she was frequently seen by Griffith. The patient had four children, but pregnancy had no influence on the disease to which she was a victim. Her father from his earliest infancy had been afflicted with the same affection. On three occasions these attacks seem to have affected the throat. The third attack carried him off at the age of twenty-nine years. The swellings which this young woman presented were diffuse or circumscribed. They were usually pale, but sometimes slightly pink, and did not pit on pressure. They never became vesicular or bullous. In February of 1892 she felt that her throat was swollen, but as the swelling seemed to be passing backward, she thought that she would soon be all right. At noon, when her husband came home from his work, she started up, tried to speak, clutched at her neck, grew blue in the face, and died almost at once. Griffith made a series of transverse sections of the larynx which proved very instructive, for it showed that the œdema affected not only the mucous membrane but the deeper connective tissue, and even the substance of the muscles. This condition probably prevented the abductors from causing the necessary physiological enlargement of the aperture during inspiration. The œdematous fluid was purely of the serous variety, untinged with blood. The tissue covering the true vocal cords was decidedly affected.

The Œdema of Anæmia.—Thomas Houston sums up the interesting points which have suggested themselves to him in his observations on this subject: (1) The absence of loss of weight in anæmic conditions, and the fact that the patient seldom seems emaciated is mainly due to the fact that there is abnormal accumulation of fluid in the blood and tissues. If this excess of fluid were deducted, it would probably be found that in these, as in other chronic illnesses, there is a progressive loss of weight in proportion to the severity and duration of the disease; (2) In the cure of such anæmic conditions, especially chlorosis, the first stage seems to be the getting rid from the blood and tissues of this excess of fluid; (3) A gain of weight in a case of pernicious anæmia under treatment, and without any improvement in the hæmoglobin, is to be regarded as an unfavorable sign, indicating dilution of the blood and consequent escape of serum into the tissues. It may, however, be a critical phase of the disease, and indicates the first step toward concentration of the blood. Immediately after this sudden increase in œdema there is either a marked improvement or the patient dies; (4) The œdema of anæmic condition seems to result from a hydræmic plethora of the blood, and is sowewhat different in origin and nature from the œdema usually found in Bright's disease; (5) Careful observations in the manner indicated of anæmic conditions, namely, a record of the weight and hæmoglobin value of the blood may furnish very interesting results. The points to direct attention to are the occurrence of hemorrhages (epistaxis, etc.), œdema, diarrhœa, and profuse sweating. The writer's observations convince him that these symptoms are often the result of dilution of the blood, and may be merely nature's method of counteracting the excessive and abnormal volume of the blood.

Deutsche medicinische Wochenschrift, May 29, 1902.

The Contagiousness of Carcinoma.—Radestock reports two instances in which the husbands of carcinomatous woman developed carcinoma. In the first instance the woman suffered from an ovarian carcinoma. Seven years after her death the husband, aged fifty-five years, sickened with an intestinal carcinoma which also proved fatal. In the second instance the wife died from a carcinoma of the œsophagus, and three weeks subsequent to her death the husband, aged seventy-seven years, began to show the first symptoms of a tumor in the same location. This proved to be a carcinoma, and death took place four months later. In neither instance did the husband give any hereditary history of carcinoma. The author does not believe that either of these cases adds much weight to the infectious theory of carcinoma, although the second case would be so regarded by the supporters of that theory. It should be remembered that in both instances the husbands were in that period of life during which carcinoma most frequently develops.

Enteroptosis and Its Costal Sign.—B. Stiller says that the variety of enteroptosis which invariably accompanies nervous dyspepsia is always of neurasthenic origin, and is always accompanied by a movable tenth rib. In all cases the presence of a movable tenth rib signifies that the trouble is constitutional and not mechanical in character. The presence of this sign is, therefore, not only of diagnostic, but also of therapeutic importance. By its aid the stomach specialist may easily differentiate between organic and functional disturbances. The neurologist may absolutely diagnose neurasthenia, the gynecologist may separate those cases which are mechanical from those which are dependent upon constitutional factors, and the specialist in children's diseases may early detect the presence of neurasthenic proclivities. The mobility of the tenth rib may vary greatly in degree. In many cases the unions between it and the ninth rib is only slightly altered from the normal. In a few cases the costal extremity of the rib is entirely free. In some of the latter the eleventh and twelfth ribs are entirely absent. The intensity of the deformity stands in direct relation to the intensity of the neurasthenic condition. Since this condition is essentially an asthenic of the nervous system, combined with an atony of the general muscular tissue, the author proposes for it the name of "asthenia universalis congenita."

Berliner klinische Wochenschrift, June 2, 1902.

Splashing Sound.—Hans Elsner says that the splashing sound is not necessarily a pathological symptom, and is not, as Stiller thinks, diagnostic of atony of the stomach. Elsner has examined twenty-six women whose stomachs were perfectly normal and found a distinct splashing sound in ten. It is evident, therefore, that other symptoms must be present in order to render the diagnosis of atony of the stomach sure, and he who will make such a diagnosis on the mere presence of the splashing sound will often be deceived.

Protective Inoculation against Anthrax.—G. Sobernheim has obtained an anti-anthrax serum by inoculating horses, cows and sheep with increasing doses of highly virulent anthrax cultures. Sheep and cows were then experimentally protected against anthrax by inoculation with this antiserum. In the first set of experiments the antiserum alone was inoculated and a passive immunity thus produced. For this purpose the initial dose of the antiserum was 10 c.c. This amount was increased in the subsequent inoculations, the largest quantity used at one time being 100 c.c. In the second set of experiments slightly virulent anthrax cultures were inoculated at the same time with the antiserum and a combined active and passive immunity produced. The amount of anthrax culture inoculated at one time varied from .5 to 1 c. c. and the coincidently inoculated antiserum from 5 to 15 c. c. By both of these methods it was possible to absolutely protect sheep and cows when inoculated, experimentally, with highly virulent anthrax cultures. These methods were then put into practical use, in that animals living in regions infected with anthrax were immunized. At first the antiserum alone was used, but the passive immunity thus produced was found to be very transient. The combined method was then employed and a much more durable immunity obtained. None of the animals treated in the latter manner developed anthrax, although many of the uninoculated in the same flocks or herds contracted the disease and died therefrom. This combined method is much to be prefered to the use of the Pasteur vaccine, since it in no wise injures the animal, and one inoculation is sufficient to produce a complete immunity. Furthermore, the immunity thus conferred is more lasting and of a higher degree. Additional experiments have shown that in many cases anthrax may be cured by the use of the antiserum alone. This is not possible with the employment of the Pasteur method.

Münchener medicinische Wochenschrift, June 3, 1902.

Sudden Heart Failure.—Jorus reports a case of sudden heart failure as the result of over exertion in a powerfully built, healthy man. Death took place in three days with marked dilatation of the left ventricle. It is most probable that the cause of the heart failure is to be ascribed to an instantaneous over-straining of the healthy heart muscle and its permanent injury thereby.

A Pathogenic Streptothrix Isolated from Sputum.—W. Rullmann reports a case which has been under observation for five years, and from the sputum of which a streptothrix has, repeatedly, been isolated, oftentimes in pure culture. When grown upon Lœffler's blood serum the morphology of this microorganism greatly resembles that of the diphtheria bacillus, the bulbous extremities, however, are very prominent. The Röntgen picture of the thorax shows the presence in the left lung of three small circumscribed shadows. At the base of the right lung one small shadow is also seen. The movements of the diaphragm on the left side are normal, but on the right side they are somewhat restricted. During the last few months iodipin has been the chief therapeutic agent used. Too short a time, however, has elapsed to admit of a definite opinion with respect to its value in this condition.

Nasal Dysmenorrhœa.—F. Linder, under this name, considers those cases of dysmenorrhœa, which are accompanied by an inflammation of the nasal mucous membrane. Fliess has shown that such an inflammation usually develops in two typical locations: (1) On the mucous membrane of the inferior turbinate body, and (2) On the mucous membrane of the tuberculum septi. He says, moreover, that the application of a 10 to 20 per cent. solution of cocaine to the inflamed mucous membrane in these locations is a specific for the dysmenorrhœa, in that the pains are quickly cut short thereby. Linder confirms this statement, as the result of the observation of sixteen cases. In all of these the pains were almost instantaneously relieved by such applications. In most of the case the pains returned after about twenty-four hours, but were again relieved by renewed applications. In order to determine whether suggestion was at all responsible for the results obtained in several of these cases during subsequent attacks, the cocaine solution was replaced by water, either cold or lukewarm. In one of the cases the water produced no effect, but in all of the others the pains were somewhat relieved. This relief, however, was not nearly so marked and of such long duration as with the use of cocaine. It is evident, therefore, that suggestion is responsible for a certain portion of the beneficial results obtained, but that it does not play the entire part therein.

French and Italian Journals.

The Hæmolytic Power of Aqueous Extract of Tumors.—From his experimentation in this line, G. Panzacchi concludes that the watery extracts of sarcoma, carcinoma, and adenoma have a hæmolytic power. This power is not specific for human corpuscles, but acts upon those of the dog, the rabbit, and the guinea-pig. The extract is not specially active for several days after its preparation, but increases rapidly in its hæmolytic power, and loses it again after a certain time.—*La Riforma Medica*, May 31, 1902.

The Semeiological Value of Partial Epilepsy.—G. Seppilli, discussing the question of the value of partial or Jacksonian epilepsy in the diagnosis of the seat of cerebral lesions, holds that it cannot be considered as an infallible sign of a morbid organic process in the Rolandic zone, but that it is not accurate to assert that it has no diagnostic value. He reports two cases in which the diagnosis of tumor in that situation, made from the presence of partial epilepsy, was confirmed at autopsy, and concludes that the symptom is frequently of diagnostic importance.—*La Riforma Medica*, May 24, 1902.

The Pharyngeal Cough of Children.—Loisel believes that a frequent symptom of many diseases of the pharynx, and of the nasal fossæ is the pharyngeal cough. It is often not understood by the physician—to the great detriment of the patient. In the case of hypertrophied tonsils, whether of the soft or hard variety, there is often a cough which is constant and painful. It is often nocturnal. It is apt to be periodical. The cough of the patient with adenoids is, like that found in hypertrophy of the tonsils, often connected with nasopharyngeal catarrh. This cough may have various characteristics. Chronic granular pharyngitis is also accompanied by cough. In the case of children with fat chests, if nothing is found by auscultation, the pharynx ought to be carefully examined.—*Le Bulletin Médical*, June 7, 1902.

Ankylosing or Collesic Arthritis.—R. Massalongo says that it has long been known that certain affections, localized or diffuse, acute, subacute, or chronic, could lead to the ankylosis of all or of some of the articulations affected. This has been observed in the case of acute articular rheumatism and other infective forms of rheumatism, in syphilis, and especially in gonorrhœa. Chronic cases of ankylosing arthritis are what the author calls collesic or agglutinating. In his practice he has met with many such cases resulting in ankylosis of one or more articulations of the vertebral column alone, or in connection with other joints, and even cases in which nearly every joint in the body was affected, giving a true generalized bony ankylosis. He considers this merely a symptomatic variety of arthritis, however, and not a pathological entity.—*Rivista Critica di Clinica Medica*, May 3, 1902.

A Case of Chorea Minor from Intestinal Intoxication.—Mario De Maldè reports the case of a little girl of nine years, suffering from chorea minor, the cause of which was obscure, until the physician ascertained that she was a victim of chronic constipation, having a passage from the bowels only every ten or twelve days. Intestinal disinfection was at once begun by the administration of 50 cg. of calomel in two doses. This secured the passage of scybalæ, which were almost petrified, black and unusually fetid. On the following day 30 cg. were given in one dose, and caused the copious discharge of hard, black, fetid matters. The daily administration, for about ten days, of a glass of fluid magnesia resulted in the most remarkable change in the child's condition, and in about two months a complete cure was obtained.—*La Riforma Medica.*

A Rare Case of Congenital Deformity of the Nose.—Nicola Longo reports the case of a little girl of eight months, the left side of whose nose was entirely normal, while on the right side there was a trumpet-shaped appendage about four centimeters long and one wide. The narrowest part of this appendage was inserted between the inner canthus of the eye and the root of the nose, and was covered with normal skin. The rest of it was free, and at the inferior extremity was a small orifice, which led to a narrow canal that extended throughout the appendage, and through which air came out when the child cried. The author removed the growth in such a way as to make a new nostril, and the results of the operation were entirely satisfactory. The abnormality was probably due to an arrest of development in about the eighth week of fetal life.—*Giornale Internazionale delle Scienze Mediche*, May 15, 1902.

Annals of Surgery, June, 1902.

The Surgical Aspects of the Status Lymphaticus.—From an experience of seven cases, J. A. Blake notes that five occurred in negroes, six were adults; evidences of tracheal compression by the thymus were wanting. He says that anæsthesia in patients suffering with status lymphaticus is at least frequently fatal. Chloroform in these cases is especially dangerous. Death may occur during anæsthesia or some hours after, the evidences being those of cardiac and respiratory failure. We have no positive means of diagnosticating this condition previous to operation; the most suggestive condition which should put us on our guard is lymphatic hyperplasia. The article concludes with a bibliography.

Sarcoma of the Mesentery.—A. C. Bernays contributes the clinical history of a case under personal observation. Operation was done under chloroform and recovery was uneventful. The removal of the tumor necessitated the removal also of all the ileum except three or four inches which were left attached to the ileo-cecal valve and a part of the jejunum, the whole length of bowel removed being 119 inches. An analysis is made of thirty-six cases of resection of small intestine collected from surgical literature. The analysis shows that in the thirty-six cases, including the author's, death occurred quickly in ten. Four survived four months, twenty-two recovered permanently, and in two of these the colon was partly removed. All the others except three, one of which is his own, report that only ileum was removed. It appears thus that the clinical experience of the thirty-six cases is applicable mainly to the operative results of resection of the ileum. Taking the arbitrary length of gut resected at 200 centimeters, and using only those cases which reach or exceed this length, we find eleven cases recorded. Two hundred centimeters are approximately one-third the length of the small intestine. Of these only one in which 365 centimeters were removed died immediately after the operation. Of the others only five seem to have permanently recovered, not counting the author's case, which was done only sixty-one days previous to the latter's report.

Fracture of the Base of the Fifth Metatarsal Bone by Indirect Violence.—Robert Jones believes that this fracture is very common, but does not find it referred to in surgical literature. He himself met with a mishap of this nature. The symptoms are pain when the patient endeavors to put pressure on toes or inner side of foot, when he fixes the toes, or attempts to invert. The swelling is generally localized over the fractures, and pain is sharp. There is generally no crepitus, no deformity, no yielding on manipulation. The history of the accident is important, because it is sufficiently constant to form a factor in the diagnosis. It is a cross-breaking strain directed anteriorly to the metatarsal base and caused by body pressure on an inverted foot while the heel is raised. The fracture is therefore an indirect one. The prominent base of the fifth metatarsal is closely bound to the cuboid and to the fourth metatarsal by strong ligaments on every side. So powerful are these ligaments that dislocation of the base is the rarest of accidents. It is obviously easier to break the bone than to dislocate it. When the heel, therefore, is off the ground, the body weight expends itself upon the fifth metatarsal, rotating it slightly inward. The opposition to this force takes place at its base, where the strongly attached ligaments resists its displacement. A fracture occurs, therefore, exactly where one would expect it to occur, Crepitus is not felt, probably because the line of fracture runs toward the interosseous ligament, and the fragments are therefore fixed, or because impaction may occur. As reference to skiagrams accompanying the article shows, all the lines of fracture cannot be traced quite through the bone, but there can be but little doubt that the fracture is complete. The difficulty in tracing the fracture line, added to the fact that, like a wedge, it is wider to the outer side, is suggestive of impaction.

Studies in Pathogenesis of Appendicitis.—S. P. Kramer states that, when we consider the situation of this organ, we can readily understand that it must often be subject to alternating periods of anæmia and hyperæmia. If such a disturbance of circulation causes a superficial destruction of epithelium, we would have a condition favoring the invasion of the mucous membrane by the B. coli communis. The character of the inflammation produced is strikingly like that caused by a microorganism closely allied to this, namely, the typhoid bacillus. At times the lymph follicles are hyperæmic and enlarged, almost occluding the lumen of the appendix. These nodules may break down, giving rise to punched-out ulcers. They may perforate the entire thickness of the gut. A vessel may become eroded and we may have a hemorrhage into the appendix or beneath the mucosa. In those cases in which we have a foreign body, or a particle of hardened fæces, finding its way into the appendix, the process is different. Here the disease partakes of the character of a catarrhal or desquamative inflammation, which leads to the formation of concretions. A section of such an appendix through the concretion will show that at least the outer half, and in many cases nearly all, of the concretion is made up of closely packed cast-off cells cemented together with mucus. A small particle of hardened fæces or a foreign body may form the nucleus. These cells are derived from the cast-off epithelial cells lining the appendix and tubular glands and the exuded lymphocytes. The cells will be seen to be gradually losing their staining power as one passes toward the center of the concretions; that is, the older or central cells have lost their chromatic substance, the younger or peripheral cells, being but recently cast off, retain it. Such a concretion by pressure exerts a deleterious influence upon the bloodvessels of the mucosa, compressing the superficial capillaries, thus bringing about the death of a new layer of cells, which become in turn a part of the concretion. In this way we may have a progressive enlargement of the concretion at the expense of the wall of the appendix, until, by pressure, we may have at some point all of the capillaries occluded; there then follow necrosis and perforation.

Society Reports.

ILLINOIS STATE MEDICAL SOCIETY.

Proceedings of the Fifty-second Annual Meeting, Held at Quincy, May 20, 21 and 22, 1902.

The society met in the Superior Court Room of the Court House, under the Presidency of Dr. John T. McAnally of Carbondale.

Prayer was offered by Rev. S. A. Dana, after which an address of welcome was delivered by Hon. J. A. Steinbach, Mayor of Quincy, which was responded to by the President.

The society adopted a new Constitution and By-Laws, in conformity with the plan of reorganization of the American Medical Association. It also endorsed a bill providing for a state board of medical examiners, which is to be separate and distinct from the State Board of Health.

After the transaction of considerable routine and miscellaneous business, the society divided itself into sections, and the reading of papers was begun.

General addresses were delivered by Dr. Chas. B. Johnson of Champaign, who selected for his subject "A Country Doctor's Contribution to Preventive Medicine;" "Pernicious Anæmias, their Diagnosis and Treatment;" by Dr. George Dock of Ann Arbor, Mich.; "Surgical Intervention in Borderland Cases," by Dr. Roswell Park of Buffalo, N. Y.

President's Address.—This was delivered by Dr. John T. McAnally of Carbondale. Matters of general interest to the profession and the laity were discussed.

La Grippe Infection Resembling Puerperal Fever.—Dr. Joseph Brayshaw of Homer gave a resumé of the literature of infection resembling puerperal fever. He also dwelt upon the methods of diagnosticating the same. He said the prognosis was usually unfavorable. He reported a case of la grippe infection in a tuberculous patient, followed by childbirth at seven and one-half months, after which patient developed pneumonia, peritonitis, pleurisy, pericarditis, nephritis, with, finally, general septic infection and death.

Treatment of Septic Conditions of the Uterus.—This was the title of a paper by Dr. M. S. Marcy of Peoria. He said the uterus was a very fertile field for introducing poisonous material into the circulation. He spoke of the treatment of septic conditions after confinement. Special attention should be given to the treatment of these conditions after actual abortion. The different opinions of writers were given. He spoke of the curette in the hands of the general practitioner, and, finally, discussed the best remedy for intrauterine infections.

The Stokes-Adams' Syndrome, with Report of Cases.—Dr. Frank Billings of Chicago gave a brief account of the phenomena which characterize the syndrome described by Stokes and by Adams, the character of the pulse and syncopal attacks; the cardiovascular conditions in which the phenomena may occur. He gave a brief account of two cases in which the syndrome appeared; one with a clinical diagnosis of aneurysm of the aorta, the other one senile arteriosclerosis and fibrous myocarditis. The diagnosis and treatment were discussed at length.

Life Insurance Examinations.—The author of this paper, Dr. H. B. Buck of Springfield, stated that policy demanded that any accepted duty in this line must be done in a thorough, painstaking manner, irrespective of the size of fee. That anything short of honest, painstaking work reflects upon the profession as a body. That suspicion as to the honesty of the profession (entertained by the life insurance companies) can only be remedied by widespread individual effort, each examiner realizing in every case examined that his work tends either to weaken or strengthen that suspicion. That truly careful and scientific professional work would lessen the percentage of premature deaths from diseases of lungs, heart and kidneys. In other words, either carelessness, undue haste, or both, might result in overlooking the incipient evidence of diseases that by and through rapid development and fatal termination furnished too many proofs of death. He then discussed the necessary qualifications for and the technique of the work.

Typhoid Fever in Children.—Dr. I. A. Abt of Chicago, in a paper on this subject, reported ninety cases of this disease in children. He spoke of the prodromata and of the symptoms which mark the onset of the disease; the relapse and date of its occurrence, severity, duration and special symptoms, the pulse, temperature, nervous symptoms, headache, delirium, muscular tremor, neuritis and chorea, the tongue, mouth and pharynx, epistaxis, the intestinal symptoms, diarrhœa or constipation, hemorrhage, perforation, tympany, vomiting, special symptoms, the liver, size and consistency, the lungs, bronchitis, pneumonia, special considerations, the heart, dimensions and physical examination, the larynx, the skin, roseola, date of appearance, location and duration, and occurrence during relapse, abscesses, furunculosis, erythema, bed-sores, unusual conditions, organs of special sense, examination of urine, diazo-reaction, examination for typhoid bacilli and other microorganisms, probable source of infection in cases, including a consideration of house epidemics, the Widal reaction, its occurrence, technique, complications, daily observations, termination of the disease, and autopsial reports.

The Infant's Clothing.—Dr. A. C. Cotton of Chicago, in a paper with this title, discussed the objects of special requirements on account of anatomical and physiological peculiarities; form and material best suited to meet these requirements; the pernicious effects of improper clothing; lowered vitality; impaired nutrition; arrested development, and permanent deformities.

Miliary Tuberculosis.—This was the title of a paper by Dr. Frank X. Walls of Chicago, in which he reported an interesting case of miliary tuberculosis in an infant. He considered the etiology, symptomatology, and the diagnosis of miliary tuberculosis in general.

What Should We Teach the People in Regard to Tuberculosis?—Dr. George W. Webster of Chicago contributed a paper on this subject. He divided the question into three divisions: (1) Those who are not affected with the disease, especially the wealthy class. What is their duty to others? (2) Those not affected, but especially liable, because of heredity or because some near friend or some member of the immediate family is tuberculous. (3) Those already afflicted. Physicians should aim to make their suggestions and help simple and practical rather than difficult and scientific. Efforts should necessarily be directed chiefly toward the second and third classes. Patients should be taught that there are two elements in the case; the susceptibility of the patient, and the germ. We should then teach them how immunity is lessened or destroyed, and how it may be regained. We should teach them the sources and modes of infection, and the methods of preventing the same. They should be taught their duties to themselves, their families and the public.

Senile Pneumonia.—Dr. D. W. Reid of Jacksonville presented a paper with this title. He said that senile pneumonia meant acute croupous or lobar pneumonia, as it affected the aged. The importance of a disease depended on its frequency and its mortality. Senile pneumonia was the most frequent and deadly disease in old age; it was the natural end of the old man. He said that nine-tenths of all deaths over seventy-five were due to acute lobar pneumonia. The etiology was the same as sthenic pneumonia in the young adult, namely, invasion by the pneumococcus of Fraenkel. It was, probably a local infection with general toxæmia. Authorities, however, differed on this point. There was more to be learned about the real cause of pneumonia than of any other common acute disease. He then discussed at length the symptoms, prognosis and treatment.

Pathology of Kidney in Pneumonia.—In a paper on this subject, Dr. E. C. Franing of Galesburg discussed the physiologic elimination of toxins through the kidneys; the the microscopic appearance of kidney in croupous pneumonia; blood supply and congestion; changes in epithelial tissues; changes in connective tissues; changes in Malpighian tufts; changes in blood vessels; also leucocytic infiltration; lymphocytic infiltration; plasma cell infiltration; presence of granular and hyaline casts; presence of pneumococci; the conditions of the kidneys when death occurs early or late in the disease; the suggestions on causes of congestion; causes of degenerations and effects of toxins in acting a long or short time or in large or small amounts; the influences which bring about lymphocytic, leucocytic, and plasma cell infiltration; and suggestions on the offices of plasma cells and lymphocytes.

Treatment of Pneumonia.—In discussing this subject, Dr. N. S. Davis, Jr., mentioned as measures of treatment bleeding, tartar emetic, blistering, fomentation, veratrum viride, calomel, purgation, foods, hypodermoclysis, warm baths, oxygen, inhalation, digitalis or strophanthus, strychnia, ammonium compounds, alcoholic beverages, chemical antipyretics, cold baths, antipneumococcus; serum, and the prophylaxis of the disease.

Certain Clinical Points Regarding the Use and Indications of the Cardiac Stimulants.—A paper with this title was read by Dr. Arthur R. Edwards of Chicago, in which he discussed the use of nitroglycerin, also its contraindications. He likewise spoke of the use of ammonia, its action on the circulation and respiratory apparatus, and mode of administration. The action of alcohol was considered, especially upon the nerve centers and circulation; also its effect on the vasomotor system. He mentioned its use in acute infections, sepsis, etc. He dwelt upon the use of morphine and its effects in respiratory and circulatory lesions; the indications for the use of digitalis; contraindications; adjuvants and substitutes.

Prognosis and Treatment of Suppurative Pleurisy.—Dr. E. Fletcher Ingals of Chicago, in a paper with this title, gave an analysis of eighty-three cases from private records and those from the Presbyterian and Cook County hospitals, with a study of the relative value of different methods of treatment.

He said that empyema was extremely fatal, although in the majority of cases, in children and in others, when caused by the diplococcus lanceolatus, it might be cured by appropriate measures. Of twenty patients under fifteen years of age only two died. Of sixty-three older patients twenty died; total death rate after operative measures in all cases, 28 per cent., although rarely patients recovered by absorption of the fluid and encapsulation of the remaining pus, and a considerable number by perforation of the lung and expectoration of pus. Of those cases due to the pneumococcus, according to Jaccoud and Netter, from 25 to 40 per cent. recovered without operation. In children under three years of age the mortality was about 50 per cent.; from this to the fifteenth year, according to some statistics, the mortality was as low as 2 or 3 per cent. Hippocrates recommended tapping, also perforation of the rib, an operation not very dissimilar to the exsection practised to-day. Laennec considered the disease very fatal and recommended paracentesis, but had never himself obtained permanent benefit from the operation. Of 121 cases collected by Foulk twenty-three were cured by aspiration alone. Four of the author's cases were cured in the same manner. John Sculceus, in the early part of the seventeenth century, recommended the withdrawal of pus by a syringe. Repeated aspirations were urged in all cases before a radical operation was performed until the pleural cavity could be once thoroughly emptied. Four or five days later a radical operation should be done. The introduction of two large drainage tubes through a trocar was believed to be the simplest and best operation, because it could be done by the physician without the aid of a surgeon; it did not require general anæsthesia, and gave the patient less discomfort and apparently saved more lives than the most formidable operation. An examination of these eighty-three cases, which were due to various causes and to various complications, and treated under various methods, showed 70 per cent. recovered under operation recommended, and only 30 per cent. recovered after exsection of ribs. Statistics appear to show that, excepting when temperature is present, cases did better by drainage without irrigation than with it after operation. In case a cavity remained for four or five months after operation, the resection of portions of two or more ribs was recommended, to allow collapse of the side, so that the walls of the cavity might come in apposition, and healing take place.

Alcoholic Neuritis, with Report of Case.—In this paper the author, Dr. C. Martin Wood of Decatur said that alcoholic neuritis was the most frequent type of multiple neuritis, which was first described by Jackson in 1822. The disease was more common in women in the middle period of life. The symptoms were motor, sensory, trophic and mental. He dwelt at length upon the differential diagnosis from anterior poliomyelitis, tabes, myelitis and rheumatism, and discussed at length the prognosis and treatment. His case was a male, aged thirty-six years, who had taken a small amount of alcohol for ten years. The disease was gradual in its onset, attended by severe pains and mental symptoms. Wrist drop occurred without foot drop. Under treatment there was a gradual improvement of the paralysis.

Disorders of the Nervous System Due to the Severe Anæmias.—Dr. Archibald Church of Chicago read a paper on this subject. He considered the various lesions of the nervous system which have been recognized for a long time as the result of, or at least associated with, severe anæmias. He pointed out the changes in the spinal cord due to or associated with the pernicious anæmias. He gave a summary of the clinical manifestations of such disorders. He reported briefly a number of cases; dwelt upon the pathology of the contion, and the indications for treatment.

Marked Changes in the Blood from Small Repeated Hemorrhages.—Dr. Frank Billings of Chicago said that small repeated hemorrhages from whatever source may, if long continued, induce marked changes in the blood, as well as in the general condition of the patient. In some instances these cases at first sight resemble pernicious anæmia. The characteristics of the blood, however, are those of a severe secondary anæmia. He detailed the histories of cases illustrating the above points.

The Psychoses in Bright's Disease.—Dr. C. Barlow of Robinson, in a paper with this title, stated that mental disturbances might become manifest in every variety of nephritis, but were most frequent in the chronic interstitial variety. For convenience of study, the mental symptoms were divided into four groups. The first group consisted of those in which there were the mildest forms of mental disturbances, such as loss of memory, confusion of thought, and occasionally mild delirium and temporary loss of consciousness. The second group of symptoms included acute delirious uræmia, coma, and the mental symptoms resulting from convulsions or paralysis. The third group comprised insanity occurring in patients who were not predisposed through heredity. The fourth group embraced cases of insanity occurring in individuals who had hereditary tendencies. The causes of the psychoses in nephritis were expatiated upon, and the importance of the subject from a clinical and from a medico-legal standpoint emphasized.

Exophthalmic Goiter.—Dr. L. HARRISON METTLER of Chicago contributed a paper with this title. He reported three cases in a mother and her two sons.

He said the classification of this disease had been various in the past. To-day its real nature was hardly less mysterious than it was formerly. As with all such affections, theories were rife. Dogmatic assertions in regard to it were certainly not allowable. Three prominent views of it were that it was a neurosis of the central nervous system; a hypersecretion of the thyroid gland, or a combination of neurosis and hypersecretion reacting mutually upon each other. That it was not due to hyperthyroidization primarily was shown by its etiology (heredity, age, sex, mental shock, anæmia, etc.). By the peculiar symptomatology (alternate prominence of tachycardia, struma and exophthalmos; hyperidrosis, trembling, psychic state, and other secondary symptoms) by the pathologic findings (condition of thyroid gland, of blood and other organs); by the prognosis (cases often suddenly recovering under influences other than those that affect the thyroid gland); and, lastly, by the therapy (rest, electricity and nerve sedatives, usually giving the best results). On the other hand, all these factors pointed strongly to a neurotic origin for the disease.

Exophthalmic goiter and myxœdema were not antithetical, except in some few minor symptoms, hence, if the latter was due to diminished secretion, it was not to be concluded that the former was due to an excess of thyroid secretion.

Recent Advances in the Treatment of Epilepsy.—Dr. HAROLD N. MOYER of Chicago spoke of the effects upon epileptics of diminution of salt ingested, and discussed the dietetics of epilepsy in general, also the use of the glandular extracts, notably suprarenal, in the treatment of idiopathic epilepsy, and presented a simple chart for the daily record of the condition while under treatment.

Dr. E. M. ECKARD of Peoria discussed hydro- and electrotherapy in the treatment of diseases of the alimentary tract.

Some Essential Points Regarding Chronic Constipation of the Bowels.—The author of this paper, Dr. J. W. HENSLEY of Peoria, spoke of the causes which bring about the atonic condition of the intestine, which he said should be searched for and corrected, if possible. The middle classes of the adolescent and adult people of civilized countries were the ones most addicted to irregular action of the bowels, because of occupation, sedentary habits, hurry and worry in business, improper diet, neglect in the beginning, environments, the frequent use of active purgation, etc. Hence, constipation from these causes might be said to be idiopathic. Defective digestion, insufficiency of food, anæmia, chlorosis, and all other conditions weakening intestinal peristalsis, without other or remote local or constitutional disease, were considered within the scope of the paper. All grave continuous constitutional diseases, local organic affections, obstructions, together with the sequelæ thereof, except simple gastric or intestinal atony, were excluded. To cure chronic constipation, even though all organs might be anatomically and physiologically normal in the essential, required tact, confidence, and long-continued treatment, hygienic, digestant and medicinal, all of which must be regular and persistent. Confidence on the part of both patient and physician, inspired by experiences and autosuggestions, were indispensable aids in the management of all outdoor patients, especially so where the digestive and eliminative functions were impaired. Regular habits, exercise of a healthy physical nature, the proper and full ingesta of wholesome foods with both gastric and intestinal sufficiency of digestion, were important conditions to be considered. These, together with an understanding and agreement from the beginning, to remain under treatment and observation for at least six months, would, in a great majority of cases, result in a permanent cure. The treatment must be pursued on rational conservative bases. No doubt should be expressed or conveyed as to a favorable outcome. With a due observance of prescribed hygienic measures, a properly selected diet and exercise, together with a studied treatment by medicines, manipulations and suggestions, according to conditions, causes, and the idiosyncrasies of each individual case, would almost always result favorably in the end.

Concerning A New Series of Synthetic Salts; the Nucleids of Iron, Copper, Mercury and Silver.—Dr. E. R. LARNED of Chicago discussed this subject. He said synthetic chemistry was particularly useful, by imitating nature and building in the laboratory remedial agents similar to those of nature's construction. The irritating and devitalizing action of most germicides was explained upon the ground of chemical affinity for tissues and cell constituents. The most important constituent of blood and lymph corpuscles was nuclein. Health was maintained and resistance to disease effected through the defensive proteids of which nuclein was the most active. These new salts were true chemical combinations of the metals with nucleinic acid. The therapeutic application of compounds of nucleinic acid was rational and supported by abundant clinical observations. Inorganic salts of the metals must undergo reformation into nucleids before the organism could make use of them.

Malarial Hematuria.—Dr. L. M. WINSTED of Wetaug read this paper. The author having had considerable experience with this disease, he gave a brief account of the pathology and etiology as now taught from different standpoints. He outlined the symptoms and treatment in detail, paying particular attention to the different methods of treatment, particularly in reference to the administration of quinine, and took the ground that quinine was, if not contraindicated, of very little use in the treatment of the disease. Three theories of the cause of the disease were mentioned, namely, malarial, quinine and specific. Eliminative treatment, or a clearing of the alimentary canal and the active stimulation of the excretory organs were advocated, together with the use of quinine, arsenic and strychnine following later. The author narrated ten typical cases of the malignant type of the disease.

Unusual Case of Typhoid Fever.—Dr. J. W. KELLY of Springfield reported a case of typhoid fever of sudden development; chills and hyperpyrexia, the chills failing to recur, and temperature was reduced by the administration of large doses of quinine and capsicum. No plasmodia were found in the blood. There was a continued perversion of ideas, amounting at times to marked, and at one time wild, delirium, which continued even while the temperature was normal and subnormal. These marked changes in temperature amounted to complete intermission for several days. There were likewise marked and sudden changes in the pulse and respiration.

Consistency in Medical Practice.—Dr. J. N. NELMS of Taylorville said his paper was written in defense of the legitimate practice of medicine. He called attention to the requirements demanded by law and deplored the fact that many, after having attained the requisite knowledge to practise scientific medicine, denounced internal medication and resorted to irregular processes as a substitute. He did not underestimate the value of hydrotherapy, suggestion, massage, etc. They were valuable as aids, but could never take the place now held by scientific medicine. He pointed out the inconsistency of legislating against osteopathy and at the same time resorting to massage exclusively, or condemning Christian Science while practising suggestive therapeutics to the exclusion of drugs. To secure legislation in behalf of the profession, physicians must be consistent. Some insisted that the tendency was toward nihilism. He condemned this idea as dangerous to the profession.

The laity would soon learn that it did not require a professional to do nothing, and would refuse to pay physicians for doing nothing simply because they were professionals. The knowledge of the physician was judged by the services rendered. If the physician did nothing, the laity would assume that he knew nothing. He believed in the physiological action of drugs and said he administered them for the physiological effect. He denounced all irregular processes, whether practised by physicians or another. He was a strong advocate of serum-therapy. He noticed the advancement made in surgery in recent years, and held that medicine had fully kept pace with surgery.

Surgery of the Stomach.—In a paper on this subject, Dr. Arthur Dean Bevan of Chicago gave an historical review of stomach surgery, discussed operations for malignant disease, and operations for benign pathological conditions, especially ulcer and its consequences. He likewise spoke of the operative treatment of perforating wounds of the stomach and of the operative removal of foreign bodies. The results of surgical treatment in malignant disease were reviewed and the conclusion reached that they were not satisfactory, but that in a limited number of cases of carcinoma operative procedures should be resorted to. He gave a review of the surgery for benign conditions, and reached the conclusion that operative treatment was satisfactory, and should be resorted to more frequently. He reviewed the treatment of perforating wounds, and said that perforating wounds from the modern military rifle should not be interfered with surgically. In civil practice, however, the operative treatment seemed preferable. The history of operative procedures was discussed under six heads: Preliminary preparation of the patient, question of anesthesia, operative technique, the after-treatment, complications, and causes of death.

Rupture of the Liver.—Dr. J. L. Wiggins of East St. Louis read a paper on this subject. He said that the subjective signs in intra-abdominal lesions, even when corroborated by objective signs, might cause an error in diagnosis. He cited a case in point with pains and a history of traumatic injury, indicating involvement of the viscera in the left side of the abdomen; large bloody stools and bloody vomit. He accentuated the subjective signs. Exploration disclosed a rupture of the liver on its upper surface. The secondary operation was made for hematoma through the right chest wall. During the second week the eighth and ninth ribs were excised for the purpose of establishing direct drainage. A biliary fistula resulted, which closed spontaneously during the third month, followed by recovery.

Lymphadenitis and Abscesses of the Liver as Complications of Appendicitis.—Dr. M. L. Harris of Chicago discussed this subject. The complications considered did not depend upon the severity of the local changes found in the appendix. A severe lymphangitis or lymphadenitis might be present in mild cases of appendicitis. An appendicitis so mild as to escape detection might form the infection atrium through which microbes might enter the lymph channels and set up a severe pyelophlebitis, or might enter the portal circulation, producing a severe pyelophlebitis with secondary abscesses in the liver. These complications might also take place some time after the acute symptoms of appendicitis had subsided. In cases of general infection, with symptoms pointing to the involvement of the liver, the appendix should always be thought of as a possible point through which the infection had gained entrance.

Appendicitis—When Shall We Operate?—In a paper with this title, Dr. H. C. Mitchell of Carbondale condemned the practice of wholesale operating on these cases in all stages of the disease. He recommended operation only in certain stages, preferring to allow the patient to take chances of recovery otherwise. He gave statistics proving his claims.

A Plea for the More Accurate Diagnosis of Cholelithiasis.—Dr. J. H. Stealy of Freeport reviewed forty cases in point, with a consideration of previous diagnosis. He enumerated the more essential differential points between the above condition and chronic gastritis, appendicitis, renal disturbances, hysteria, neuralgia and subphrenic abscess.

Malignant Disease of the Kidney in Children.—Dr. J. F. Percy of Galesburg reported a case of malignant disease of the kidney in a child, with a pathological report by Dr. Wm. H. Welch of Baltimore. The study of malignant disease of the kidney received an impetus from a paper published by Grawitz in 1883. Primary renal growths, benign and malignant, were extremely rare, as were also growths due to secondary involvement of the kidney. Over 52 per cent. of all malignant tumors of the kidney occurred below the age of ten years. Pathologists refer this to the complicated structure of the organ. But other organs also had a complicated structure, and yet were not vulnerable to the changes denoted as malignant, especially at so early an age. The literature of malignant disease of the kidney had been wonderfully influenced by Cohnheim's theory of embryonic cell inclusion. But cell inclusion in the kidney did not manifest itself, as far as malignancy was concerned, in the later years of life nearly to the degree that it occurred before the age of ten years. Malignancy, barring the kidneys, was in the majority of cases a disease of late adult life. This raised the question of infection during elimination, due to lessened resistance in the kidney of the child. The adult kidney showed a marked resistance to the changes referred to, and malignancy might be due to an acquired immunity similar to that which manifested itself in adult life in relation to the exanthemata. The tumor was pronounced by Dr. Welch as a hypernephroma.

Surgery of Ureters.—In a paper with this title, Dr. Emil Ries of Chicago discussed tuberculosis, the necessity of treatment in connection with tuberculosis of the kidney and bladder, and also plastic surgery in cases of intermittent hydronephrosis.

Technique and Possibilities of Endovesical Operative Procedures.—Dr. Louis E. Schmidt of Chicago discussed the principles of endovesical operations. He described the essential features of the two distinct types of operating cystoscopes, namely, the Nitze, and the Caspar. He favored the use of the Kolischer operative cystoscope, saying that the operator works under direct vision. The lamp and window were situated on the convexity of the beak. To the under part of the cystoscope was attached a canal through which the different instruments were introduced into the viscus. Their working end appeared just below and in front of the window. He then considered the technique and limitations of endovesical operative procedures, the frequency of cases for procedures of this kind, and the results.

Prostatectomy.—In a paper with this title, Dr. John B. Murphy of Chicago, after detailing several interesting cases in which he performed prostatectomy, drew the following conclusions:

(1) From the clinical reports and experience, in extreme cases prostatotomy is the operation of election; (2) It appears evident that in the hands of safe, far-seeing, informed practitioners, few cases will now be allowed to progress to this extreme condition before radical means are resorted to for permanent relief. The practice of to-day should be timely practice. (3) Continued use of the catheter is a menace to life not to mention its discomfort, no matter how favorable the conditions for its performance. The patients all, sooner or later, suffer from cystitis and its sequelæ; (4) Prostatectomy gives the best permanent result, and is fraught with very little more danger than prostatotomy; (5) Suprapubic prostatectomy should be limited to exceptional cases of enormous intravesical enlargements of the prostate. It appears to us to endanger the sphincteric control more than the perineal

operation. It is more sanguinary and the work is more difficult and distant from the operator; (6) The perineal is the most direct and least bloody route. It admits of a very large opening, and permits the prostate to be drawn quite into the open before it is attacked. It gives the greatest security against injury to the bladder wall and least inability to disturbance of the internal sphincter. It endangers the rectum least and affords the best drainage; (7) It can be best performed through a Y-shaped incision, with a Sims' speculum for a posterior retractor. The prostate is drawn out easily with sharp hook retractors, and best separated from the bladder from behind forward. The operation should never be performed in the dark, *i. e.* through a small incision; (8) It should always be an intracapsular enucleation *en masse*, allowing the anterior isthmus to remain. The hemostasis may *be* secured with forceps or a packing of subiodide of bismuth (not iodoform) gauze. The permanent catheter should not be introduced until the perineal drain is removed; (9) The patient should be kept in a semi-sitting position for seventy-two hours after the operation, and should be out of bed by the fifth day. He should drink large quantities of water from the onset; (10) Anæsthetic is *sub judice*. Phosphate of sodium should be administered to keep the urine acid; and urotropin as an antiseptic. The personal equation must never be lost sight of in operating these cases, and attention to every small detail of the patient's general condition is necessary for the best results.

The Accidents of Anæsthesia; Their Prevention and Treatment.—Dr. D. N. Eisendrath of Chicago, in a paper on this subject, spoke of the survival of ether and chloroform as the chief agents for the production of general anæsthesia. He said there was a gradually increasing usefulness for the method of local anæsthesia of Schleich. He gave a comparison of the action of chloroform and ether on healthy and diseased organs. He mentioned the chief indications and contraindications in the use of these anæsthetics; the method of administration of each, and how it had been improved since the recent researches of various investigators. He discussed the matter of how to prevent grave cardiac, pulmonary and renal complications; also the treatment of chloroform syncope by raising the foot of the table, resorting to massage of the heart, rhythmical tractions of the tongue, and artificial respiration, which should first be employed. He then alluded to the necessity of having everyone understand the need of system in the application of methods of resuscitation. As methods of last resort, he mentioned the plan of Prus, intratracheal insufflation of air, etc.

Transverse Arrest of the Head an Indication for Forceps.—Dr. Chas. B. Reed of Chicago read this paper, in which he said that the impacted head was found low down in the pelvis with the saggital suture parallel to the transverse diameter of the pelvis, the fontanelles on about the same level, and no tendency to forward rotation of the occiput. Deep transverse arrest of the head was recognized thirty-two times in the last 3,600 labors at the Chicago Lying-in Hospital, or 9 per cent. According to Münch, the condition occurs in I-paræ in 81.61 per cent. of all the cases, and is due to the early descent of the head into the pelvis. This unusual frequency in I-paræ was not borne out in the Chicago Lying-in Hospital statistics. Here eighteen cases occurred in multiparæ, and fourteen in I-paræ. Flat pelves, general contracted pelves, the too large pelvis (47 per cent. of Ahlfeld's cases), exostoses of the sacrum and symphysis, insufficiency of the powers of labor, pendulous abdomen, and dolichocephalus were also of etiological importance. The diagnosis was readily made by vaginal examination The danger to mother and child arose from the great prolongation of the labor and the consequent evils; sepsis, fistulæ, necrosis, hemorrhage, and so forth. Cases were treated either by position on the side, by manual correction or by forceps. In the Chicago-Lying-in Hospital service the maternal conditions furnished the most frequent indication to terminate the labor. Forceps were applied twenty-three times; head spontaneously rotated nine times; forceps applied in the oblique diameter of pelvis which corresponded to the position of the occiput. The head was grasped by the anterior malar bone, and posterior parietal eminence. Two objects were to be secured, rotation and extraction, and these must be simultaneous.

The author concluded that deep transverse arrest of the head was a relatively common complication of labor. The diagnosis was easily made from the position of the fontanelles and sutures. The normal termination of the case could not be awaited in most instances, but forceps should be applied as soon as it was evident that rotation would not occur spontaneously. The location of occiput must be determined before the forceps are applied. The blades of the instrument must be applied in that oblique diameter toward which the occiput lay. Traction and rotation must be simultaneous.

Care of the Perineum During Labor and the Puerperium.—Dr. Effa V. Davis of Chicago read a paper on this subject, based on the study of five hundred and fourteen cases. She reviewed the various methods advocated for preservation of the perineum in labor; spoke of the percentage of ruptures, the elements involved in their production, and then discussed her own methods and results; also repair of the perineum and after-treatment of cases.

The Curette in Puerperal Sepsis.—Dr. Geo. L. Eyster of Rock Island discussed two prime forms of puerperal infection, putrid and septic, in one of which he said the curette was a most efficient means of treatment, while in the other its use was fraught with danger.

The General Practitioner and Surgery.—Dr. W. C. Bowers of Decatur said that the study of medicine for general practice should be broad and thorough. It should be undertaken with nothing less than a high-school education, or its equivalent. Physicians should cultivate shrewdness, discernment and a scientific habit of mind. He thought there was a tendency to stagnate and rust after graduation. Interneship in a hospital was greatly to be desired. If not procurable, then the physician should do post-graduate study nearly every year. He was not sure but this should be compulsory within certain limits. Every man in medicine was expected by the public to do at least minor surgery. If not born surgeons, physicians should be good imitators of good surgeons. Great familiarity with medical and surgical diagnosis and pathology were essential to good work, even in minor surgery. The general practitioner should feel his way carefully into surgery, as mistakes in surgery were usually more grave than in medicine, hence the responsibility was greater. The crudeness of methods in surgery and lack of knowledge of anæsthesia among those in general practice were frequently appalling. Cases were cited in point.

Dacryocystitis.—This was the title of a paper by Dr. E. E. Clark of Danville. This disease and its complications gave the physician more anxiety and annoyance than any other comparatively small affection of the eye. The factors and associate conditions leading to this affection were interesting and deserving of much consideration. As to treatment, chloride of zinc had, so far as the author's experience went, given him gratifying results. Before using this remedy he had never heard its use talked of or written about, but some time after his own favorable experiences he saw a brief abstract of an article by Froelich, who employed the same treatment he had been using, and with gratifying results. The author's first case was one of three years' standing, which he had treated for three months, with no improvement. He concluded to try a 20 per cent. solution of chloride of zinc, about 3 drops, as nearly as he could estimate, injected into the sac. The next day there was a very violent reaction, but the single treatment brought about a complete and absolute restoration of all the functions of the drainage system in a few days. Subsequent cases treated with solutions of less strength had given him results that made him enthusiastic in favor of this treatment. He was inclined to believe that results were to be obtained from cataphoresis and electrolysis. However, his experience in this line had not been sufficiently large to warrant a very positive opinion.

Dr. L. L. Firebaugh of Robinson, in a paper on ophthalmia neonatorum, emphasized the importance of the subject, and was inclined to think that there was a lack of understanding of the subject by the general profession. He discussed the usual treatment of this affection.

Nephritic Eye Lesions.—Dr. Willis O. Nance of Chicago presented a paper with this title, saying that ocular affections dependent on kidney disease were of not infrequent occurrence. Every vascular structure of the eye might be involved. He alluded to œdematous infiltration of the lids; also chemosis; vitreous hemorrhages; paresis of extrinsic muscles; interference with action of ciliary muscle; iritis; cataract, and neuroretinitis nephritica. He said the last-named condition was of the greatest importance. He thought unilateral involvement was rare. He discussed the effect on vision, the progress of the disease, its prognostic significance, and also uræmic amaurosis.

Congenital Dislocation of Hips.—In this paper, Dr. Edward H. Ochsner of Chicago gave a short review of the history of the treatment of congenital dislocation of hips, with especial reference to the Lorenz functional weight method. The history of a case treated by this method was given in detail. He demonstrated the pelvis, which was obtained three years after reduction, and about one year after complete recovery.

A Plea for the Conservation of the Uterus in Pelvic Hemorrhage.—Dr. O. Beverly Campbell of Chicago read a paper with this title. He condemned the routine practice of removing the uterus for pelvic inflammation as the needless sacrifice of an organ which would recover, at least symptomatically, if properly treated. Hysterectomy should be the exceptional practice in pelvic inflammation, only warrantable where the uterus was hopelessly diseased. The advocates of the method were fortified in their position by the pathologic findings in the uteri of women affected with pelvic inflammation. Thus, from a pathologic standpoint, the metritic uterus rarely underwent perfect resolution under any system of treatment; therefore, its removal was deemed justifiable. The simple fact, as demonstrated pathologically, that an organ once the seat of a septic process might never resume its normal condition, did not argue that it must necessarily be removed, provided it did not affect the health and comfort of its possessor. The fault need not be ascribed to pathology, but to failure to associate living pathology with clinical study and the processes of repair.

The essayist then presented arguments lengthy in favor of the conservation of the uterus.

He deemed it incumbent upon those who practise the radical method of removing the uterus in pelvic inflammation to show just cause for their practice. It must be shown, from clinical evidence gathered from every available source, that the pathology in the uterus in pelvic inflammation was so extensive that resolution did not occur, and its presence was a menace to the health and comfort of its possessor regardless of palliative measures. It must be shown conclusively that the uterus was devoid of function when the appendages were removed. The mere assertion that the uterus was absolutely a functionless organ when the ovaries had been removed could not be accepted as argument. It should be shown that the results, extending over a period of five years, prove that better results were obtained in every particular where the uterus was removed.

The Limitations of Surgery in Gynecology.—In a paper with this title the author, Dr. O. B. Will of Peoria, made a plea for greater conservatism in gynecological surgery of the relative order, having its basis in considerations of surgical physiology; not alone the immediate but ultimate effect as well upon the conscious health of the individual of any given operative procedure. Ablative surgery was limited in its possibilities only by exhaustion of material, but should be restricted to the removal of abnormal products, and along lines of least resistance. Reparative surgery had its natural limitations in the degree of solution of continuity which created the demand for it. It was along lines of what might be called reconstructive surgery that the most misguided and ill-considered surgical enterprise was shown. It constituted a field of operative procedure in which the changes were constantly being rung without proper regard for either the moral, anatomic, or physiologic principles involved. This was too often illustrated in the mere exchange of one sensory evil for another; in nervous and mental debasement, without any compensating advantage. The chief point made was that too much influence was relegated to mechanical states, with corresponding neglect of integral tissue conditions, upon which more than upon anything else depended the pathologic manifestations. It was contended that, as an aid to the restoration of normal conditions, temporary mechanical and positional influences were as valuable as were the numerous operative readjustments, without the subsequent functional disarrangements incident to the latter.

Hemostasis of the Broad Ligament.—Dr. Henry P. Newman of Chicago said that ideal hemostasis should insure (1) Absolute security against hemorrhage, primary and secondary; (2) Protection against septic contamination; (3) The minimum of injury to the parts treated; (4) Absence of foreign bodies from the wound; (5) Objections to the conventional ligature.

The author gave his experience with the angiotribe; its advantages and disadvantages. He exhibited his pressure clamp and described his method. He spoke of the use of reenforcing small catgut ligature on the ovarian and uterine artery. He insisted upon the manner of placing this ligature as securing exceptional results. The claims for the combined method were (*a*) complete and permanent hemostasis, with no possibility of slipping of the ligature; (*b*) The prevention of hematoma and hematocele; (*c*) No puckering or massing of broad ligament tissue to draw upon or displace other organs or structures; (*d*) No strangulated stump tissue remains to slough, granulate and form adhesions; (*e*) A neat linear stump; (*f*) The amount of foreign matter left in the wound is reduced to a minimum; (*g*) Convalescence materially eased and hastened.

Dr. S. C. Stremmel of Macomb read a paper, in which he said that the unsurgical features of vaginal hysterectomy were forceps and silk ligatures, which almost invariably became infected, leaving an open wound between the vagina and peritoneum.

Treatment of Pleural Effusions by Continuous Aspirations.—In a paper on this subject, Dr. Weller Van Hook of Chicago discussed the methods of treating pleural effusions, saying that they were unsatisfactory for a variety of reasons, which he gave. Continuous aspirations by the method of Perthes were not subject to these objections. He described a modification of Perthes' apparatus, and narrated at length his observations and results of this method of treatment.

Tetanus.—Dr. Frank E. Wallace of Monmouth presented a paper in which he reported a case of this disease, followed by recovery. The disease was produced by a germ admitted through a wound, and most generally followed uncleanliness. The incubation period varies—first, because of the germ being anæorbic; second, because of individual susceptibility. It was the toxins which produced the symptoms and not the germ. It acted through the nervous system and produced characteristic symptoms. The toxins were only absorbed through the vascular system and not from the intestinal tract. There might not be any local manifestations of infection. Pronounced prismus seems to be the only sign pathognomonic of the disease.

The treatment was based on the following principles:

(1) Removal of the germs at the point of infection; (2) Elimination of toxins; (3) Neutralization of toxins; (4) Control of spasms; (5) Sustaining the patient's strength.

Cleanliness was paramount in dressing surgical cases. Primary injections should consist of at least 500 units of antitoxin serum. The serum acted rather as an immunizing agent than a curative one. Serum was of no avail in tetanus puerperalis. Intracerebral injection of serum was justifiable. The later the onset of the symptoms, the better the chances of recovery. Science should determine the exact amount of antitoxin serum to use in any given case. He said there was a noticeable decrease in the mortality from this disease.

Surgical Tuberculosis.—Dr. T. N. Rafferty of Robinson read a paper with this title, saying that a new and very important department in surgery had been created by the recognition by Lawrence, in 1826, of the inoculability of tuberculosis, and Koch's discovery, in 1882, of the bacillus of tuberculosis. The disease was now recognized in nearly all its forms, and, wherever found, as a surgical disease. This recognition, based on present knowledge of its pathology, had placed its surgical treatment on a firm basis, not yet fully appreciated or positively fixed. He mentioned the varieties of tuberculous disease and the different parts and organs of the body attacked by it, with proper surgical treatment for each. The greater part of the paper was devoted to lung surgery, and the surgical treatment of tuberculous peritonitis.

Remarks upon the Treatment of the More Common Skin Diseases.—Dr. E. A. Fischkin of Chicago presented a table of some three thousand cases of skin affections treated. He discussed the treatment of eczema, acne vulgaris, psoriasis, cutaneous syphilis, impetigo contagiosa, and the dermatomycoses.

Congenital Phimosis.—Dr. C. C. Hunt of Dixon, in a paper on this subject, said that phimosis was a muzzling closure. It was a term usually applied to an elongated prepuce of a male, associated with a congenital preputial orifice. The preputial orifice was normally narrow in the new-born; the mucous membrane of the prepuce and that of the glans normally adherent, so that the foreskin could not be retracted over the glans without undue force. Separation of these normally adherent surfaces took place in early childhood. No surgical interference was necessary so long as these normal conditions prevailed. He thought the religious rite of circumcision was not good surgery. Its imitation on the part of practitioners of to-day was entirely too common, and was reprehensible. No surgery was necessary unless the functions of the organ were impaired, or some otherwise incurable pathological condition existed. The reflex influences of a narrow prepuce had been greatly exaggerated. Surgical interference, when indicated at all, should be the simplest possible. Splitting of the prepuce and uniting the edges of mucous membrane and integument were all that was necessary in the vast majority of cases. The evolution of the organ by the natural processes of growth usually righted conditions, either really or apparently abnormal, if the parts were kept clean and physicians had the patience to await the establishment of adolescence. Removal of the redundant foreskin was not warranted unless the redundancy was extreme, which was an exceedingly rare condition. The indiscriminate amputation of redundant foreskins should be condemned.

The Illegitimate Child.—Dr. H. H. Hart of Chicago, in considering this subject, stated that four parties were to be considered, the child, the mother, the father and the community. The child was an innocent, helpless party, entitled to safe birth, skilled care, proper nutrition and a fair start in life. The mother, as the responsible parent, and also as an errant member of the community, should be so guarded and guided as to restore her to right living, and thus protect the community. The father, as a responsible party, should be made, if possible, to recognize and meet his responsibility. The community was entitled to all possible protection from the social ills which tended to result from illegitimacy. The medical profession were deeply concerned in this matter because they were invariably brought into these cases, and they stood in the position of representatives of the community at large, who were called upon to discharge the most important responsibilities in these cases.

Officers.—The following officers were elected: *President*, Dr. M. L. Harris of Chicago; *Secretary*, Dr. E. W. Weis of Ottawa; *Treasurer*, Dr. E. J. Brown of Decatur; *Editor of the Society's Journal*, Dr. George N. Kreider of Springfield; and *Assistant Secretary*, Dr. James H. Stowell of Chicago. Chicago, Ill., was selected as the place for holding the next annual meeting.

NEW YORK ACADEMY OF MEDICINE.

Section on Surgery.

Stated Meeting, Held May 12, 1902.

John B. Walker, M.D., Chairman.

Nephrectomy and Other Operations in the Same Patient.—Dr. Charles H. Peck presented a woman upon whom he had operated for acute intestinal obstruction. On August 27, 1898, he had done nephrectomy on the right side because of a suppurating hydronephrosis, and, although the operation had been followed by albuminuria, she had recovered. A year later she had become pregnant, and, in spite of the albuminuria, which persisted throughout the pregnancy, made a good recovery. Since then she had become pregnant several times, but had miscarried. On March 20, of the present year, she had been brought into the hospital for curettage for the removal of retained secundines. During this operation it was discovered that there was a rather large hydrosalpinx on the right side and a mass on the other side. On March 31 he had removed the right tube and ovary and the vermiform appendix, the latter being involved in the mass, and also the left tube. The woman did well for the first few days, but, during his absence from the city, her bowels had been neglected, and on his return on the seventh day after the operation, there was fecal vomiting. She had not had a movement of the bowels for several days. On the afternoon of the eighth day, her condition having improved somewhat, the abdomen was again opened, and a complete obstruction of the ileum by a kink and a band was found about eight feet above the ileocæcal valve. The obstruction resulted from adhesions formed after the last operation. This was relieved, and she made an uninterrupted recovery. This was the first case that he had seen of complete obstruction of the bowel from adhesions following a laparotomy in which no drainage had been employed.

Sulphite Laps for Absorbent Dressings.—Dr. Robert T. Morris said that absorbent cotton and absorbent gauze were the materials most generally employed for surgical dressings. Cotton was not very absorbent, but it served to filter out the bacteria and protect the dressings underneath. Both of these substances, were practically pure cellulose. There was another substance which, so far as he knew, had not been used for this purpose. It occurred in the market in bulk in connection with the manufacture of paper under the name of "sulphite laps." It was made by the action of sulphuric acid on wood, and the name was evidently a misnomer. The fibers of this substance are so much closer together that it is much more absorbent than either absorbent cotton or gauze. He had used it in a number of surgical cases, putting a layer of gauze next the wound and the "laps" next to that. He had found it very absorbent. A specimen of each one of the three substances mentioned was placed with its lower end in a basin of water to show the much greater rapidity with which the "laps" absorb this fluid.

Dr. E. M. Foote asked if any tests had been made as to the quantity of water that would be absorbed by a pound of the laps and by the same quantity of cotton and absorbent gauze; also as regards the cost of the material and its tendency to mat down when wet. Such a dressing should prove useful in connection with the care of fistulæ.

Dr. Morris replied that he had not measured the quantity of water absorbed; his deductions regarding its absorbent properties had been based solely on the rapidity of the absorption. There was no tendency to matting, and it was very much cheaper than absorbent cotton or gauze and even than moss. The material was of neutral reaction.

Wounds, with a Discussion of What Constitutes Rational Treatment.—Dr. Frederic Griffith presented a paper on this subject, which was largely an historical sketch. Rest of the part, in its broadest sense, he said, was the fundamental principle of good wound healing. Drainage in some form was, of course, of great importance, but the methods of securing this were very numerous. The hot-water treatment of Varick and others was described, and it was pointed out that dusting mixtures usually do far more harm than good. Many surgeons failed to appreciate the great advantage of applying to a granulating surface or next a wound narrow strips of gutta-percha tissue, laid on like shingles. Moisture should never be applied to an open wound for any length of time; healing under such conditions took place in spite of and not because of such dressings. Only very light and moist dressings should be used over subcutaneous wounds. The author favored the use of solutions of hydrogen dioxide, and drying the wound with sterilized gauze prior to suturing. The one opponent to the quick healing of a wound was friction; hence the ancient custom of using oils on wounds.

The Skilful Neglect of Wounds.—Dr. R. T. Morris said regarding the use of gutta percha tissue next to the wound that this was a very important question. Throughout the world at large gauze and cotton were used next the wound, and yet they were about the worst materials to be chosen. Granulations were apt to be engaged in the cotton or gauze, and on the removal of the dressing the repair of the wound was naturally retarded. This tearing was prevented by the use of gutta percha tissue next the wound, but it sometimes had the disadvantage of causing the collection of too much serum, with the result that the wound became sodden. To avoid this Lister's protective, which is not quite impervious to moisture, could be used, or silver foil could be substituted. Better than any of these, in his opinion, was the use of the newly introduced substance "Cargile membrane." The skilful neglect of a wound required years of experience.

Dr. M. W. Ware said that while there was a great unanimity among surgeons regarding the treatment of operation wounds, this was far from being the case with regard to granulating and accidentally inflicted wounds. In the latter class one must consider not only the bacteriological side, but the mechanical conditions involved. He had been interested in Dr. Morris's demonstration of the comparative rapidity with which water was absorbed by cotton gauze and sulphite laps, but nothing had been said as to whether the same result was obtained if serum or pus or other fluids were substituted for the water. He agreed with Dr. Griffith that the use of dusting powders on wounds should be abandoned, but he condemned the placing of gutta percha tissue next the wound. If the wound were large, and its secretions were sufficient to keep up capillary action and compensate for the drying of the secretions in the dressing, then a dry dressing might be used; on the other hand, if the wound were small and its secretion scanty, a moist dressing should be used to facilitate drainage. Air should have access to the wound for the same reason, and on this account a gauze bandage was preferable to one made of muslin.

A Case of Intraligamentous Ovarian Cyst, Pyosalpinx and Appendicitis.—Dr. Joseph Wierner, Jr., reported the following case: The patient was a lady of forty-five years, first seen by him in consultation on December 1, 1901. She had borne one child, twenty years before. Following this confinement there had been recurrent attacks of pain in the right iliac fossa, and there had been a moderate vaginal discharge for many years. None of these attacks had occurred for five months until the present one, three days before. The pain at this time was fairly localized in the right iliac fossa, and as usual in her case, the administration of a cathartic was followed by vomiting. Examination showed the abdomen distended and rigid in the right lower quadrant, and there was a point of exquisite tenderness at the outer border of the rectus muscle just above Poupart's ligament. The pulse was 120 and the temperature 102°F. Internal examination showed some sensitiveness in this region. The diagnosis was pyosalpinx and appendicitis. Under deep ether narcosis no tumor could be found on abdominal palpation, either by himself or by several others. On opening the abdomen, however, he was surprised to find an intraligamentous cyst on the right side about the size of an orange. It was only partly filled with fluid. The lower wall of the cyst was formed by a huge pyosalpinx. The two were removed together without rupture. The appendix was found behind the cæcum, pointing upward and firmly imbedded in a mass of adhesions, from which it was with difficulty extricated and removed. The cyst was made up of two cavities, in one of which the ovary was found.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON MEDICINE.

Stated Meeting, Held May 20, 1902.

James K. Crook, M.D., Chairman.

The Climate and Health Resorts of Maine.—Dr. Guy Hinsdale of Philadelphia presented this paper. He said that the climate of Maine was cold and stimulating. The mean summer temperature for the northern third of the State was precisely the same as for the southern two-thirds, *i. e.* 62.19° F. There had been a notable decrease in the annual number of deaths from pulmonary tuberculosis in the State of Maine in the past ten years, which was attributed to a systematic education of the people as to the nature of this disease and the best methods of controlling it. The mortality from pneumonia was precisely the same in the interior counties as in the maritime counties. Infantile diarrhœa was more common in the interior counties. The climate of the coast was specially suitable for those suffering from neurasthenia and insomnia, or those needing recuperation; it was hardly suitable for those suffering from tuberculosis or other chest troubles.

Ocean Climatotherapy in Summer.—Dr. H. Holbrook Curtis presented this paper. He said that it was the return ocean currents from the north that made the climate of the Maine coast so cool. The deflection of these currents accounted for the peculiar climatic conditions found at Newport, Block Island and Nantucket. The last-named place possessed an exceedingly small diurnal variation in temperature. The mean temperature of Block Island was 74° F. in summer. A rather long experience with the climate of these islands had impressed him with the fact that many persons experienced as much, if not more, benefit from a sojourn there as from a sea voyage. The enforced rest, regular routine and bracing air explains the beneficial influence of a sea voyage on a certain class of persons, but long sea voyages should be reserved for dipsomaniacs and errant sons. He had seen some remarkable cures of pulmonary tuberculosis at Nassau, W. I., and knew of many patients with weak chests who did very well provided they spent their winters at this place.

Bronchial Asthma and Allied Disorders; Their Summer Treatment.—Dr. Beverley Robinson read this paper. He said that asthma was, as a rule, a symptom of various allied affections. An urgent attack could generally be relieved by an injection of morphine and atropine, and the inhalation of nitrate of amyl was also useful. Of the well-known remedies nothing had been found by him superior to iodide of potassium, either with or without the addition of Hoffman's anodyne. The treatment of most importance was the preventive. Whenever possible he sent his patients with catarrhal respiratory affections to Europe for the summer. A spa treatment of three or four weeks was advisable in the long-standing and obstinate cases. If this were not practicable, he strongly favored sending them to sulphur springs in this country, such as Sharon and Richfield. He believed that the air itself in and around sulphur springs was distinctly curative for most catarrhal diseases. Many of these patients also did well in the more or less elevated regions of the Adirondacks. As a general rule, he did not favor sending them to the seashore. Almost all cases of bronchitic asthma which had lasted for some years were apt to have a more or less impaired heart action, and hence they should not be sent to high altitudes. They should also avoid foggy shores. Disturbance of the stomach was a very frequent accompaniment of asthma, but, unfortunately, these digestive derangements were often not apparent, and were only detected by careful study of the individual and of the therapeutic effect of certain remedies. Potatoes and starches in excess should be eliminated from the diet, and tea, coffee and tobacco should be indulged in exceptionally. Arsenic was often exceedingly useful in relieving the dyspnœa. While very exceptionally a brilliant result would follow some special surgical operation, as upon the nasal passages, in the vast majority of cases the ultimate results of such interference were disappointing. The only cases of bronchial asthma which thoroughly and permanently recover are in young persons in whom secondary complications have not developed, and who have exceptionally good and hygienic surroundings.

The Summer Climatic Treatment of Neurasthenia — Dr. E. D. Fisher took up this topic. He said that it had been his experience that in very high altitudes many of the symptoms of neurasthenia are increased. This was especially noticeable in patients exhibiting cardiac irregularity. It was a common experience to find, among persons in high altitudes and unaccustomed to such localities, a troublesome insomnia. High altitudes, if not extreme, were often beneficial, though the individual constitution and temperament must be considered. Many health resorts, having no specially salubrious climate, had nevertheless won a deservedly high reputation by the establishment of some system of treatment which occupied most of the patient's time, and so largely prevented morbid introspection. In these conditions of exhaustion it was not advisable to join so-called tours; it was far better to go to a moderately cool region, such as the Isle of Wight. Again, Scotland, with its bracing air and out-door life, was a good place. The advantages of the coast of Maine had already been well set forth. In all cases exercise and occupation must necessarily be combined with intelligent medical treatment. There was no climate adapted to neurasthenia *per se*. Extremes of cold and heat should be avoided and also the more crowded and fashionable resorts. Camp life, with plain but sufficient food, was often most beneficial. Many trials must often be made before the best climate is found for the individual case. All exercise should be indulged in in moderation, and the amount of such exercise must be very gradually increased. A permanent cure was only secured by persistent attention to hygienic rules.

Mineral Springs and Resorts.—Dr. James K. Crook spoke briefly on this subject. (See page 1036.)

Dr. Louis Faugères Bishop said that, while the custom was to send pulmonary cases inland, he had seen many of these persons greatly benefited by residence on the strip of sandy land below Point Pleasant, New Jersey.

Dr. Simon Baruch commended the statements made by Dr. Crook, and added that he believed it was more important for the family physician to analyze the mental ingredients of the resident physician at the springs than the waters themselves, for the latter would be of little benefit if not used under the guidance of a physician having the requisite brains and judgment. After all it was not so much the question of climate as a matter of management of the patient in a given climate. There was no specific virtue in any climate, not even for phthisis; the great point was not to send patients to any particular locality there to do as they pleased, but to send them to a suitable place, always to be under appropriate medical supervision while there.

Dr. Rabinovitch referred to the peculiar properties of sea air, especially those dependent upon the presence of iodine.

Dr. S. A. Knopf said that he was positive that a person with pulmonary tuberculosis would do better right here in New York City, especially if living most of the time on the roof, than if sent away to the most ideal climate without proper medical supervision and sanitary surroundings. It was most unfortunate that sea-coast sanatoria had not yet been established in this country for tuberculous children.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON OBSTETRICS AND GYNECOLOGY.

Stated Meeting, Held May 22, 1902.

James N. West, M.D., Chairman.

Complications of Pregnancy.—Dr. Brooks H. Wells opened the postponed discussion on this subject. He said that the chief point that had interested him concerned the best course to pursue when an ovarian tumor was discovered during pregnancy. Statistics showed that only about 2.5 per cent. of those operated upon during pregnancy aborted, while many more mothers were sacrificed if allowed to go on to full term without operative interference.

Dr. G. H. Balleray said that he thoroughly agreed with the position taken by Dr. Wells. He had only operated upon a few such cases during pregnancy, but in every instance with satisfactory result, whereas in a case operated upon after delivery the mother died from a continuation of the sepsis that had demanded the operation. He had had considerable experience with fibromata complicating pregnancy, and did not fear such tumors very much unless they were so situated that it was impossible for delivery to be effected by the natural passages. In a number of cases the fibromata had entirely disappeared after confinement.

Retroversion and Retroflection of the Uterus.—A series of papers was presented on this subject.

Etiology, Pathology and Palliative Treatment.—Dr. J. Riddle Goffe discussed this subject. He first took up the consideration of the forces which maintain the uterus in the normal position. The chief support of the uterus was derived from its ligaments, and especially from the uterosacral ligament, and the uterovesical ligament. This sling of tissue, reaching from the sacrum to the symphysis, was the all-important agent in retaining the uterus in position. While the round ligament had been utilized for retaining the uterus in position after it had been displaced, he believed it normally possessed no such function. Its office was to limit the excursions of the uterus during gestation and throw the intestine behind the uterus. With rare exceptions he did not believe the fundus of the uterus could be displaced except when the uterosacral ligament had been stretched. Among the factors producing such stretching, in the order of their importance, were: (1) Suppurative disease of the appendages; (2) Subinvolution of the ligaments of the uterus after parturition; (3) The presence of a rectocele due to lacerations of the perineum, and (4) Congenital malformation of this ligament, *i. e.* the anterior vaginal wall is so short that the cervix cannot go into the hollow of the sacrum and the fundus tip forward. Much had been said about the importance of involution of the uterus, but little attention had been given comparatively to the necessity for proper involution of the ligaments as well as the uterus. It should be remembered that the ligaments are muscular structures and are hypertrophied during gestation. Before discharging a patient after confinement, it was the duty of the accoucheur to be sure that involution of the ligaments was complete. This process could be favored by local treatment with boroglyceride tampons. In the congenital cases there seemed to be no remedy except operation, but in the others much could be accomplished by the use of tampons for weeks or even months. Pessaries, in his opinion, had their place. A retroversion pessary was useful in cases of subinvolution, and it was just in this class that permanent cures were effected. Statistics showed that only about 5 per cent. of actual cures were produced by the use of pessaries; in the other cases the pessary must be worn indefinitely, just like a crutch. The object of a pessary was to take up the slack in the uterosacral ligament, and and so tilt the fundus to the front. It was often unfortunate to have to use a pessary, and in many cases the persistent use of tampons would make it unnecessary to employ a pessary at all.

Alexander's Operation.—Dr. Leroy Broun read this paper. He said that this operation was applicable only to that class of displacements in which the uterus was free from adhesions. The broad ligament and the included round ligaments act as guys to the fundus of the uterus, preventing too great motion backward. Especially was this true of the round ligaments, which contain a large amount of muscular tissue. It was, therefore, reasonable to shorten the round ligaments when it was desired to restore to an anterior position a uterus which had been displaced backward. The uterus thus restored was placed in a position to be restrained by the normal forces, *i. e.* the uterosacral ligament and intraabdominal pressure. Where the uterus was held in its backward position by adhesions the best plan was to open the abdomen, separate the adhesions and then follow the plan recently suggested by Dr. J. D. Bissell of the Woman's Hospital, *i. e.* take out a section of both the round and broad ligaments sufficient to hold the uterus in a forward position. The anatomical results of this operation were excellent. The support of the vaginal column was necessary to keep the uterus at a normal level in the pelvis even though this organ were in a normal anterior position. For ten years he had been doing Alexander's operation, and had followed his patients as carefully as possible. The operation had no death rate other than that attendant upon any other minor operation, and due to outside and unlooked-for causes, as for example, tetanus. With this rather large experience he was free to say that no other operation of the kind had given him equally satisfactory results. The uterus had remained forward even after subsequent confinements. He knew of four hernia having occurred in the 300 Alexander's operations, and this accident should be preventable. The relief of the symptoms by this operation was most gratifying alike to patient and surgeon, and the pain in the scars, urged by some as an objection to Alexander's operation, would be entirely avoided if the nerve emerging from the ring with the round ligament were carefully isolated and not included in the ligature. Both pillars of the external ring should be exposed before making any effort to pick up the round ligament. This ligament was easily lacerated by artery forceps and clamps, and, hence, the clamps used to draw out the ligament should have their sharp edges smoothed off with a file. The ligaments are anchored with black silk, two sutures on each side usually being sufficient. The redundant ligament may be cut off or dropped back.

Abdominal Operations for Retroversion and Retroflexion.—Dr. Brooks H. Wells read this paper. He said that ventral fixation had been proved inapplicable to cases in which pregnancy was likely to occur. Dr. Howard A. Kelly had devised the operation of ventral suspension, and while it had been very generally performed, the relief afforded had not always been permanent, and there had been occasional interference with pregnancy and labor. In June, 1893, Dr. W. Gill Wylie had devised the operation of intraabdominal shortening of the round ligaments. His own experience had taught him to lay down the following rules with regard to these operations: (1) Intraabdominal shortening of the round ligaments should be done in cases in which it was necessary to open the abdomen for the treatment of complicating conditions and in cases of persistent retroflexion in which the displacement interfered with health and could not be relieved by simpler measures; (2) Ventral suspension should be done in old women in whom there was no risk of subsequent pregnancy and, in the operator's judgment, when the uterus was large and heavy; and (3) Intraabdominal shortening of the round ligaments should be the operation of choice in young women in whom there was a probability of future conception. These operations should be supplemented by operations for the repair of a lacerated cervix and injuries to the pelvic floor. In cases of subinvolution following abortion and labor he found that the use of boroglyceride tampons or pessaries would effect a cure in a considerable number of cases provided lacerations of the cervix and perineum had been repaired. A number of his patients, after Alexander's operation, had gone through subsequent pregnancies without any difficulty, and the operation had relieved them of their discomfort. His experience with the vaginal operation had been quite limited.

Vaginal Operations for These Conditions.—Dr. H. N. Vineberg presented a paper on this subject, which was a critical review of fifty-seven cases of vaginal suturing of the round ligaments. He said that he had been the first in this country to perform vaginal fixation. In patients still in the child-bearing period he resorted to vaginal suturing of the round ligaments, an operation which he had devised early in 1896. In May, 1900, he had reported upon his first fifty cases. In forty-seven of these the operation had resulted in an anatomical success and there had been four pregnancies terminating normally at full term. Some of the cases had now been under observation for six years. There had been no mortality in the fifty-seven consecutive cases, and in only three of the first series had convalescence been disturbed by any complications. In every case the peritoneal cavity had been entered and the adnexa brought into view for inspection; moreover, in 70 per cent. of the cases certain plastic operations had been done in addition. There had been two relapses in fifty-five cases. Experience had taught him the advisability of using at least two sutures on each round ligament. He could safely say that there was little likelihood of dystocia following the operation he had devised. There was no occasion to make a raw surface on the uterus.

A New Operation.—Dr. J. D. Bissell said he could accept most of the views expressed this evening regarding the causes of retroversion, but he had not been pleased with the methods devised for its relief. Alexander's operation was excellent when done under the conditions laid down by its originator, but it was limited in its application. His own operation produced a shortening of both the round and the broad ligaments. The technique involved opening the abdomen, breaking up existing adhesions and the passing of a suture near the fundus of the uterus and another near the brim of the pelvis. These sutures partially controlled the hemorrhage, but their chief function was to prevent a slipping back of the ligament into the pelvis. The next step was to resect the round ligament, cutting out, if thought best, a V-shaped piece. The ends of the divided broad ligament were then brought into apposition by suturing the divided broad ligament transversely. The technique of the operation was demonstrated by Dr. Bissell on a model. Of the twenty cases operated upon in this manner the result had been satisfactory in all with the exception of one case of congenital retroversion, and here the relief came slowly and was only partial.

Dr. A. Brothers said that he had tried all of the various operations recommended and had found a certain field for each of them. He had been satisfied with the result of Dr. Vineberg's operation in a number of cases, while in others it had seemed to him to be a very difficult operation. At the present time the Alexander's operation was his operation of choice, because he considered it one of the minor surgical procedures for the treatment of retroversions of the uterus. One of its great advantages was that it did not invade the peritoneal cavity, and, despite modern advances in surgery, he felt that the opening of the peritoneal cavity should be avoided when not necessary. The difficulty of learning the technique of the Alexander operation seemed to him to be the chief reason for so many other operations having been devised to take its place.

Dr. S. W. Bandler thought too much stress had been laid upon the uterosacral ligament as an etiological factor. The uterus was simply imbedded in connective tissue, and all of the uterine ligaments were simply connective tissue containing some muscle fibers. The ligamentum lata was one of the most important structures in keeping the uterus at the proper level. In all probability most retroflexions were acquired, and, in general, the symptoms observed were not due to the retroflexion itself, but to the associated descent of the uterus. The levator ani was one of the important structures in keeping the vagina in position, and, hence, laceration of this muscle explained the occurrence of rectocele and cystocele. He believed that a retroflexion *per se* could be treated and the symptoms relieved without resorting to operation. The important indication for an operation was a retroflexion with adhesions. In such cases he preferred the vaginal operation. The method of Dührssen seemed to him admirable and incapable of causing dystocia if properly performed.

Dr. Goffe said that he usually found congenital retroflexion in young women who had not suffered from inflammatory conditions in the pelvis, and who presented a shortening of the anterior vaginal fornix. He was a great believer in vaginal work, and favored shortening of the round ligaments through the vagina. In cases of simple retroflexion of the uterus he did not think one was justified in doing a laparotomy or making unnecessary scars on the surface of the body. According to his experience, the great majority of cases, say, 75 per cent., of retroflexion or retroversion of the uterus presenting symptoms were complicated by adhesions, so that in only about 25 per cent. of the cases would Alexander's operation be indicated at all. He had just been told by a member of the staff of the City Hospital that in the past month there had been four autopsies on cases of ventral suspension, and in each instance the adhesions to the abdominal were so long that the uterus had again become displaced into the hollow of the sacrum. His own method of shortening the round ligaments, through the vaginal fornix was by the Wylie-Mann procedure. This operation he considered a minor one, and he had done it 130 times without any complicating peritonitis.

Dr. Broun said that it should be rare for Alexander's operation to be followed by suppuration. This operation seemed to him ideal and beautiful. The frequency of hernia following it depended very largely upon the operator; it occurred so infrequently that one should not expect it. The vaginal operation had not appealed to him, and hence he had not done it. Although for about three years the vaginal route had been employed almost exclusively by Dr. Cleveland and himself at the Woman's Hospital, they had both gradually and almost unconsciously drifted away from this method, and he was positive that the work done now was better than that done during the period mentioned. The same gradual abandonment of the vaginal route had been noted among the other surgeons on the hospital staff. He felt sure this had been brought about solely by an effort towards greater conservatism.

Dr. Wells expressed the opinion that chronic constipation was an important factor in the development of retro-displacements. He had watched the work of the advocates of vaginal operations, and was convinced that it would not become *the* operation of the future.

Dr. Vineberg said that he did not wish to be understood as advocating the vaginal operation to the exclusion of other methods; on the contrary, he favored a careful selection of the operation best fitted to the individual case. Where there were extensive adhesions of the adnexa he would not think of doing the vaginal operation. A careful examination should enable one to decide before beginning the operation what cases could be successfully completed by the vaginal route. The one weak feature of these vaginal operations was the danger of encountering serious hemorrhage. Any method by which the uterus was attached to the abdominal wall was likely to be followed by such firm union as to lead to serious trouble in a subsequent pregnancy. He wished to congratulate Dr. Bissell on his very ingenious operation; nevertheless, he felt that it was a dangerous thing to open the broad ligament.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, Held May 19, 1902.

Frederick Holme Wiggin, M.D., Chairman pro tem.

A Three Months' Ectopic Gestation and a Hydrosalpinx.—Dr. A. B. Tucker presented these specimens, removed by operation from a woman of twenty-two, married eight months. There was a history of irregular uterine hemorrhage from March until coming under observation on May 10. Six weeks prior to this date she had been suddenly seized with violent abdominal pain, and had almost collapsed. On rising from bed, about one week later, the attack of abdominal pain had recurred, and since then she had suffered almost constantly. When seen by Dr. Tucker on May 10 she was recovering from an attack of collapse; the abdomen was distended and very tender; the pulse was 140 and the temperature 99°F. A diagnosis of ectopic pregnancy was made, and she was sent to hospital, where Dr. George Tucker Harrison saw her and concurred in the diagnosis. She was stimulated for a few days, and then, on May 15, laparotomy was performed by Dr. Tucker. A mass was found filling the entire left side of the pelvis. Through a mass of adhesions he delivered a three-months' fœtus, the umbilical cord, placenta and left ovary; also the right tube, which was the seat of a hydrosalpinx. The abdomen was partially filled with blood clots, and there was every evidence of a recent peritonitis. As considerable oozing of blood followed the separation of the adhesions, the pelvis was packed with iodoform gauze for seventy hours. The patient was recovering satisfactorily.

Dr. George Tucker Harrison said that the adhesions had walled in the hemorrhage and had prevented the woman from bleeding to death. The general teaching at the present time was that rupture of the gestation sac was the cause of the hæmatocele, but while it was true in the present instance it was not ordinarily so. In the vast majority of cases hæmatocele was due to an incomplete tubal abortion with hemorrhage.

The Therapeutic Use of Suprarenal Extract.—Dr. William H. Bates presented an introductory paper on this subject. He said that some years ago, while experimenting with a number of organic extracts he had tried an extract made by himself from the suprarenal gland. The effects observed were so remarkable that he had at once begun a special study of its action.

Preparation of the Extract.—The best method of preparing the suprarenal extract was as follows: The fresh suprarenals are minced and mixed with distilled water which had been boiling for one hour to drive off the air held in solution. Sixteen parts of the glands are then mixed with twenty parts of boiling water, and this mixture is boiled for fifteen minutes, filtered immediately and the filtrate allowed to stand for two hours at 60° F. It is then decanted and filtered into two-drachm bottles. These bottles are loosely corked and heated in a sterilizer at 212° F. for one hour. They are then removed from the sterilizer and kept at 70°F. for twenty-four hours, when they are again sterilized for one hour at 212°F. before being tightly corked. This sterilized solution keeps for many months, although it will spoil within two or three hours after the removal of the cork. The addition of such substances as chloretone, carbolic acid, boric acid and resorcin does not prevent the growth of bacteria, and he had seen infection of the eye follow the use of such solutions. Moreover, the action of the extract was impaired by the addition of these preservatives. Dr. R. H. Cunningham had first pointed out that the powdered suprarenal gland contains active poisons which are formed during the process of dessicating the gland. This powder, like the alkaloid, is hygroscopic, and, hence, is apt to spoil. The preparation of tablets of suprarenal also tends to impair the strength of the extract by reason of the moisture used in the manufacture of the tablets. The hypodermic use of suprarenal extract was not necessary. If instilled into the mouth of an unconscious patient, as in a case of collapse under anæsthesia, it would quickly stimulate the heart.

In the Treatment of Diseases of the Heart and Lungs.—Dr. SAMUEL FLOERSHEIM read this paper. He said that his first paper on this subject had been published in 1900, and his experience in this field embraced about 500 cases. He recommended that the dry powdered extract be given by the mouth in doses of three grains, with instructions that it be chewed and swallowed without water. It should be dispensed *dry* in capsules, and the patient should chew these capsules. According to his experience, this extract acted directly on the heart muscle, and not through the nervous system. This remedy was indicated in all forms of heart disease in which the pulse was weak, soft and rapid. In almost every case a marked beneficial effect was noted within five minutes, and it usually lasted for a number of hours. Its characteristic stimulating effect was noted even near the fatal termination of cases of organic heart disease, and after strychnine and other well-known heart tonics had failed. In those cases of organic heart disease in which there was full compensation the administration of the remedy did no harm, but was not followed by any appreciable effect. The remedy was exceedingly safe in its action, and was the most powerful heart stimulant known to him. In mitral stenosis it had no effect on the murmur, although the beneficial action on the heart was marked. In aortic regurgitation the murmur often become more clearly defined and more localized. In aortic stenosis, with failing action of the heart, the murmur was sometimes diminished in intensity. Where there were several murmurs, so that they were confused with the heart sounds, the administration of the suprarenal extract often brought these murmurs out more clearly. In predominant hypertrophy, with a full, regular and strong pulse, the extract apparently had no effect. Dr. Floersheim said that he had been the first to publish an account of the use of the suprarenal extract in diseases of the lower air passages. He had found it exceedingly useful in many cases of acute bronchitis, but its action was only temporary in chronic bronchitis. Cases of spasmodic asthma due to nervous causes were not benefited. In forty-eight cases of hæmoptysis in which he had used it benefit had been noted. The extract had succeeded in controlling hemorrhage from the lungs when most other remedies had failed. He had used it in twenty-six cases of acute pulmonary tuberculosis. It had no effect, of course, on the tuberculous process, but was administered for its action on hæmoptysis and on the expectoration.

In the Treatment of Diseases of the Nose and Throat.—Dr. EMIL MAYER read this paper. He said that it was an exceedingly valuable remedy in operations on the nasal mucous membrane, because of its strong ischæmic effect. The contraction of the arterioles of the nasal mucous membrane often lasted for hours, and hence its value in inflammations of the mucous membrane. A few individuals presented an idiosyncrasy, and were made very much worse by its use, and, unfortunately, no one could tell of the existence of such a peculiarity before trying the remedy. Perhaps the greatest value of the extract was in acute inflammatory conditions, and if it had no other use whatever, it must be conceded to be a most useful and wonderful remedy. In the various forms of rhinitis occurring reflexly, as for example, vasomotor rhinitis, it exerted an immediate palliative effect. Many sufferers from hay fever had been very decidedly benefited by its use, but it should be borne in mind that there was nothing curative about its action. It made the sufferer much more comfortable and enabled the rhinologist to reach parts otherwise practically inaccessible. The extract was also useful in operations on spurs of the septum, angiomata, nasal polypi, etc. Some claimed that much more hemorrhage was seen after its use than formerly, but on this point opinion was divided. His own experience was that there was more bleeding subsequently to its use than without it, and hence he used it sparingly and in every instance packed the operated side. The packing was removed in twenty-four hours, and the nose cleansed with peroxide of hydrogen, the suprarenal extract not being subsequently employed. For epistaxis it was oftentimes of great value in that it cleared the field and allowed of appropriate treatment. For operations, such as for adenoids and the removal of tonsils, its use was, in his opinion, absolutely contraindicated. Here, as in the nose, it was well to bear in mind that any hemorrhage that might co-exist with the operation was controllable by the surgeon, whereas a secondary hemorrhage might occur when no assistance was at hand, and consequently a preventable issue might occur. In œdema of the glottis the suprarenal extract was quite useful.

In the Treatment of Diseases of the Eye.—Dr. WILBUR B. MARPLE discussed this subject. He said that the action of the suprarenal extract in relieving inflammatory redness of the eye was certainly little short of magical, and it delighted the patient, but so also would the patient be pleased by the use of morphine for the relief of pain. We should ask ourselves seriously whether or not suprarenal extract was curative in the long list of diseases for which it had been recommended. His own experience led him to assert that it was not curative. Two cases of conjunctivitis were reported in which, contrary to his instructions, adrenalin had been used for many weeks. Both patients found it necessary to increase the frequency of the instillations after a short time, and finally to increase the strength of the solution, and, instead of the drug being curative, it had distinctly aggravated the local condition. There could be no question that adrenalin would secure a bloodless operation, but he was far from being convinced that this use of the extract was desirable, although, undoubtedly, exceedingly convenient. There was certainly an increased possibility of infection, and hence he would not think of using it in an operation in which the globe was opened, and there was reason for believing that the use of this remedy lowered the resistance of the tissues and interfered with healing. For slight operations on the eyelids the extract could be used apparently without harm and enabled the operator to dismiss his patients from the office more quickly. A remarkable case was referred to, in which an epitheliomatous growth on the inner edge of the eyelid, which had existed for a number of years, began to diminish in size coincidently with the employment of adrenalin solution as a placebo. After having used this solution for a number of months, it was found that the growth had entirely disappeared and the cosmetic result was far better than could have been secured with the knife. The action of adrenalin in this case was explained by Dr. Marple on the theory that it destroyed the blood supply of the epitheliomatous mass. The patient was exceedingly susceptible to the action of adrenalin, because when a pledget of cotton moistened with this solution was laid upon this lady's cheek the skin became white underneath the cotton.

In Obstetrics and Gynecology.—Dr. GEORGE TUCKER HARRISON read this paper. He said that he had first used it in a case of chronic hyperplastic endometritis associated with a severe and obstinate metrorrhagia. After curettage and packing the persistence of the hemorrhage led him to prescribe suprarenal extract, five grains three times a day in capsules, and the result was most gratifying. He had also found this remedy useful in cases of uterine myomata. Attention was called to the fact that the administration of this extract gave rise to painful uterine contractions. The coincident tonic action upon the heart was exceedingly useful in many cases of uterine hemorrhage. No doubt radical operation was the better method of treatment, but patients in private practice would not always consent to operation, and the extract proved to be a potent remedy in cases of uterine myomata. Its harmlessness was in striking contrast with ergot in similar cases.

In Diseases of the Genitourinary Tract.—Dr. EDWARD L. KEYES, Jr., was the author of this paper. He said that so far his experience had convinced him that suprarenal extract had a restricted sphere of usefulness in genitourinary surgery. Meatotomy often gave rise to troublesome hemorrhage, and this could be almost entirely prevented by the use of suprarenal extract. His method of using it was by washing out the urethra with a weak bichloride solution, then inserting a half-grain tablet of cocaine, and after it had dissolved in the remaining drops of the bichloride solution, placing one grain of the powdered suprarenal on the same spot. This would quickly cause a marked blanching of the parts. After the operation he found it desirable to apply glutol, a compound of formaldehyde and gelatin, to insure against subsequent hemorrhage. For moderate urethral hemorrhage the injection of a 5 per cent. solution of suprarenal extract or a 1 to 2,000 solution of adrenalin was admirable. For severe bleeding bandaging of the penis to a retained catheter was still the proper treatment. In some cases suprarenal extract was useful in assisting cystopic examination. In cases of severe vesical hemorrhage he had not found suprarenal extract superior to alum or other astringents. It had been found a useful means of distinguishing between renal and vesical hemorrhage.

Dr. W. FREUDENTHAL spoke of a case of serious tonsillar hemorrhage following incision, in which, after all the usual applications had failed to check the hemorrhage, it was quickly controlled by one insufflation of the powdered extract. Notwithstanding what had been said about the powerful stimulation of the heart by suprarenal extract, his experience pointed to the contrary. In one case of severe asthma, in which the suprarenal extract had been used, there was irregularity of the heart action and a feeling of pain and oppression about the precordium, which ceased on stopping the administration of suprarenal and returned on resuming the use of this agent.

Dr. FRANCIS J. QUINLAN said that explorations of the nose, mouth and larynx were greatly facilitated by the use of adrenalin solution. It was particularly useful in some forms of vasomotor rhinitis. When used with cocaine the toxic action of the latter was minimized.

Dr. GEORGE B. McAULIFFE said that he had thoroughly tried both the suprarenal extract and adrenalin, and he was sure that the best results were obtained from a fresh solution of the suprarenal powder. The powder when dry keeps for an indefinite time, whereas adrenalin has no warning odor of decomposition, and one was not sure, therefore, whether or not it was in proper condition for use. He had repeatedly found patients developing toxic effects of cocaine immediately after the application of the suprarenal extract.

When packing pledgets moistened with suprarenal extract into one nostril he had noticed the ischæmic effect on the opposite side of the nose. He believed that in the eye this remedy had no further value than as a vasomotor constrictor. In checking hemorrhage in the nose, spraying of the suprarenal solution was not sufficient; it should be applied by means of a pledget moistened with the suprarenal solution.

Dr. H. DAVISON SARIL said that he thought iritis could be produced by adrenalin, but that it would be of a mild type. In graduated tenotomies on the eye it should prove useful. For small operations on the conjunctiva it was also of great value. In cataract operations the best method, he thought, was the flap operation, and here free bleeding was desirable, so that suprarenal extract should not be employed. In performing iridectomy in glaucomatous eyes there was apt to be much bleeding which interfered with the operation. Here the application of adrenalin solution would prove useful. While adrenalin was valuable as a hæmostatic it was absolutely valueless as an antiphlogistic.

Dr. D. S. DOUGHERTY said he was sure that suprarenal extract had been the cause of sepsis in some cases, and many patients objected to the odor of this extract. This objection did not apply to the adrenalin, which was also very much more powerful. He had not found it necessary to use pledgets moistened with adrenalin; an application of a 1 to 1,000 solution was sufficient to entirely blanch the parts. It was particularly useful in cases of acute laryngitis marked by great turgidity of the tissues.

Dr. ERNEST V. HUBBARD said that if, as had been said, suprarenal extract were a stimulant to the heart muscle he would expect it to be applicable to the same class of cases as digitalis.

Dr. CHARLES G. AM ENDE exhibited a solution of adrenalin which was three months old. To keep it well it was only necessary to boil it in a tube closed with a cotton plug.

Dr. WILLIAM J. ROBINSON called attention to the fact that in the discussion the expression suprarenal extract had been freely used, whereas it was not the extract but the suprarenal gland that had been used in most instances. The extract occurred in the market in the form of scales, but this preparation was very expensive and, so far as he could learn, had been very little used. Mention was made of a very severe and obstinate case of pruritus vulvæ, in which a few applications of suprarenal gave complete relief. To use this remedy as a curative agent in chronic heart disease seemed to him illogical, although he would admit that it might prove of value as a temporary measure.

Dr. BATES said that it had been repeatedly demonstrated by competent physiological chemists that, unlike cocaine, the contraction of the blood vessels produced by suprarenal was not followed by a secondary dilatation.

Dr. FLOERSHEIM said that he had administered as much as half an ounce of the suprarenal powder in the course of eight hours without producing any over-stimulation or other ill effect. In this respect there was a vast difference between suprarenal and digitalis. It was not so much a true stimulant of the heart as a muscle food. He had given as much as sixty grains at one time without observing any excessive stimulation.

Dr. E. Mayer said that in the past year and a half he had used adrenalin to the complete exclusion of suprarenal. He had never yet seen any diminution of the good effect of suprarenal or of adrenalin from the prolonged administration of these agents, and he had yet to see a single case in which any injurious effect had resulted from the use of either suprarenal or adrenalin.

Dr. W. B. Marple said that he had referred in his paper only to his own experience with suprarenal in diseased conditions of the eye, and he knew that the deleterious effects seen by him were not isolated instances.

Dr. G. T. Harrison reported a case which he thought proved conclusively the correctness of Dr. Bates' contention, that the contraction of the blood vessels produced by suprarenal was not followed by secondary dilatation.

Book Reviews.

Handbook for the Hospital Corps of the United States Army and State Military Forces. By Colonel Charles Smart, Assistant Surgeon General, U. S Army. Third edition, revised and enlarged. New York: William Wood & Co., 1902.

Excellent as have been the previous issues of Colonel Smart's handbook, the present edition is even more admirable, containing within its covers everything which a hospital corps man is expected to know. The present edition of the book has been generally rewritten, and a very valuable and comprehensive section on military nursing has been added. The book treats of the duties of the hospital corps in peace and war; military organization; general hospital service; elementary hygiene and camp sanitation; anatomy and physiology; first aid in medical and surgical emergencies; military nursing; elements of cookery for the sick, etc. The book is a mine of information, which is set down in clear, yet simple language, devoid of technical terms. The work is absolutely essential for the efficient instruction of hospital corps men in the performance of their duties, and should be as widely distributed among the State troops as it is in the regular army. As a household book of reference for use in the care of the sick and the treatment of domestic emergencies, it is very valuable. It is impossible to give too great praise to this book—the best that can be said of it is that it stands without rivals in its field of application and usefulness. The book is attractively bound and printed, admirably illustrated, and its contents is made readily available by a copious index.

Toxicology: the Nature, Effects and Detection of Poisons. By Cassius M. Riley, M.D., Professor of Chemistery and Toxicology in Barnes Medical College, St. Louis, Mo. Published by the author, 1902.

This little book of 120 pages was prepared for the needs of medical students in their study of toxicology. The treatment given the subject is independent and considered rather from the standpoint of the practitioner than in its medico-legal or chemical aspects alone. The substances treated of are grouped under the headings of inorganic and organic poisons, and these are subdivided under gases, solids, and liquids, manufactured organic poisons, organic poisons of vegetable and animal origin, ptomaines, etc. Under each substance discussed is given a brief description of its physical and chemical characteristics, the clinical symptoms following an overdose, the size of the minimum fatal dose, the duration of life after a fatal dose, the appropriate treatment for the poison, the post-mortem appearances after fatal poisoning, the chemical and other methods for determining the presence of the poison.

The arrangement of the book renders its contents very accessible, and it should prove of much value to students and practitioners for purposes of study and reference. The author has done a service to the profession by the preparation of his book, which is written in clear and concise language, and is eminently practical in character. The subject matter is worthy of a better dress than the cheap bidding and poor quality of paper in which it appears.

Diseases of Women: a Manual of Gynecology. Designed especially for Students and General Practitioners. By F. H. Davenport, A.B., M.D., Assistant Professor in Gynecology, Harvard Medical School. Fourth Edition, revised and enlarged, with 154 illustrations. Gus Brothers & Co., 1902.

The present edition, the fourth, differs very little in size and contents from its predecessor, and its value to students or practitioners is to be found in the non-surgical portions of the work. We think the book would have been improved by more revising and amplifying. It is safe to say that a large number of the beginners' gynecological cases will be cases of vulvitis, yet only one page is given to its consideration. We think a wrong impression is conveyed as to the frequency of gonorrhœal vaginitis. It is certainly much less frequent as an acute inflammation, except in children, than vulvitis or cervicitis. We do not think patients with an acutely-inflamed vagina can tolerate douches of a temperature of 120°F.

Why call a variety of vaginitis "follicular" when there are no follicles, lymph or glandular, in the vagina?

The writer's methods are still antiseptic rather than aseptic, as shown by this recommendation of wet bichloride gauze as a dressing for a clean abdominal wound, and the iodoform in glycerin tampons for the treatment of adherent retroversion. The statement that gonorrhœal extension from vagina to uterus is "comparatively rare" is at least debatable.

Such unscientific terms as "cancer," "cancroid" and "cauliflower growth" are used instead of carcinoma and epithelioma. The book is an excellent one for acquainting students with non-operative gynecological treatment.

Books Received.

While the Medical Record *is pleased to receive all new publications which may be sent to it, and an acknowledgment will be promptly made of their receipt under this heading, it must be with the distinct understanding that its necessities are such that it cannot be considered under obligation to notice or review any publication received by it which in the judgment of its editor will not be of interest to its readers.*

A Reference Handbook of the Medical Sciences. By Albert H. Buck. Royal Octavo, Vol. IV., 873 pages. Illustrated. William Wood & Company, New York. Price, muslin, $7.00; brown leather, $8.00; Turkey morocco, $9.00.

Principles of Sanitary Science and the Public Health. By W. T. Sedgwick, Ph.D. 8vo. 368 pages. The Macmillan Co., New York City.

The Principles of Bacteriology. By A. C. Abbott, M.D. Sixth edition. 8vo. 641 pages. Illustrated. Lea Brothers & Co., Philadelphia, Pa. Price, cloth, $2.75 net.

A Text-Book of Insanity. By Chas. Mercier. 12mo. 222 pages. Swan, Sonnenschein & Co., Ltd., London. Price, $1.75.

La Fototerapia. By Dott. Antonio Sciascia. 12 mo. 128 pages. Illustrated. Societa Editrice Dante Alighieri, Rome, Italy.

Water-Supply (considered principally from a Sanitary Standpoint). By Wm. P. Mason. 8vo. 448 pages. Illustrated. Third edition. John Wiley & Sons, New York. Price, $4.00.

Twenty-third Annual Report of the Births, Deaths, Marriages, and Divorces in the State of Michigan for 1899. By Fred M. Warner. 8vo. 157 pages. Wynkoop Hallenbeck Crawford Co., Lansing, Mich.

Twenty-First Annual Report of the State Board of Health of New York, with Maps, for the Year 1900. 8vo. 579 pages. James B. Lyon, State Printer, Albany.

A Substitute for X-Rays.—Years ago Becquerel found that salts of the rare metal uranium possessed the power of throwing off a feeble and invisible radiance that affected photographic plates, like the *x*-rays.

Mme. Curie, in Paris last year, isolated from the Bohemian mineral pitch-blende two other elements that behave in the same manner, but are far more active. One of them she called "polonium" and the other "eadium." The latter is said to be one hundred thousand times as intense as uranium in its photographic effects.

The property of the new metal is apparently of great practical value. The results of the *x*-rays, now so useful in surgical diagnosis, can be duplicated by a method much cheaper. Radium seems to suffer no diminution of energy or loss of weight during the process. In addition to producing an impression on the photographic plate, radium produces phosphorescence and discharges electrified bodies. Thus it will be seen that it possesses all the qualities of the Röntgen rays.—*Scientific American.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, New York City, for the week ending June 21, 1902:

	Cases.	Deaths.
Measles	363	22
Diphtheria and croup	306	32
Scarlet fever	276	28
Smallpox	59	8
Varicella	52	..
Tuberculosis	241	143
Typhoid fever	50	8
Cerebro-spinal meningitis	..	4

Some Unusual Drug Effects upon the Nervous System.—Arthur W. Dunning says that it is a well established fact that lead introduced into the human organism may produce a multiple neuritis. It is also well known that potassium iodide will promote the elimination of lead from the system, but it may not always be remembered that the effect of the iodide upon the lead palsy may be that of greatly increasing the difficulty by too rapidly unloading the toxic agent from its storehouses in the internal organs, and throwing it into the circulating fluid, thereby directly increasing the intensity of the neuritis. He reports the case of a man whose death he considers due to the administration of the iodide. In regard to digitalis, he reports a case of violent mania developed as the direct result of the use of the drug. In another case, the administration of arsenic in the form of Fowler's solution induced sensory disorders, followed later by motor impairment. A singular feature of the case was the absence of any of the usual acute toxic effects of the drug.—*The St. Paul Medical Journal.*

The Parasites of Cancer.—At the German Congress of Internal Medicine, which took place recently at Wiesbaden, Professor von Leyden (Berlin) said that the increase of cancer in Germany and England had induced a great many observers to study its etiology. He then discussed the various themes of Cohnheim, Hausemann and Ribbert. Cancer, from an anatomical point of view, consisted in a proliferation of epithelial cells, together with a destruction of all the other cells. The exciting cause of this proliferation had not yet been discovered. Various parasites had been credited with possessing this power, but none of these hypotheses had stood the test of further investigation, so that any new discovery in that direction was received with some distrust. Very likely the parasites of cancer lived within the cells. Ribbert had asserted that a parasite living in a cell would destroy it, but would not produce proliferation. This view, however, could be disproved by botanical analogies. There was sometimes in cabbage a growth very similar to cancer and known as "Kohchernie," in which plasmodia had been discovered by Dr. Woronin, a Russian savant. These plasmodia grew within the cells and produced first a proliferation and then a destruction of them. The anmill and the alteration of the urine which occurred in cancer must be taken as symptoms of a general infection. Moreover, cancer had been communicated, experimentally, from one animal to another—of course, of the same species. Professor von Leyden also mentioned a case where by accident a student had drunk a fluid consisting of the gastric juice of a patient suffering from cancer of the stomach, the result being his death from cancer within two years. He then described plasmodia, which were found within the proliferated cells in cancer, especially in fresh specimens, and were very like those discovered by Dr. Woronin; the plasma of the cells appeared as if destroyed by the parasites.

Professor von Leyden recently discovered masses of these corpuscles in capsules which were supposed to be sporangia. Similar masses had also been met with in a case of cancer of the lungs.—*Lancet.*

Blasting in New York.—The decision in a federal court in this city that the proper remedy in the case of a person so prostrated by illness that the noise of blasting on private property next door to his home may hurry him to the grave lies in an appeal to the compassion of the blaster, and not to the courts for an injunction, may be the best of law, but it grates harshly on sympathetic feelings. And what can be thought of the man who will keep on blasting in a private, personal enterprise, when he knows that his brutality may kill the victim on a sick bed?—*New York Tribune.*

Health Reports.—The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon-General, U. S. Marine Hospital Service, during the week ended June 21, 1902:

SMALLPOX—DOMESTIC.

		Cases.	Deaths
California, Los Angeles	May 31–June 7	7	
Sacramento	May 31–June 7	1	
San Francisco	May 31–June 8	6	
Illinois, Belleville	June 7–14	1	
Chicago	June 7–14	4	
Freeport	June 7–14	3	
Indiana, Evansville	June 7–14	3	
Indianapolis	May 31–June 7	11	
South Bend	May 31–June 14	5	
Terre Haute	May 31–June 7	1	
Kansas, Wichita	May 31–June 14	5	0
Kentucky, Covington	June 7–14	6	
Massachusetts, Boston	June 7–14	12	9
Lawrence	May 31–June 7		1
Lowell,	June 7–14	3	2
Malden	June 7–14	1	
Newton	June 7–14	1	
Michigan, Detroit	June 7–14	4	1
Missouri, St. Louis	June 1–15	52	2
Montana, Butte	June 1– 8	6	
Nebraska, Omaha	June 7–14	17	
New Hampshire, Nashua	June 7–14	11	
New Jersey, Hudson County, Jersey City included	June 1–15	55	14
Newark	June 7–14	26	4
New York, Elmira	May 31–June 7	2	
New York	June 7–14	32	13
Yonkers	June 6–13	1	
Ohio, Cleveland	June 7–14	29	5
Dayton	June 7–14	3	
Toledo	May 31–June 14	5	
Oregon, Portland	June 2	18	
Pennsylvania, Johnstown	June 7–14	3	
McKeesport	June 7–14	1	
Philadelphia	June 7–14	8	3
Pittsburg	June 7–14	38	
Scranton	June 8–15	2	
Utah, Salt Lake City	May 31–June 14	48	
Wisconsin, Green Bay	June 8–15	2	
Janesville	May 31–June 7	1	
Milwaukee	June 7–14	1	

SMALLPOX—FOREIGN.

Austria, Prague	May 19–31	7	
Belgium, Antwerp	May 24–31	8	1
Brussels	May 24–31		1
China, Hongkong	Apr. 27–May 3	4	3
Colombia, Panama	June 2– 9	15	
Great Britain, Birmingham	May 24–31	3	
Glasgow	May 31–June 6	1	
Liverpool	May 24–31	6	
London	May 24–31	251	48
India, Bombay	May 13–20		7
Calcutta	May 10–17		4
Madras	May 3– 9		1
Italy, Palermo	May 24–31	8	2
Mexico, City of Mexico	May 25–June 8	2	3
Russia, Moscow	May 17–24	14	8
St. Petersburg	May 17–24	10	

YELLOW FEVER.

Mexico, City of Mexico	June 1– 8		1
Vera Cruz	June 7–14	27	0

CHOLERA—INSULAR.

Philippines, Manila	Apr. 28–May 3	174	138
Bataan Province	Apr. 28–May 3	44	47
Bulacan Province	Apr. 28–May 3	79	58
Camarines Province	Apr. 28–May 3	109	98
Cavite Province	Apr. 28–May 3	1	1
Laguna Province	Apr. 28–May 3	14	13
Nueva Eeija Prov	Apr. 28–May 3	1	1
Pampanga Province	Apr. 28–May 3	118	81
Pangasinan Prov.	Apr. 28–May 3	1	1
Tarlac Province	Apr. 28–May 3	4	4

CHOLERA—FOREIGN.

India, Bombay	May 13–20		1
Calcutta	May 10–17		64
Madras	May 3– 9		1
Straits Settlements, Singapore	Apr. 12–19		12
"	Apr. 27–May 3		84

PLAGUE—UNITED STATES.

California, San Francisco	May 19	1	1
" "	May 25	1	1
" "	May 26	1	1
" "	May 29	1	1

PLAGUE—FOREIGN.

India, Bombay	May 13–20		224
Calcutta	May 10–17		209
Karachi	May 11–18	54	54

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A

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effects observed were so remarkable that he had at once begun a special study of its action.

Preparation of the Extract.—The best method of preparing the suprarenal extract was as follows: The fresh suprarenals are minced and mixed with distilled water which had been boiling for one hour to drive off the air held in solution. Sixteen parts of the glands are then mixed with twenty parts of boiling water, and this mixture is boiled for fifteen minutes, filtered immediately and the filtrate allowed to stand for two hours at 60° F. It is then decanted and filtered into two-drachm bottles. These bottles are loosely corked and heated in a sterilizer at 212° F. for one hour. They are then removed from the sterilizer and kept at 70°F. for twenty-four hours, when they are again sterilized for one hour at 212°F. before being tightly corked. This sterilized solution keeps for many months, although it will spoil within two or three hours after the removal of the cork. The addition of such substances as chloretone, carbolic acid, boric acid and resorcin does not prevent the growth of bacteria, and he had seen infection of the eye follow the use of such solutions. Moreover, the action of the extract was impaired by the addition of these preservatives. Dr. R. H. Cunningham had first pointed out that the powdered suprarenal gland contains active poisons which are formed during the process of dessicating the gland. This powder, like the alkaloid, is hygroscopic, and, hence, is apt to spoil. The preparation of tablets of suprarenal also tends to impair the strength of the extract by reason of the moisture used in the manufacture of the tablets. The hypodermic use of suprarenal extract was not necessary. If instilled into the mouth of an unconscious patient, as in a case of collapse under anæsthesia, it would quickly stimulate the heart.

In the Treatment of Diseases of the Heart and Lungs.—Dr. SAMUEL FLOERSHEIM read this paper. He said that his first paper on this subject had been published in 1900, and his experience in this field embraced about 500 cases. He recommended that the dry powdered extract be given by the mouth in doses of three grains, with instructions that it be chewed and swallowed without water. It should be dispensed *dry* in capsules, and the patient should chew these capsules. According to his experience, this extract acted directly on the heart muscle, and not through the nervous system. This remedy was indicated in all forms of heart disease in which the pulse was weak, soft and rapid. In almost every case a marked beneficial effect was noted within five minutes, and it usually lasted for a number of hours. Its characteristic stimulating effect was noted even near the fatal termination of cases of organic heart disease, and after strychnine and other well-known heart tonics had failed. In those cases of organic heart disease in which there was full compensation the administration of the remedy did no harm, but was not followed by any appreciable effect. The remedy was exceedingly safe in its action, and was the most powerful heart stimulant known to him. In mitral stenosis it had no effect on the murmur, although the beneficial action on the heart was marked. In aortic regurgitation the murmur often become more clearly defined and more localized. In aortic stenosis, with failing action of the heart, the murmur was sometimes diminished in intensity. Where there were several murmurs, so that they were confused with the heart sounds, the administration of the suprarenal extract often brought these murmurs out more clearly. In predominant hypertrophy, with a full, regular and strong pulse, the extract apparently had no effect. Dr. Floersheim said that he had been the first to publish an account of the use of the suprarenal extract in diseases of the lower air passages. He had found it exceedingly useful in many cases of acute bronchitis, but its action was only temporary in chronic bronchitis. Cases of spasmodic asthma due to nervous causes were not benefited. In forty-eight cases of hæmoptysis in which he had used it benefit had been noted. The extract had succeeded in controlling hemorrhage from the lungs when most other remedies had failed. He had used it in twenty-six cases of acute pulmonary tuberculosis. It had no effect, of course, on the tuberculous process, but was administered for its action on hæmoptysis and on the expectoration.

In the Treatment of Diseases of the Nose and Throat.—Dr. EMIL MAYER read this paper. He said that it was an exceedingly valuable remedy in operations on the nasal mucous membrane, because of its strong ischæmic effect. The contraction of the arterioles of the nasal mucous membrane often lasted for hours, and hence its value in inflammations of the mucous membrane. A few individuals presented an idiosyncrasy, and were made very much worse by its use, and, unfortunately, no one could tell of the existence of such a peculiarity before trying the remedy. Perhaps the greatest value of the extract was in acute inflammatory conditions, and if it had no other use whatever, it must be conceded to be a most useful and wonderful remedy. In the various forms of rhinitis occurring reflexly, as for example, vasomotor rhinitis, it exerted an immediate palliative effect. Many sufferers from hay fever had been very decidedly benefited by its use, but it should be borne in mind that there was nothing curative about its action. It made the sufferer much more comfortable and enabled the rhinologist to reach parts otherwise practically inaccessible. The extract was also useful in operations on spurs of the septum, angiomata, nasal polypi, etc. Some claimed that much more hemorrhage was seen after its use than formerly, but on this point opinion was divided. His own experience was that there was more bleeding subsequently to its use than without it, and hence he used it sparingly and in every instance packed the operated side. The packing was removed in twenty-four hours, and the nose cleansed with peroxide of hydrogen, the suprarenal extract not being subsequently employed. For epistaxis it was oftentimes of great value in that it cleared the field and allowed of appropriate treatment. For operations, such as for adenoids and the removal of tonsils, its use was, in his opinion, absolutely contraindicated. Here, as in the nose, it was well to bear in mind that any hemorrhage that might co-exist with the operation was controllable by the surgeon, whereas a secondary hemorrhage might occur when no assistance was at hand, and consequently a preventable issue might occur. In œdema of the glottis the suprarenal extract was quite useful.

In the Treatment of Diseases of the Eye.—Dr. WILBUR B. MARPLE discussed this subject. He said that the action of the suprarenal extract in relieving inflammatory redness of the eye was certainly little short of magical, and it delighted the patient, but so also would the patient be pleased by the use of morphine for the relief of pain. We should ask ourselves seriously whether or not suprarenal extract was curative in the long list of diseases for which it had been recommended. His own experience led him to assert that it was not curative. Two cases of conjunctivitis were reported in which, contrary to his instructions, adrenalin had been used for many weeks. Both patients found it necessary to increase the frequency of the instillations after a short time, and finally to increase the strength of the solution, and, instead of the drug being curative, it had distinctly aggravated the local condition. There could be no question that adrenalin would secure a bloodless operation, but he was far from being convinced that this use of the extract was desirable, although, undoubtedly, exceedingly convenient. There was certainly an increased possibility of infection, and hence he would not think of using it in an operation in which the globe was opened, and there was reason for believing that the use of this remedy lowered the resistance of the tissues and interfered with healing. For slight operations on the eyelids the extract could be used apparently without harm and enabled the operator to dismiss his patients from the office more quickly. A remarkable case was referred to, in which an epitheliomatous growth on the inner edge of the eyelid, which had existed for a number of years, began to diminish in size coincidently with the employment of adrenalin solution as a placebo. After having used this solution for a number of months, it was found that the growth had entirely disappeared and the cosmetic result was far better than could have been secured with the knife. The action of adrenalin in this case was explained by Dr. Marple on the theory that it destroyed the blood supply of the epitheliomatous mass. The patient was exceedingly susceptible to the action of adrenalin, because when a pledget of cotton moistened with this solution was laid upon this lady's cheek the skin became white underneath the cotton.

In Obstetrics and Gynecology.—Dr. George Tucker Harrison read this paper. He said that he had first used it in a case of chronic hyperplastic endometritis associated with a severe and obstinate metrorrhagia. After curettage and packing the persistence of the hemorrhage led him to prescribe suprarenal extract, five grains three times a day in capsules, and the result was most gratifying. He had also found this remedy useful in cases of uterine myomata. Attention was called to the fact that the administration of this extract gave rise to painful uterine contractions. The coincident tonic action upon the heart was exceedingly useful in many cases of uterine hemorrhage. No doubt radical operation was the better method of treatment, but patients in private practice would not always consent to operation, and the extract proved to be a potent remedy in cases of uterine myomata. Its harmlessness was in striking contrast with ergot in similar cases.

In Diseases of the Genitourinary Tract.—Dr. Edward L. Keyes, Jr., was the author of this paper. He said that so far his experience had convinced him that suprarenal extract had a restricted sphere of usefulness in genitourinary surgery. Meatotomy often gave rise to troublesome hemorrhage, and this could be almost entirely prevented by the use of suprarenal extract. His method of using it was by washing out the urethra with a weak bichloride solution, then inserting a half-grain tablet of cocaine, and after it had dissolved in the remaining drops of the bichloride solution, placing one grain of the powdered suprarenal on the same spot. This would quickly cause a marked blanching of the parts. After the operation he found it desirable to apply glutol, a compound of formaldehyde and gelatin, to insure against subsequent hemorrhage. For moderate urethral hemorrhage the injection of a 5 per cent. solution of suprarenal extract or a 1 to 2,000 solution of adrenalin was admirable. For severe bleeding bandaging of the penis to a retained catheter was still the proper treatment. In some cases suprarenal extract was useful in assisting cystopic examination. In cases of severe vesical hemorrhage he had not found suprarenal extract superior to alum or other astringents. It had been found a useful means of distinguishing between renal and vesical hemorrhage.

Dr. W. Freudenthal spoke of a case of serious tonsillar hemorrhage following incision, in which, after all the usual applications had failed to check the hemorrhage, it was quickly controlled by one insufflation of the powdered extract. Notwithstanding what had been said about the powerful stimulation of the heart by suprarenal extract, his experience pointed to the contrary. In one case of severe asthma, in which the suprarenal extract had been used, there was irregularity of the heart action and a feeling of pain and oppression about the precordium, which ceased on stopping the administration of suprarenal and returned on resuming the use of this agent.

Dr. Francis J. Quinlan said that explorations of the nose, mouth and larynx were greatly facilitated by the use of adrenalin solution. It was particularly useful in some forms of vasomotor rhinitis. When used with cocaine the toxic action of the latter was minimized.

Dr. George B. McAuliffe said that he had thoroughly tried both the suprarenal extract and adrenalin, and he was sure that the best results were obtained from a fresh solution of the suprarenal powder. The powder when dry keeps for an indefinite time, whereas adrenalin has no warning odor of decomposition, and one was not sure, therefore, whether or not it was in proper condition for use. He had repeatedly found patients developing toxic effects of cocaine immediately after the application of the suprarenal extract.

When packing pledgets moistened with suprarenal extract into one nostril he had noticed the ischæmic effect on the opposite side of the nose. He believed that in the eye this remedy had no further value than as a vasomotor constrictor. In checking hemorrhage in the nose, spraying of the suprarenal solution was not sufficient; it should be applied by means of a pledget moistened with the suprarenal solution.

Dr. H. Davison Saril said that he thought iritis could be produced by adrenalin, but that it would be of a mild type. In graduated tenotomies on the eye it should prove useful. For small operations on the conjunctiva it was also of great value. In cataract operations the best method, he thought, was the flap operation, and here free bleeding was desirable, so that suprarenal extract should not be employed. In performing iridectomy in glaucomatous eyes there was apt to be much bleeding which interfered with the operation. Here the application of adrenalin solution would prove useful. While adrenalin was valuable as a hæmostatic it was absolutely valueless as an antiphlogistic.

Dr. D. S. Dougherty said he was sure that suprarenal extract had been the cause of sepsis in some cases, and many patients objected to the odor of this extract. This objection did not apply to the adrenalin, which was also very much more powerful. He had not found it necessary to use pledgets moistened with adrenalin; an application of a 1 to 1,000 solution was sufficient to entirely blanch the parts. It was particularly useful in cases of acute laryngitis marked by great turgidity of the tissues.

Dr. Ernest V. Hubbard said that if, as had been said, suprarenal extract were a stimulant to the heart muscle he would expect it to be applicable to the same class of cases as digitalis.

Dr. Charles G. Am Ende exhibited a solution of adrenalin which was three months old. To keep it well it was only necessary to boil it in a tube closed with a cotton plug.

Dr. William J. Robinson called attention to the fact that in the discussion the expression suprarenal extract had been freely used, whereas it was not the extract but the suprarenal gland that had been used in most instances. The extract occurred in the market in the form of scales, but this preparation was very expensive and, so far as he could learn, had been very little used. Mention was made of a very severe and obstinate case of pruritus vulvæ, in which a few applications of suprarenal gave complete relief. To use this remedy as a curative agent in chronic heart disease seemed to him illogical, although he would admit that it might prove of value as a temporary measure.

Dr. Bates said that it had been repeatedly demonstrated by competent physiological chemists that, unlike cocaine, the contraction of the blood vessels produced by suprarenal was not followed by a secondary dilatation.

Dr. Floersheim said that he had administered as much as half an ounce of the suprarenal powder in the course of eight hours without producing any over-stimulation or other ill effect. In this respect there was a vast difference between suprarenal and digitalis. It was not so much a true stimulant of the heart as a muscle food. He had

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